The Evolution of NPD at Lubrizol

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Lubrizol Profile

Lubrizol
Traditional strengths:
- Lubricant additives
- Surface active chemistry
- Transportation markets

Noveon
Traditional strengths:
- Specialty polymers
- Performance coatings
- Personal care markets

**COMMON STRENGTHS:**
- Application technology
- Formulation
- Value-added
- Customized applications
- Performance chemistry

Noveon technologies and core chemistries to Lubrizol products and market channels

Example:
- anti-oxidants

Lubrizol technologies and core chemistries to Noveon products and market channels

Example:
- hyperdispersants in polymers and cosmetics
- skin-care emollients
- specialty additives for coatings
- specialty monomers to personal care
Discussion Scope

• A “Case History Overview”

• Focus on How Approach to NPD has Changed at Lubrizol as our Structure / Environment Evolved

• Will **Not** Cover Detailed Mechanics of NPD Processes
Two Criteria for a Successful NPD Process

• Achieves Business Results

  – DELIVER GROWTH

• Compatibility with Organizational Structure, Environment, and Culture
Financial Cycle for an NPD Project Portfolio

NPD Portfolios Must Deliver Growth to Enjoy Continued Funding Support

SHAREHOLDER RETURN

BUSINESS UNITS

REINVEST IN THE BUSINESS

LAUNCHED PROJECTS

“NEW PRODUCT REVENUE FROM CUSTOMER”

ABANDONED PROJECTS

OTHER FUNDING NEEDS

NPD PROJECT BUDGETS

COMPLETED PROJECT INVENTORY

TERMINATED PROJECTS

WORK IN PROGRESS

FINANCIAL CYCLE FOR AN NPD PROJECT PORTFOLIO

NPD Portfolios Must Deliver Growth to Enjoy Continued Funding Support
Previous Structure

Lubrizol

- Bus. Units
- Operations
- R&D
- Other…

Current Structure

Lubrizol

- Lubrizol Additives
- Sales / Mktg
- R&D

- Operations
- Other…

- Noveon
NPD – Lubrizol’s Early Years

• Rapid Industry Growth – “Steady Diet” of Technology Breakthroughs Fueled Growth in Existing Markets

• Large Invention / Innovation Engine Created

• “If R&D Invents it, the Business Can Sell it”
  – Also Developed Organizational Dependence on Chemical Invention to Solve Problems
Maturing Industry Implications

• Change in Business Strategy to Increasingly Serve Existing Revenue Streams through New Formulations, not New Components

• Business Growth Strategy Expanded into Adjacent Markets – Including Acquisitions

• Increasing Competitive Intensity Increased Business Focus on “Today”
R&D / NPD Response

• Opportunity to Focus the Chemistry Invention / Innovation Engine on New Applications

• R&D Focus on Supporting “Today” and Developing Opportunities for “Tomorrow”

  – **BUT** – Technology “Push” Projects Result in Unsatisfactory Commercial Success

• NPD Model and R&D Needed to Change
New Vision Launched in 2000

• Senior Management Defined “Vision Destinations” to Improve Alignment of Growth Efforts with Strategy

• Created Small “Business Incubators” for New Destinations.

• R&D Created Internal “Destination Owners” to Partner with Business Units on NPD Project Areas and Manage R&D Project Portfolios
Business Environment – Complicating Factors

• Competitive Intensity in “Mainline” Businesses Made it Difficult to Fully Engage with Longer-Term NPD Projects

• Business Incubators Were Embryonic – Lacked Size and Established Credibility in New Applications

• Achieving NPD Commercial Success Still Difficult Despite Increased Use of NPD Mechanics / Tools
Noveon Acquisition Brings New Structure – and a New Approach to Managing NPD

- Business Units have Direct Accountability for Growth / NPD Investment Results
  - Mainline Businesses More Fully Engaged in Commercial Development Activity for NPD Projects
- R&D “Key Account Managers” (Technology Business Partners)
Summary Impact of Business Structure Evolution on NPD Efforts

Lubricant Additives → Add Adjacent Markets → New Vision Destinations → Noveon Acquisition (New Structure)

Strong Technology Leadership (“Push”) → Much Greater Business Leadership (“Pull”)

R&D Develops Opportunities For Business Units → R&D Contributes to Business Unit Strategy

“Grow the Business” Separate from “Run the Business” → NPD Growth Responsibility Integrated in Main Business Functions

100% Central R&D → Mostly Business Unit R&D
Conclusions

• The Business Impact Goals of NPD are a “Constant” – DELIVER GROWTH

• The External Business Environment and Organizational Structure Influence the Approach to – and Success of - NPD Portfolio Management