Frank Wilhelm
International Supply Chain Solutions

Global Expertise Delivered Locally!
HISTORY OF THE SUPPLY CHAIN

- Independence & Autonomous Action
- Customer & Supplier Networks
- Managing Time & Distance Becomes Key
- New Skill Sets Such As Communication and Asset Management Now Required
- Technology Enablement
THE WORLD WE ARE NOW LIVING IN

INVENTORY MANAGEMENT
SCHEDULED ENVIRONMENT
MATERIALS PIPELINE
FORECAST DRIVEN
COST BASED METRICS
TRANSACTION BASED
INVENTORY DEPENDANT
INTERFACED SYSTEMS
MONTHLY FULFILLMENT CYCLE
CAPACITY DRIVEN
EXTENDED PRODUCT LIFE

PIPELINE MANAGEMENT
DEMAND FLOW
INFORMATION PIPELINE
ORDER DRIVEN
TIME BASED METRICS
TRANSACTION LESS
RESPONSE POSTURING
INTEGRATED SYSTEMS
DAILY/HOURLY FULFILLMENT CYCLE
DEMAND DRIVEN
VERY SHORT LIFE CYCLES

EXCELLENCE IS A JOURNEY, NOT A DESTINATION
“American Manufacturers spend 60-80% of their value based revenue on purchased materials and equipment.”

-US CENSUS BUREAU
Purchasing departments (which spend 60-80% of a companies wealth) represent only 4% of the overhead budget for most enterprises - *ISM*
US Manufacturers create 13% of the total value add delivered to customers

- WORLD BANK

By far most of the value we deliver to our customers, up to 85% comes from our supply base.
US Manufacturers (internally) create 13-15% of the value they sell, the rest up to 85% is created externally within the Supply Chain.
COCOON SYNDROME
INTERNATIONAL SUPPLY CHAIN SOLUTIONS
INWARD FOCUSED

HOW DO WE GET THERE FROM HERE?

INTEGRATED FOCUSED

INTERNATIONAL SUPPLY CHAIN SOLUTIONS
The key to success lies within the extended enterprise and the capabilities of your primary trading partners.
Two traditional responses to demand uncertainty...
1. Build Inventory
2. Precise Forecasting

“We dance round in a ring and suppose,
But the Secret sits in the middle and knows.

“Personal request here. Do not begin your forecast
with the words ‘I’m just guessing, but ...’”

– ROBERT FROST
Forecasting Techniques

- Intrinsic
  - Auto regressive integrated moving average
- Focus
  - Trend Estimation
- Linear Prediction
- Auto Regressive Moving Average
- Extrapolation
- Regression Analysis
- Delphi Method
- Extrinsic
- Scenario Building
- Surveys
- Composite Forecasting
- Auto Regressive Moving Average Exogenous Inputs
- Extrinsic
- Reference Class Forecasting
- Probalistic Forecasting
- Ensemble Forecasting
- Causal Forecasting
- Bias Forecasting
- Market Prediction
- Simulation
- Forecast by Analogy
- Exponential Smoothing
- Moving Average

16
FORECASTING TECHNIQUES

There must be a better way!
Build a Response Postured Supply Chain That:

- Replaces Inventory with Time
- Obviates or Lessens the need for Forecast Precision
- Is Demand Driven

**BASED UPON SPEED OF EXECUTION**
ENGAGE AND ACTIVATE YOUR SUPPLY CHAIN TO ASSIST IN THE MANAGEMENT OF YOUR VOLATILE DEMAND
• Cost Reduction
• Inventory Relief
• Process & Product Technology

• Rich Source of Product Innovation
• Service Level Elevation
• Quality Management
• Functional Linkage

STRATEGIC  SUPPLIERS
Step 1

Determine your Strategic Suppliers:

1. Those suppliers with whom you spend the most money

2. Those suppliers that provide you with key technology
Strategic Suppliers constitute a very small portion of the total supply base, never more than 10% making change manageable.
DEMAND VOLATILITY ABSORBED THROUGH EXCESS INVENTORY

SUPPLY BASE

ENTERPRISE

CUSTOMER

SMOOTH REPLENISHMENT SIGNAL TO SUPPLIERS

VOLATILE DEMAND
DEMAND DELAYED DUE TO PLANNING & ORGANIZATIONAL DELAYS

SUPPLY BASE

FREQUENT SPORADIC EXPEDITED DISRUPTIVE SUPPLY REQUESTS

ENTERPRISE

VOLATILE DEMAND

CUSTOMER
INSTANT DEMAND RECOGNITION

ENTERPRISE
- NO EXCESSIVE INVENTORY
- NO TIME DELAYS

CUSTOMER

STRAIGHT SUPPLIER BASE

STRATEGIC SUPPLIERS ARE POSTURED TO REACT TO SPORADIC DEMAND

VOLATILE DEMAND
ENGAGE AND ACTIVATE YOUR SUPPLY CHAIN TO ASSIST THE MANAGEMENT OF YOUR VOLATILE DEMAND
1. DETERMINE STRATEGIC SUPPLIERS
2. FORM EXCLUSIVE LONG TERM RELATIONSHIPS
3. FORMULATE DEMAND RESPONSE STRUCTURES
4. MANAGEMENT SANCTIONING
WHAT TOOLS ARE NEEDED
PUCHASE ORDER

• Defines the business conditions of the transaction

• Not an ongoing working document

• Can be punitive in nature

• Episodic

• Says nothing about the relationship

• Valuable in defining basic expectations
PARTNERSHIP FRAME AGREEMENT

(Controlling Document of the Partnership)

- Underpins the supplier partnership
- Working document
- Rules based
- Defines the collaborative relationship
- Communication protocol
- Numbers driven
- Shared metrics
- Demand response structures defined
- Management oversight
- Escalation process
- Systems access
SUCCESS STORIES...
Volkswagen Brazil: (Modular Consortium)

- Reduced supply base from 400 to 8
- Partners had site RE-location ($50mm)
- Complete process and system integration
- Guaranteed long term contracts, 5-15 years
- Reduced operating costs 15-25%
- Significant lead time improvements
- On time delivery improvements
- Quality elevation
Dell Computers: (Strategic Supply Program)

- Reduced key suppliers from 204 to 47
- Stock replenishment time reduced to 15 minutes
- Inventory decreased from 30 to 13 days (industry average 75-100 days)
- Inventory reduction increased profit margin by 6%
- Easier customer customization
Saved 120 million dollars within the first two years of commodity partnering management implementation

-Source ISM
• First year **actual** savings **2.5 million dollars**

• Five year projected savings **17.5 million dollars**

• Project paid for itself in the first six months

• Created an enterprise perspective on procurement

• Big employee involvement wins..... displayed power of the employee

• **Required active, involved top level leadership and one year of work to institutionalize.**

-ISCS
First Steps Toward Creating a Customer-Driven Supply Chain:

Baseline Your Current Capabilities and Develop a Blueprint for Change
1. CLEAR CORPORATE MANDATE
2. STRONG LEADERSHIP
3. COHERENT STRATEGY
4. ACTIVE PARTICIPATION
LET’S DRILL DOWN
SUPPLIER STRATEGIES

- Manufacturing Plan
- Engineering R&D Plan
- Sales Plan
- Competition

STRATEGIC DIRECTION

SUPPLY

BASE
SUPPLIER CLASSIFICATIONS

**Qualified vendor**: A large group of potential suppliers who meet minimum standards to do business with Banner. This pool will usually constitute the “Qualified Vendor List”

**Preferred supplier**: This is usually the vendor of choice because of demonstrated consistent performance or the possession of a special capability or product feature.
This is an Elite Category Consisting of a Small Group of Suppliers Who Have Demonstrated **Superior Performance** and Have Met a **Program** Characterized by Stringent Performance Criteria in All Aspects of the Business. These Suppliers Are Typically “Certified” Allowing for No Incoming Inspection and Usually Supply the Total Global Demand for a Part or a Commodity.

- Based upon mutually agreed upon and **shared objectives / metrics** and represents a sharing of risks and rewards
- Based upon **trust & openness**: proprietary information is shared with partner vendors
- Partners are chosen to minimize total costs while maintaining excellent service. Partnerships seek to **optimize all aspects of the supply chain**.
- Strategy is to chose a **single, exclusive vendor** to supply the goods or services for a given situation. A sole source vendor or a single preferred vendor is not necessarily a partner
- **Long term contracts** are awarded between 3-10 years
- A partnership requires increase **time and effort** to maintain than other relationships.
• Supplier strategy must link closely to business unit strategy
• You must develop a close, strategic, but flexible partnership with key suppliers
Enter into long term supplier relationships with a few key suppliers and redefine the trading partner relationship at the most fundamental level.

“Redistribute risk, cost, functions and even profits throughout the supply chain.”

Based upon openness trust sharing and candor and reciprocity.
TIME IS MONEY

TIME IS EVERYTHING
The FUTURE