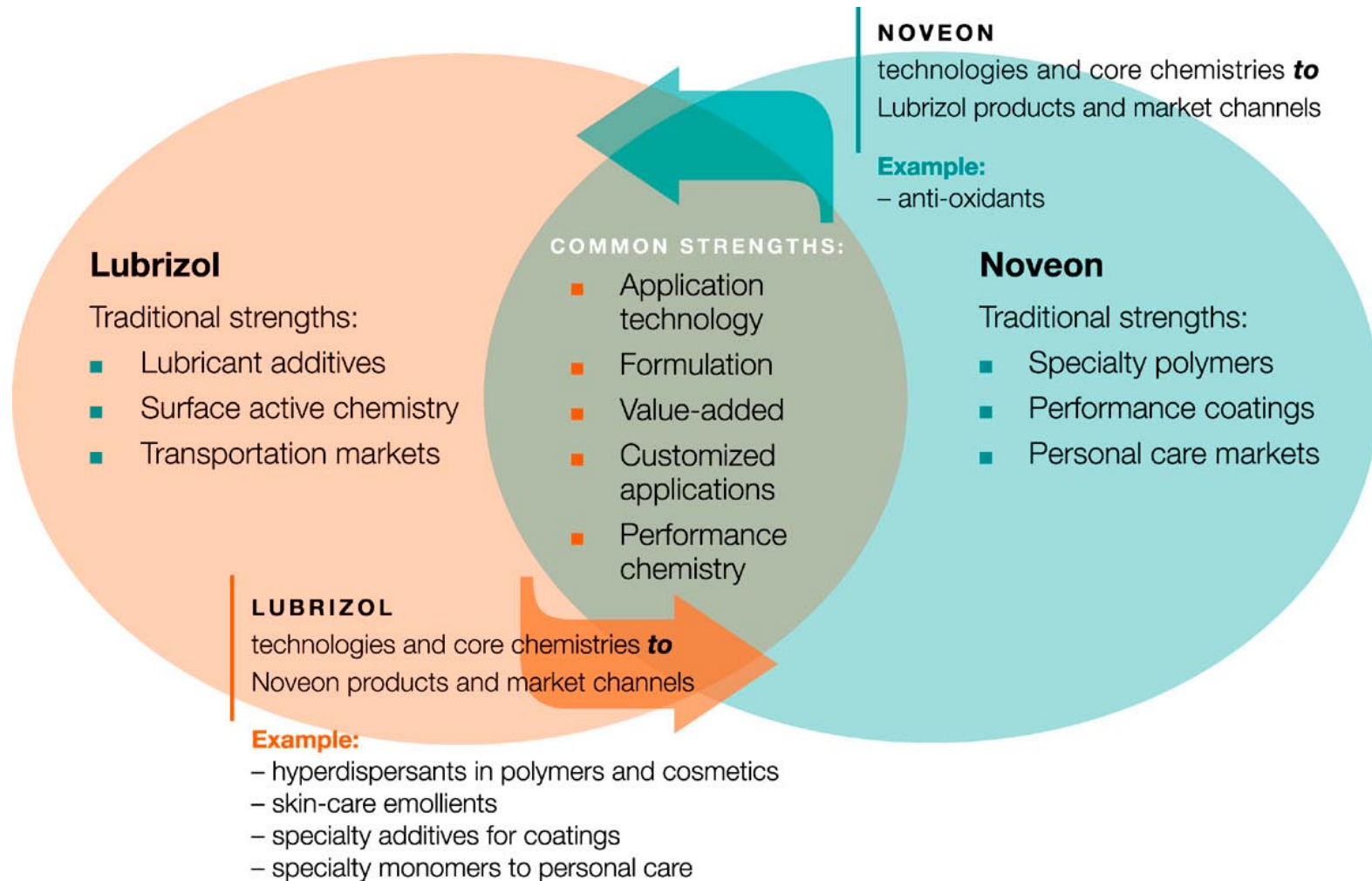


The Evolution of NPD at Lubrizol

Brian R. Cunningham

November 8, 2004

Lubrizol Profile



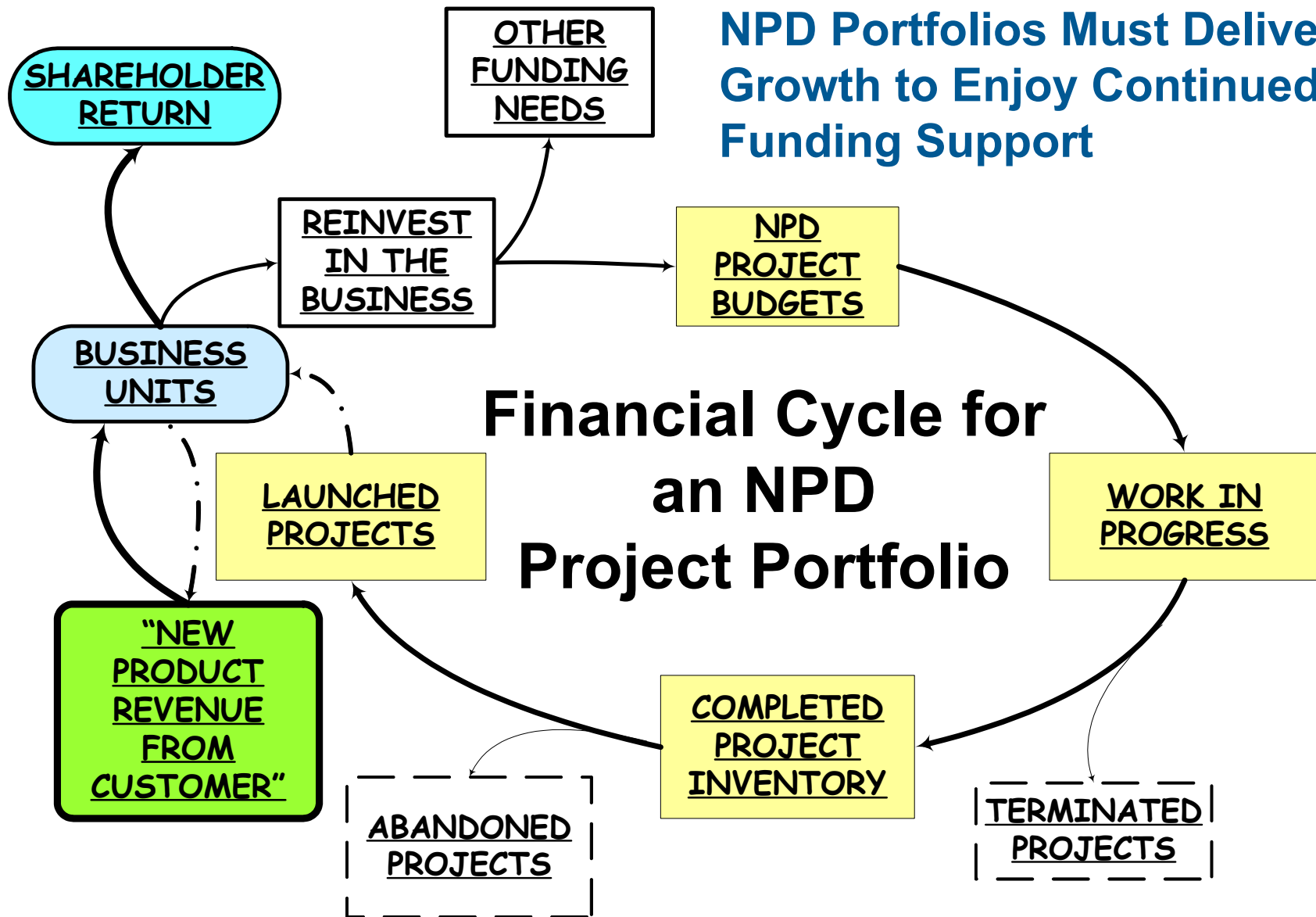
Discussion Scope

- 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

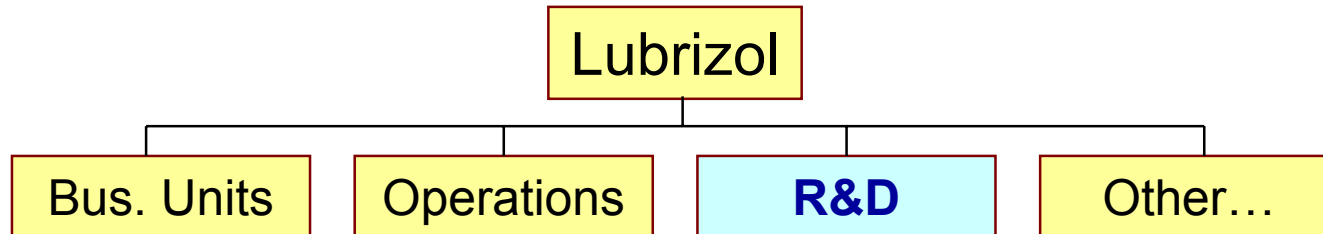
Two Criteria for a Successful NPD Process

- Achieves Business Results
 - ***DELIVER GROWTH***
- Compatibility with Organizational Structure, Environment, and Culture

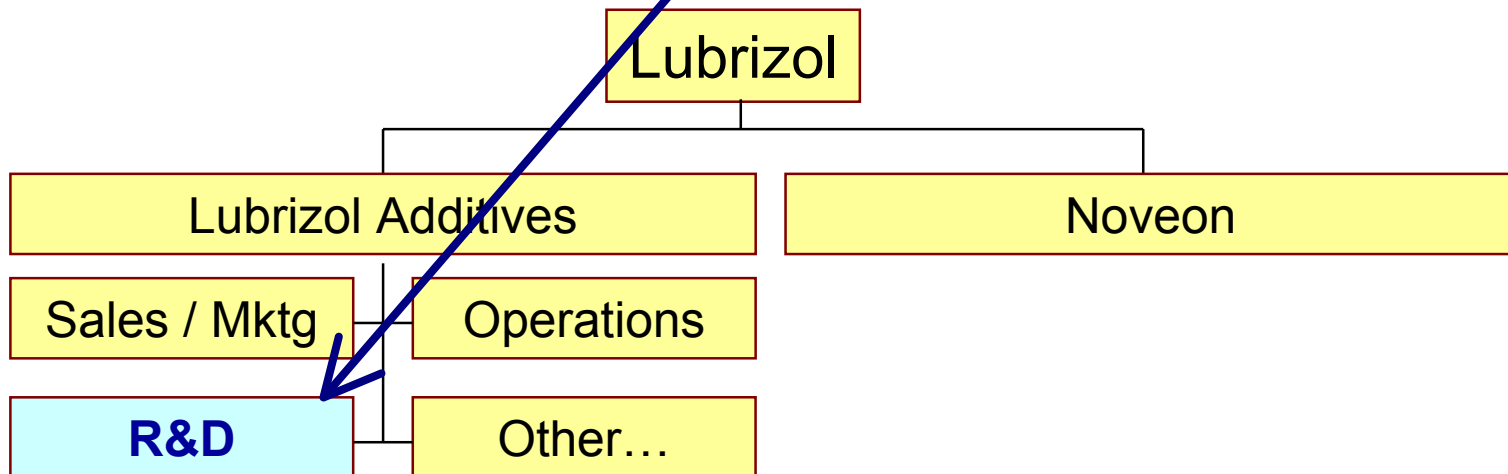
NPD Portfolios Must Deliver Growth to Enjoy Continued Funding Support



Previous Structure



Current Structure



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

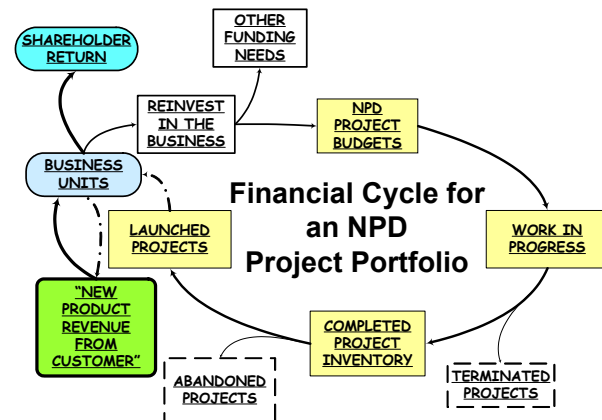
- Opportunity to Focus the Chemistry Invention / Innovation Engine on New Applications
- R&D Focus on Supporting “Today” and Developing Opportunities for “Tomorrow”
 - ***BUT*** – Technology “Push” Projects Result in Unsatisfactory Commercial Success
- NPD Model and R&D Needed to Change

New Vision Launched in 2000

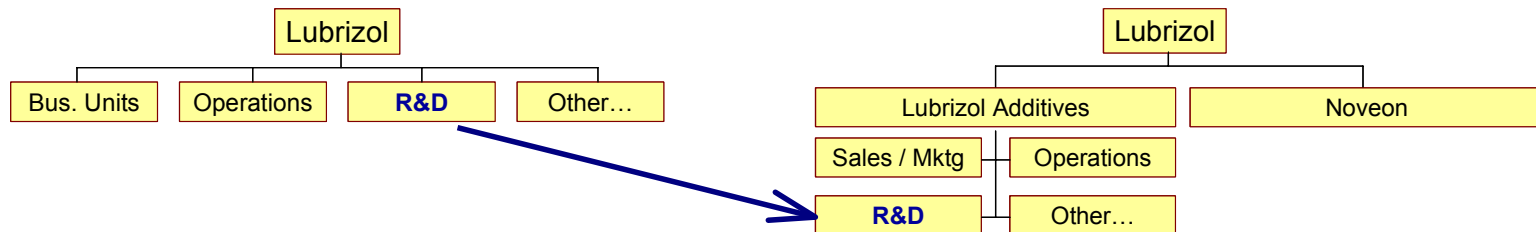
- Senior Management Defined “Vision Destinations” to Improve Alignment of Growth Efforts with Strategy
- Created Small “Business Incubators” for New Destinations.
- R&D Created Internal “Destination Owners” to Partner with Business Units on NPD Project Areas and Manage R&D Project Portfolios

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

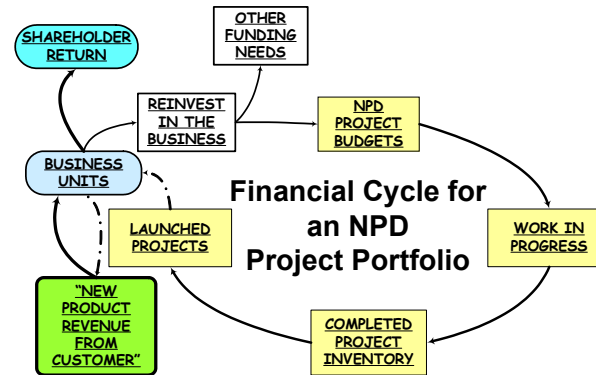
100% Central R&D



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

