

Concurrency as the Umbrella of Best Product Development Practice

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3M

In the News...

Innovation Recognition

Magazine ranks 3M among the world's most innovative companies

At a Glance

BusinessWeek magazine and the Boston Consulting Group jointly produced a listing of the 25 most innovative companies by conducting their 2006 global survey of more than 1,000 senior managers.

3M ranks third among the world's most innovative companies, following Apple Computer and Google, according to an article published in the April 24 issue of *BusinessWeek* magazine.

BusinessWeek and the Boston Consulting Group jointly produced a listing of the 25 most innovative companies by conducting their 2006 global survey. The survey was sent to 1,500 global corporations. More than 1,000 senior executives responded. The survey was composed of 19 general questions, as well as eight optional questions that focused on innovation metrics. 3M was cited for product innovation.



What works....

- Strategy
 - Global; sales in 199 countries/60% OUS
- People
 - 80,000+ and growing
- Process
 - Optimized worldwide manufacturing capability
 - Global NPI Process
- Tools
 - VOC, DFSS, DMAIC, Lean, TQM, etc.
- Technology
 - 50 distinct Technology Platforms and growing



What Things Keep You Up At Night?

- Speed to Market
- Cost
- Quality
- Competition
- Profit Margins
- ?????



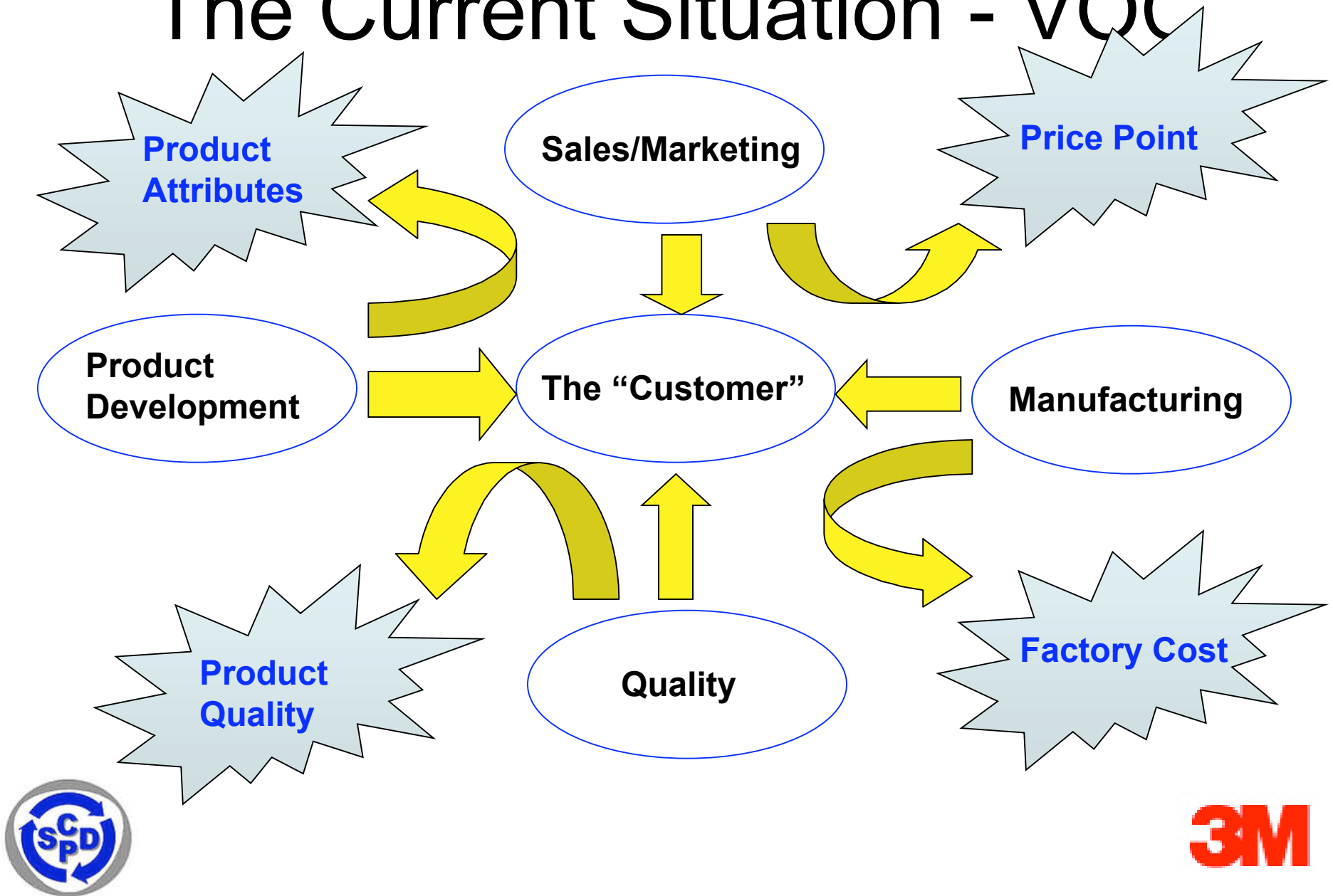
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The Methodology Universe

- Lean
 - 5S, Theory of Constraints (TOC), Kaizen
- Six Sigma
 - DMAIC, DFSS, VOM, VOC
- Quality
 - TQM, SPC
- Idea Capture and Management
- System Thinking
- Concurrent Product Development/Engineering



The Current Situation - VOC

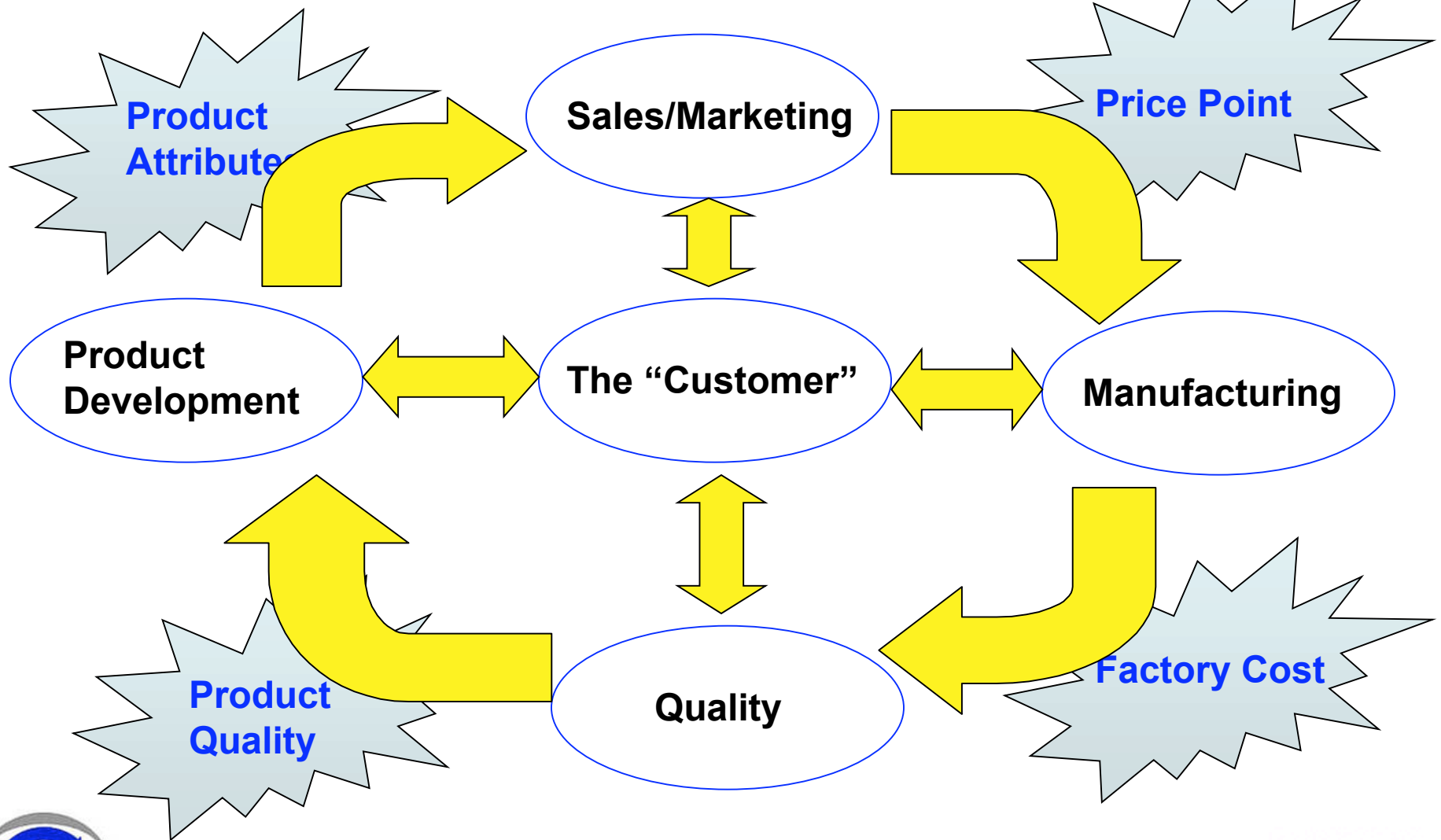


Why the Current Situation Does Not Work....

- **Projects canceled late in process**
- **Too few resources allocated to projects**
- **Lack of product development metrics and incentives attached to product success (sales) vs. patents filed**
- **Global launch execution slow – dribble launch and “launch and abandon”**
- **Process focus rather than milestone focus**
- **Significant lag/wait time in several processes – manufacturing/pilot run scheduling, legal document review, capital equipment needs fulfillment**
- **Risk aversion (little process flexibility)**
- **Sales engagement late in process**



The Concurrent Situation - VOC



Why the Concurrent Situation Does Work....

- **Projects canceled early**
- **Core resources allocated to projects, including sales**
- **Team success and contributions recognized**
 - Patents filed, sales \$, speed to market
- **Launch process coordinated with strategy**
- **Integrated process with milestone focus - context**
- **Lag time mitigated – team resources anticipate**
- **Risk taking maximized – experiment/analyze/decide**
- **Key stakeholders informed early and often**



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The Universe from 10,000 Feet

Concurrency – Product Development & Engineering

Idea Capture & Management

DFSS – Design to Reduce Variability/Increase Delight

System Thinking – Interaction of the nodes

Customer

R&D/Engineering

Six Sigma – Reduction of Variation

Marketing

Lean – Process Optimization

Production Planning

Manufacturing

Sales



What Does Concurrency Mean?

- Proactive Mindset
 - The context for the project
 - Strategy, people, process, tools, technology
 - Keeping the customer in the conversation
- Job broadening
 - Understanding the needs of each function
 - Enhanced communication to multiple stakeholders



Concurrency

- FROM

- Focus on minutiae
- Functional “silos”
- Knowledge exclusion
- Product driven
- Risk averse

- TO

- “Big Question”
- Seamless organization
- Inclusive leadership
- Customer/market driven
- Growth focused



Or...

- Concurrency as the Guiding Principle of Innovation



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