Integration in practice: Procter & Gamble and Novozymes

Experience and lessons learned
While optimizing the Upstream Supply Chain

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Procter & Gamble

- 168 years old
- Operations in over 80 countries
- Selling in more than 180 countries
- Nearly 5 billion consumers
- NOS $ 51.4 billions/year in 2003-2004
What is eBusiness for P&G

Tier 1 Suppliers
Supply Chain Integration
And Collaboration
(Extended Enterprise)

Tier 2 Suppliers
Best Value Option

e-Connect
Collaborative Design
SC Docs Repository
Payment, and Invoicing eProcess
eAuction
eRFQ
eTrading
eOutsourcing
What do we mean with eConnect?

Flow Mapping
(Analysis of Information, Physical and Cash Flows)

Demand Signals

2 ways Information Sharing on:
1. P&G Demand
2. P&G Inventory
3. Supplier Planned Shipments

Replenishment Optimization

Joint Re-design of Product Flow:
- Collaborative Inventory Management with automated dispatch/Receipt signals
- Sensitivity Analysis on Trade offs

Joint Collaboration

Discussion Platform on:
1. Long Term Demand
2. New Initiatives
   Process Changes
Potential Savings

Replenishment “Losses”
(Demurrages, Freights, Emergencies)

IMMEDIATELY RECOVERABLE

PARTIALLY RECOVERABLE IN
INTEGRATION PHASE &
COMPLETE B2B
JOINT COLLABORATION

Raw Materials &
Processing Costs

Planning, Processing,
Replenishment Optimizations

PARTIALLY RECOVERABLE IN
SYNCHRONIZATION PHASE
(DEMAND SIGNALS)
P&G and Novozymes

Time

Integration Level

"TRADITIONAL BUSINESS RELATIONSHIP"

SYNCHRONIZATION PHASE

INTEGRATION PHASE

PURCHASE ORDERS/ FAX, Phone

PURCHASE ORDERS with FORECAST VISIBILITY/ FAX, Phone

SMOI with INVENTORY/ FORECAST VISIBILITY/ VSR

TELEMETRY

PORTAL PLATFORM

ERP2ERP Integration XML

Full electronic SYNCHRONIZATION
Undisputed world leader in enzymes

Total market value 2004: DKK 12.8 billion

Around 4,000 employees worldwide
Approximately 2,100 in Denmark

Source: Novozymes' estimate 2004
Why this project is important to Novozymes - Our Supply Chain Challenge

With manufacturers

- Many product variants from biotechnical complex production process
- Production time is up to ten weeks – varies from product to product. A fermented process.
- Products are strategically important to our customers
- Customers are different in size and internal organization
- Reliability is critical to customers internally and from market to reduce inventories
Inventory and forecast data are used as basis to create purchase orders.

Customer plant
- Raw materials
  1. Inventory and forecast data are used as basis to create purchase orders
- Purchase
  2. Purchase planner is deciding when to purchase materials
     - 4000kg 18-12-02
     - 4000kg 11-12-02
     - 4000kg 11-12-02
     - 8000kg enzyme 4-12-2002

Novozymes
- Sales
  3. Sales orders are created in Novozymes ERP system
     - 4000kg 18-12-02
     - 4000kg 11-12-02
     - 4000kg 11-12-02
     - 8000kg enzyme 4-12-2002
- SalesOrder
  4. Verify that sufficient materials are available
     - FAX

Finished Goods & Production
- Make to stock
  - FAX

Safety stock
- 5. Create confirmations and backorders
- 6. Receive confirmations of orders that are OK
- 7. Decide what to do with backorders
  1) New date?
  2) Other Qty?
- 8. Change coming from customers customer
Inventory and forecast data are used as basis to create purchase orders.

Purchase planner is deciding when to purchase materials.

Distribution planner is deciding when and how much to ship.

Verify that sufficient materials are available.

Make to forecast.
The Benefits
- as experienced in pilot and roll out

- Admin - 20%
- Stock – Reductions achieved in the chain
- Transportation – optimised.
  No more rush orders and FTL shipments
- Operated within confidence window
- Positive impact on Product Availability
## Road Map – as experienced by Novozymes

<table>
<thead>
<tr>
<th>Benefit</th>
<th>Low</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAP 2 SAP Order to cash</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>System Supported VMI</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Standard orderflow</td>
<td>1A</td>
<td></td>
</tr>
<tr>
<td>Manual VMI</td>
<td></td>
<td>2</td>
</tr>
<tr>
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</tbody>
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**Potential Risk:** Benefits $\leq$ IT cost

This is where we would like to be.
Our opportunity

- Scaling usage across our relationship
- Share experience
- Scaling with more trading partners
  - Lower costs and ease of adoption through more standardisation