



Science For A Better Life

CPG Supply Chain Best Practices for Biopharma Industry

Kevin Pegels – November 7, 2011



Agenda/ Content

- Introduction
- Background
- Best Practice Discussion
- Conclusions

Introduction – Kevin Pegels (Kevin.Pegels@bayer.com)



Work History:

3/2011 – Current: VP SCM Bayer Healthcare-Biotech
3/2009 -3/2011: Sr. Director SCM Bayer Healthcare – Medical Devices
6/2004 – 6/2009: Sr. Director SCM Clorox Company
6/2002 – 6/2004 – Sr. Director SCM Levi Strauss & Co.
6/1997 – 6/2002 – Director SCM in CPG Industry Deloitte Consulting
6/1988 – 6/1995 – Manager Clorox Company

Education:

1997: MBA Harvard University
1988: B.S. Chemical Engineering Cornell University

Certifications/Publications

CPIM Certified

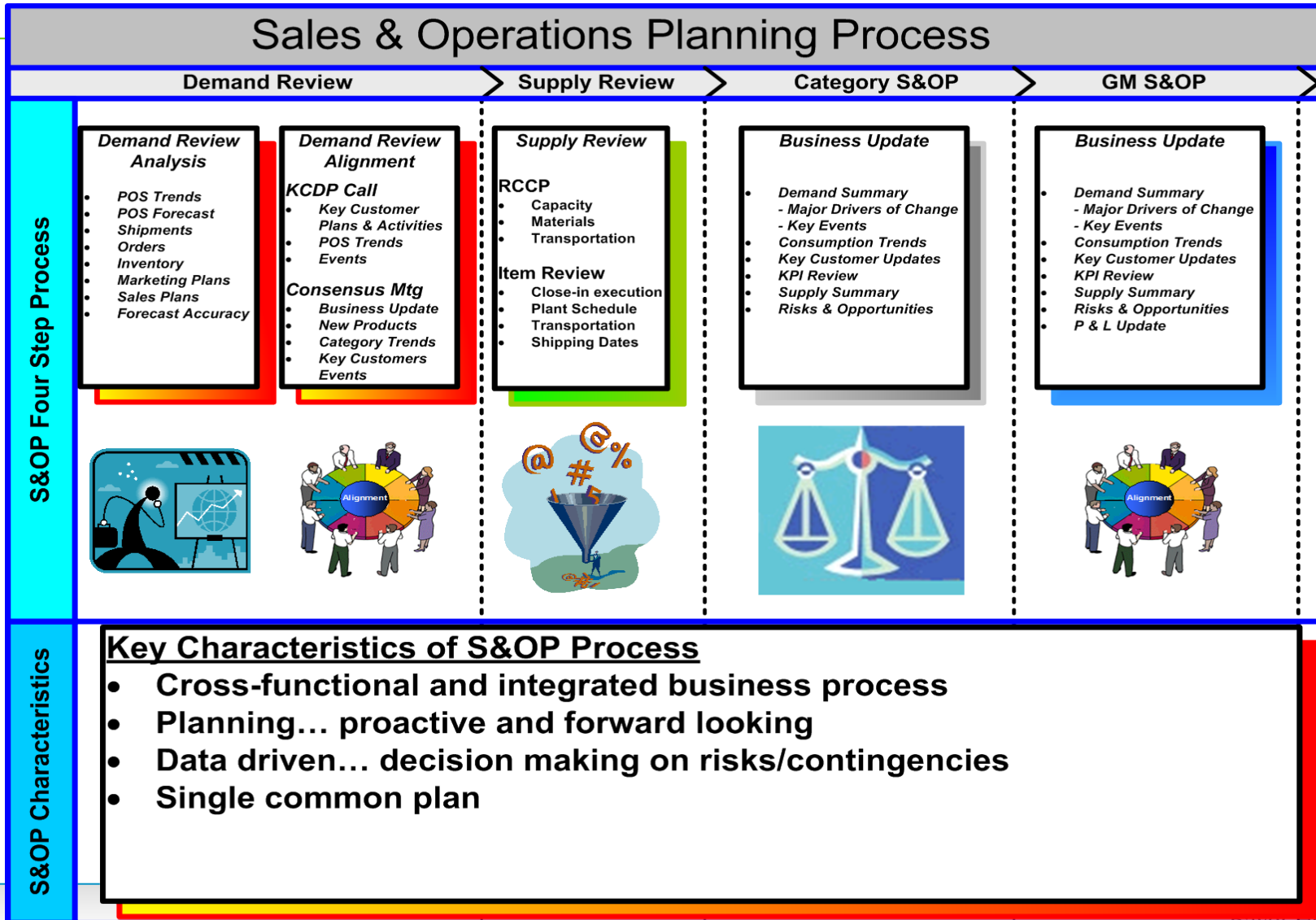
Published in Harvard Business Review & Supply Chain Exec. Board



Background

1. Consumer Packaged Goods are one of the leading industries in the development and implementation of supply chain best practices
 - Margins are tight
 - Competition is fierce
 - Customers are very demanding, eg. WM
2. Biopharma companies are implementing many supply chain planning best practices from the CPG industry
 - Transfer of talent between industries
 - Benchmarking/best practice sharing
 - Pharma industry becoming similar to CPG industry – tighter margins, more competition (eg. generics)

Sales & Operation Planning





S&OP related CPG best practices

1. Statistical Forecasting

- Leverage statistical algorithms to generate demand forecast based on history
- Often produces better results in less time

2. VMI (Vendor Managed Inventory)

- Manage country/affiliate inventory centrally
- Manage large customer/distributor inventory centrally

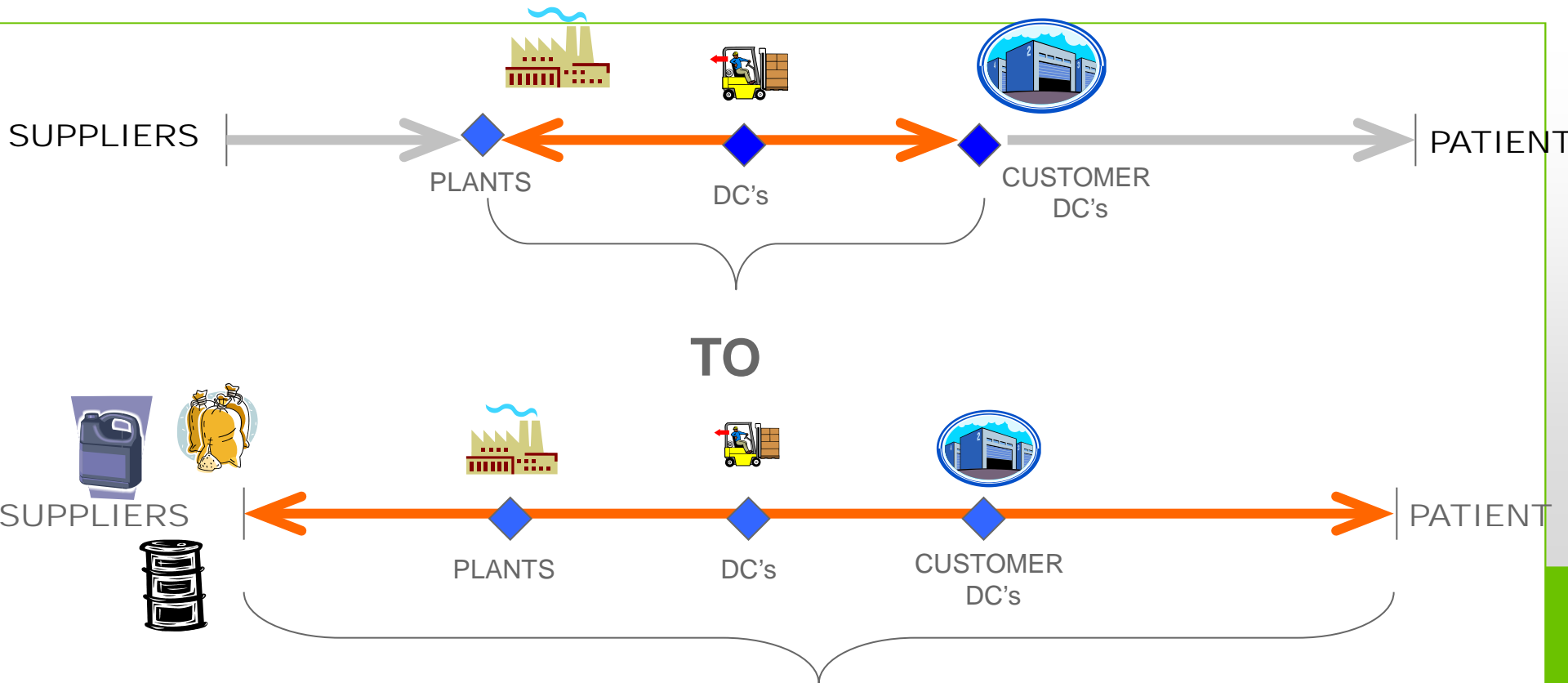
3. Customer/Patient forecasting/collaboration

- Partner with customers and even patients to improve transparency of demand forecasting and inventory management

4. Demand Driven End to End Networks

- Replenish supply chain based on patient pull

Demand Driven E2E Networks . . .



. . Through E2E planning, responsive/flexible networks, and customer management

Many Biotech companies are leveraging ABC classification



		Without ABC	With ABC
Strategic	Review and Update ABC Classification	Lack of common page around focus products for upcoming year across organization	Ability to clearly identify focus products for upcoming year
	Annual Target Setting	Potentially unfair targets and lost time	Focused discussions resulting in fair targets
	Annual Supply Parameter Agreements (SPA)	SPA process disconnected from business resulting in 'dead' SPAs	Ability to focus, discuss and maintain right parameters for right SKUs resulting in 'living' SPAs
Operational	Step 1: Demand Review	Too much data from too many SKUs makes addressing critical issues difficult and time consuming	Only Class A SKUs discussed individually* , others by exception
	Step 2: Supply Review		Class B SKUs forecast is updated by FM, freeing up time for discussions on Class A and exceptions
	Step 3: Category S&OP	Firefighting takes precedence over planning	Management by exception and continuous improvement
	Step 4: GM S&OP	Disengaged management	Management leverages Supply Chain to deliver business results

Several Biotech companies are moving to APS enabled processes



Standardization

- One planning process with defined variants
- One planning front-end
- Common wording and parameter settings
- Organizational roles



Transparency

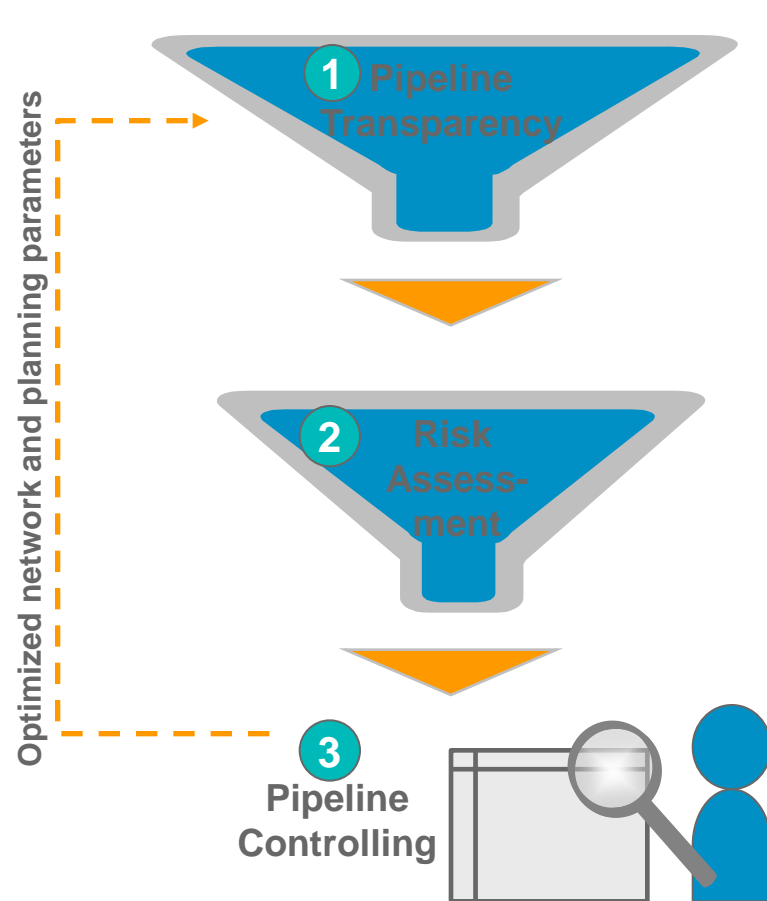
- Visibility of all relevant supply chain stages
- Integrated planning process
- Synchronized information
- Complete sales portfolio in one tool

Advanced Planning

- State of the art decision support methods
- Reduction of manual planning effort
- Alert based planning

APS = Advanced Planning & Scheduling

To optimize service/inventory, multi-echelon inventory management is becoming common



Objectives

- Monitor stock of entire supply chain and define required inventory level throughout the supply chain
- Define service level per pipeline
- Determine supply and demand risks at each stage of the supply chain
- Optimize safety stock across the pipeline
- Implement role of Pipeline Controller with dedicated responsibility for whole pipeline

Inventory transparency & pipeline management example



Transparency

- Express all inventory in API equivalent

	Coverage in month	Cumulated in month
Strategic Raw Material	3.0	3.0
Solution	1.2	4.2
Intermediate 1	1.2	5.4
API Pre-stage	1.6	7.0
API Final Stage	5.5	12.5
Semi-finished Good	0.5	13.0
Finished Good	3.0	16.0

Risk Assessment (focus on safety stocks)

- accumulate the risk through entire pipeline
- evaluate demand & supply uncertainty

	Supply Uncertainty by ...			Demand Demand uncertainty	Max	Future State Combining safety stock	Cumulated
	Sudden supply stop mo	Failure mo	Delivery Reliability mo	mo	mo	mo	mo
Strategic Raw Material	6.0	0.5	3.0	0.8	6.0	2.2	6.0
Solution	1.5	1.0	0.0	0.6	1.5	0.6	
Intermediate 1	0.0	0.1	0.0	0.1	0.1	0.1	
API Pre-stage	2.1	1.0	0.0	0.4	2.1	0.4	
API Final Stage	1.5	0.9	0.0	0.4	1.5	0.4	
Semi-finished Good	2.0	1.5	2.3	0.9	2.3	0.5	
Finished Good	1.3	1.3	1.4	1.8	1.8	1.8	

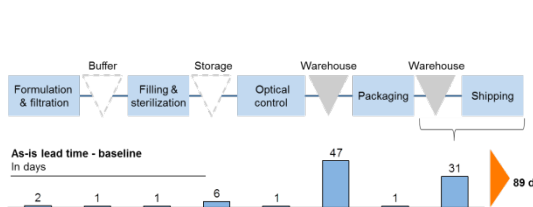
Time to market related initiatives can generate significant cost and inventory reduction



T2M project example – Bayer Facility

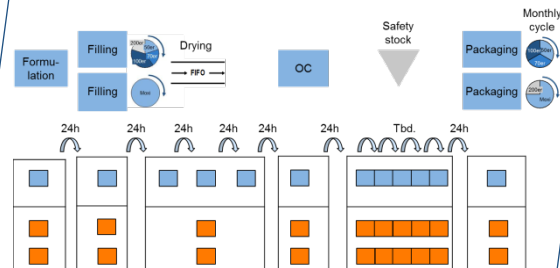
Findings

- High inventory & planning efforts due to
 - Pre-Production
 - Missing synchronization
 - Local optimization
- Bottleneck capacity & high efforts due to
 - Downtimes
 - Change over times
 - Idle times



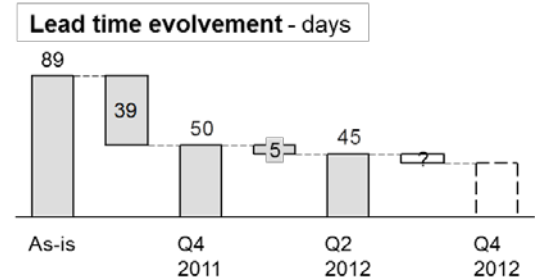
Optimization levers

- Lean material flow model using
 - One “Takt” for all process steps
 - Production wheels
- Plant improvement system
 - KPI cascade (from operator to plant manager)
 - Shop floor improvement process
 - Pilots for change-over and down-time reduction

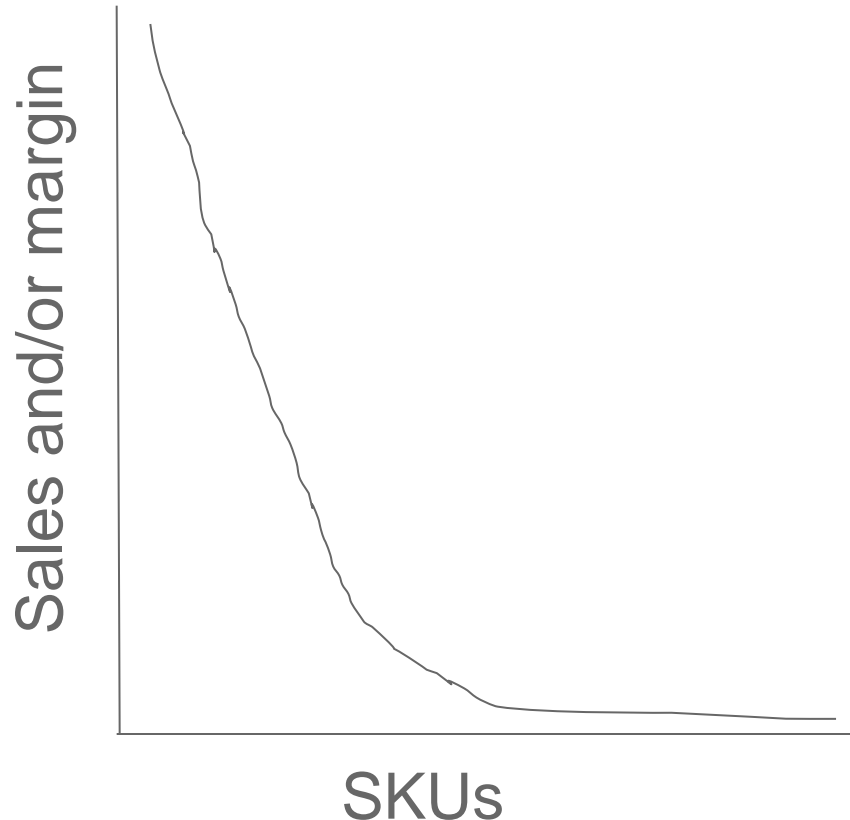


Results

- **Lead time** reduction by **40%**
- **Further potential** identified
- **Inventory** reduction by **46%**
- Further potential for finished goods inventory
- **Costs** reduction by **0.5 Mio €** due to plant improvement system
- **Further cost reduction expected** from standardizing & parallelizing of tasks



SKU management is a key enabler of cost and complexity reduction



1. Usually the top 10% of skus generate 80% of sales and or margin, “tail effect”
2. Partner with commercial colleagues annually to evaluate portfolio and consider alternative strategies
 - Reduce cost through collective makeups or “feature” elimination
 - Consolidate skus
 - Adjust pricing
 - Prune sku
3. Success Factors
 - General Management Support
 - Clear data transparency
 - Process, not one-time even
 - Understand “good” from “bad” sku

Business Process Management

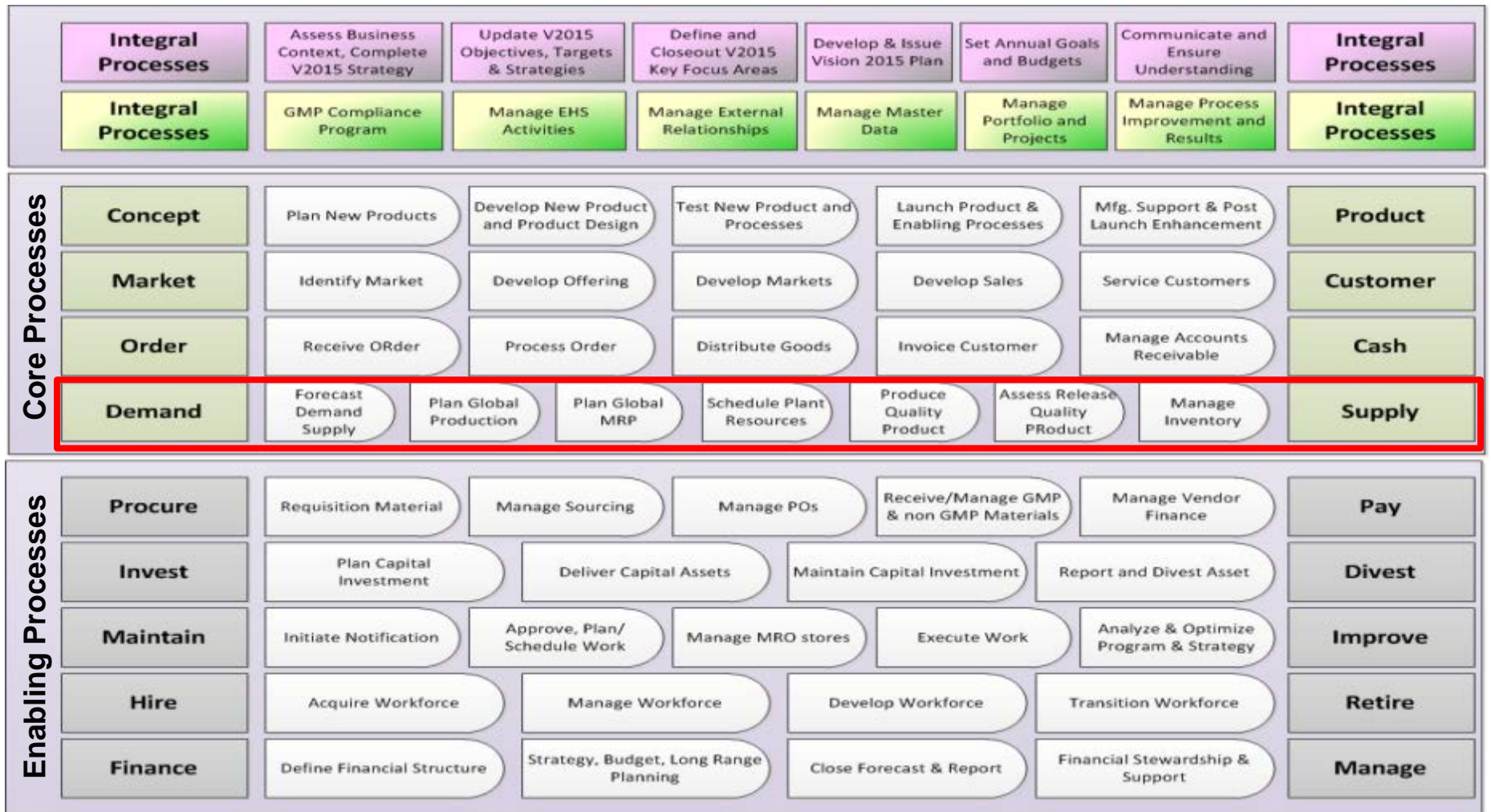
What is BPM?

- A holistic, process-centric approach to managing business
- A management approach that centers around processes and is focused on customer satisfaction and waste reduction by defining, measuring, stabilizing, and improving processes

BPM „Elevator Speech“

- Lead / Manage business from an end to end process view vs our current silo / functional approach
- Define and improve our core processes to :
 - ✓ Increase predictability and efficiency
 - ✓ Deliver top tier results

Business Process Framework



Organizational best practices from CPG Industry



1. Supply Chain Management led by a C-level leader
2. Supply chain organizations include supply chain professionals
3. Specialized supply chain management training programs are being implemented (Bayer Supply Chain Academy)
4. Customer focused supply chain organizations (integrate supply chain professionals with customer supply organization) are starting to appear
 - Cost to serve focused
 - Optimize end to end supply chain



Conclusions

1. In the supply chain planning arena, many CPG best practices have migrated to the biopharma industry
2. Of course, transportation (TMS), warehousing (RF), and procurement (strategic sourcing) best practices have transferred as well
3. The importance of supply chain will continue to increase in the biopharma industry as margins become tighter
4. The leaders will be the ones that “push the envelope” the most!



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Thank you!