



Leveraging Technology Access Through Venture Capital Investing

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The Energy Value Chain



Explore
Develop



Produce



Ship

*Commodity
economics*



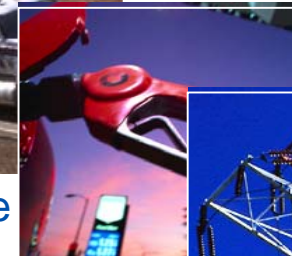
Refine
Blend



Store
Pipe

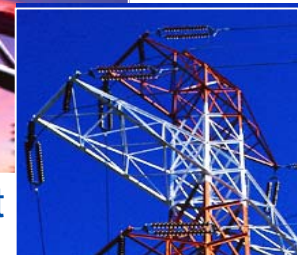


Distribute



Market

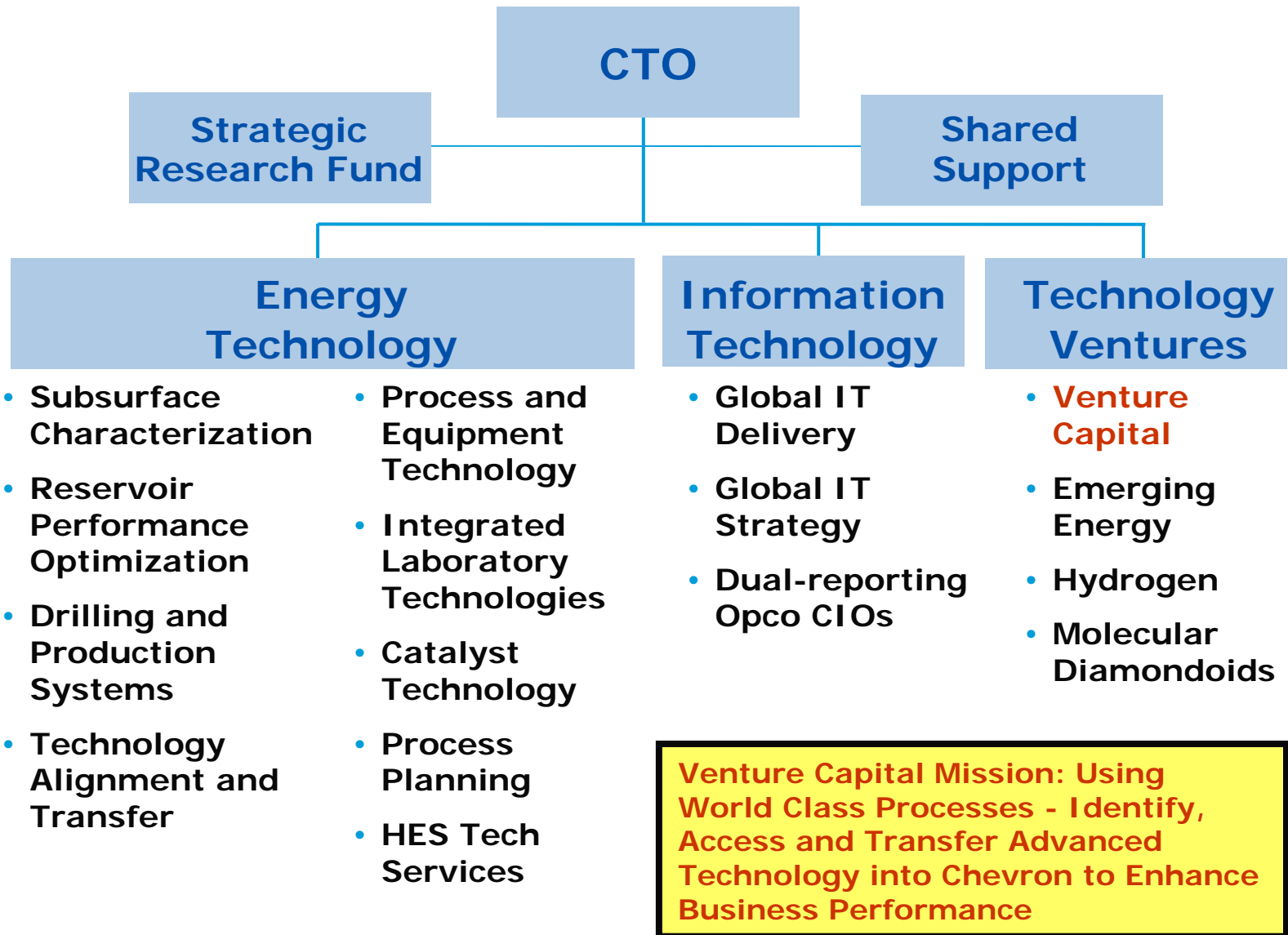
Margin economics



- Long-lived assets and liabilities
- Capital- and technology-intensive
- Technology Innovation Critical for Growth

Performance is driven by volumes, units costs and decision quality

Chevron Technology Organization

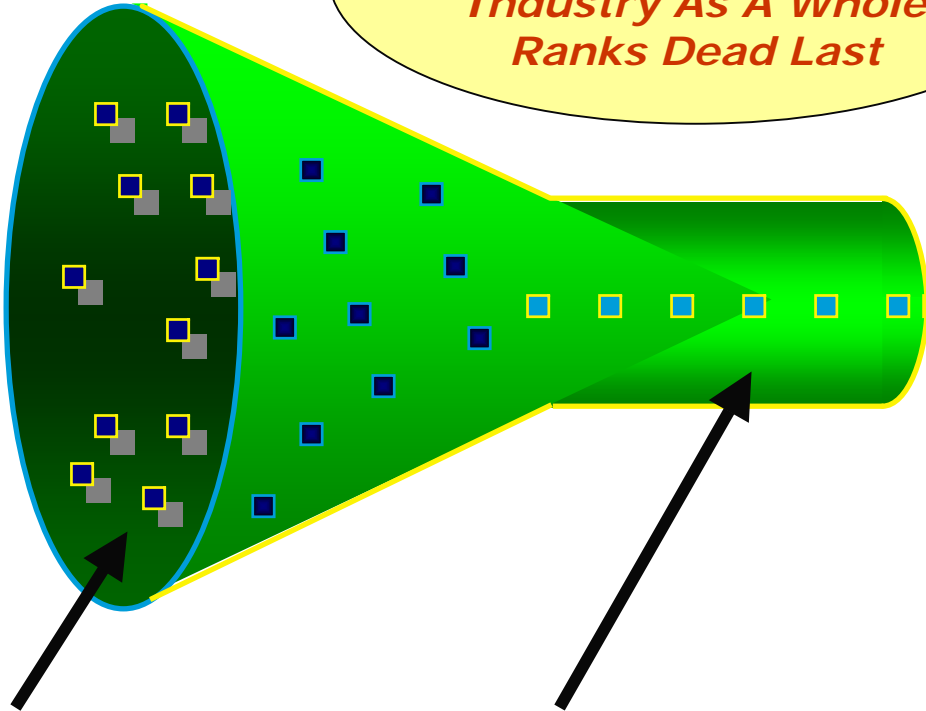


Closed Innovation System – All R&D Is Done In House



In Closed Innovation, The Global Energy Industry As A Whole Ranks Dead Last

Science & Technology Base

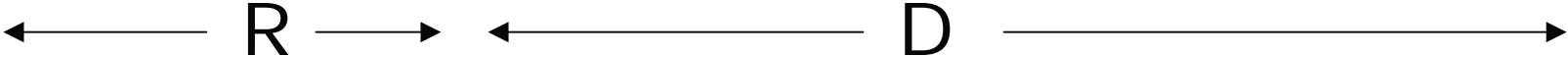


The Market

Research Investigations

Development

New Products /Services



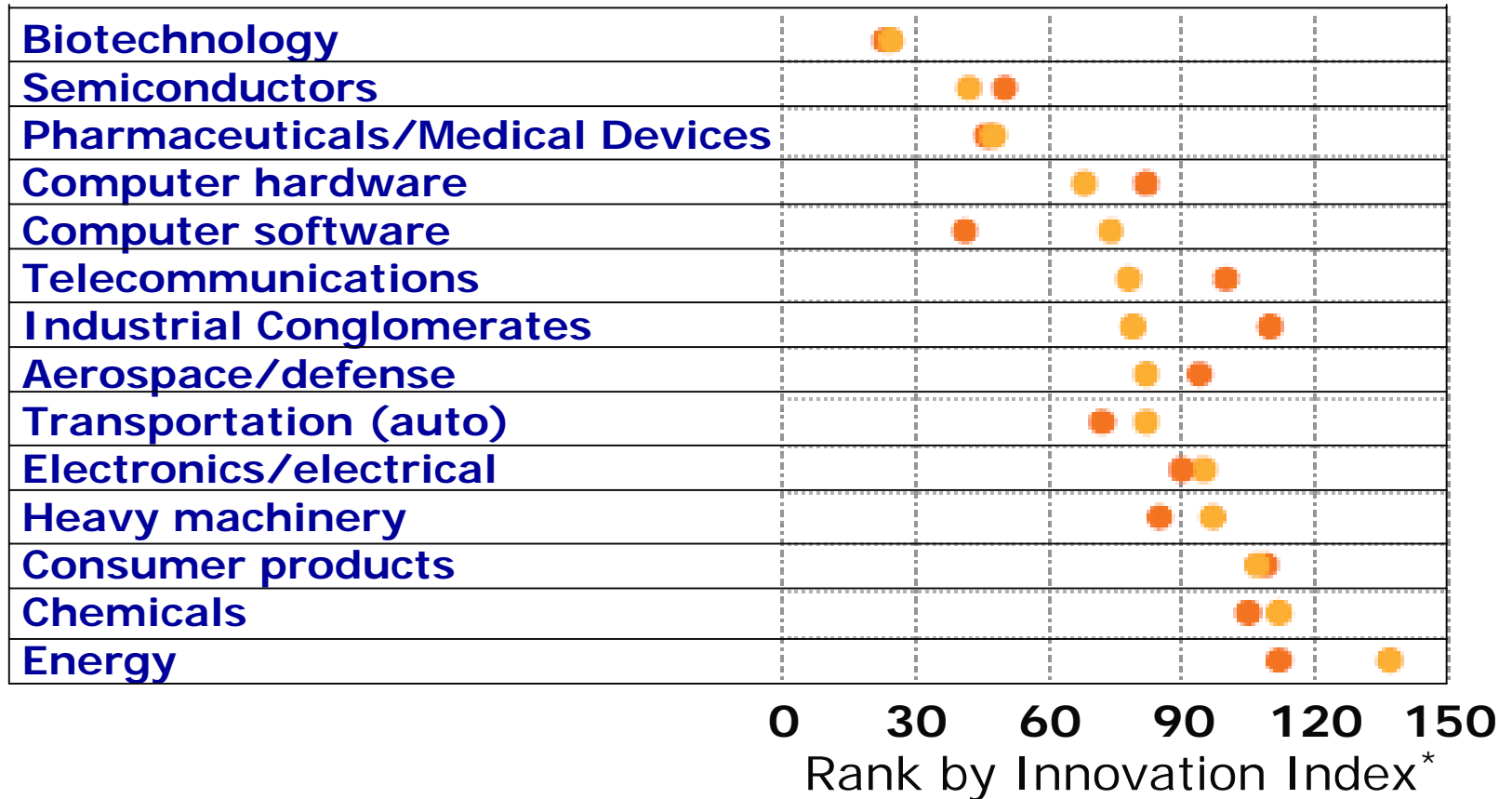
After Chesbrough - 2003

2004 Worldwide Innovation Index Based On *Internal* R&D Spend Only



● 2003 ● 2004

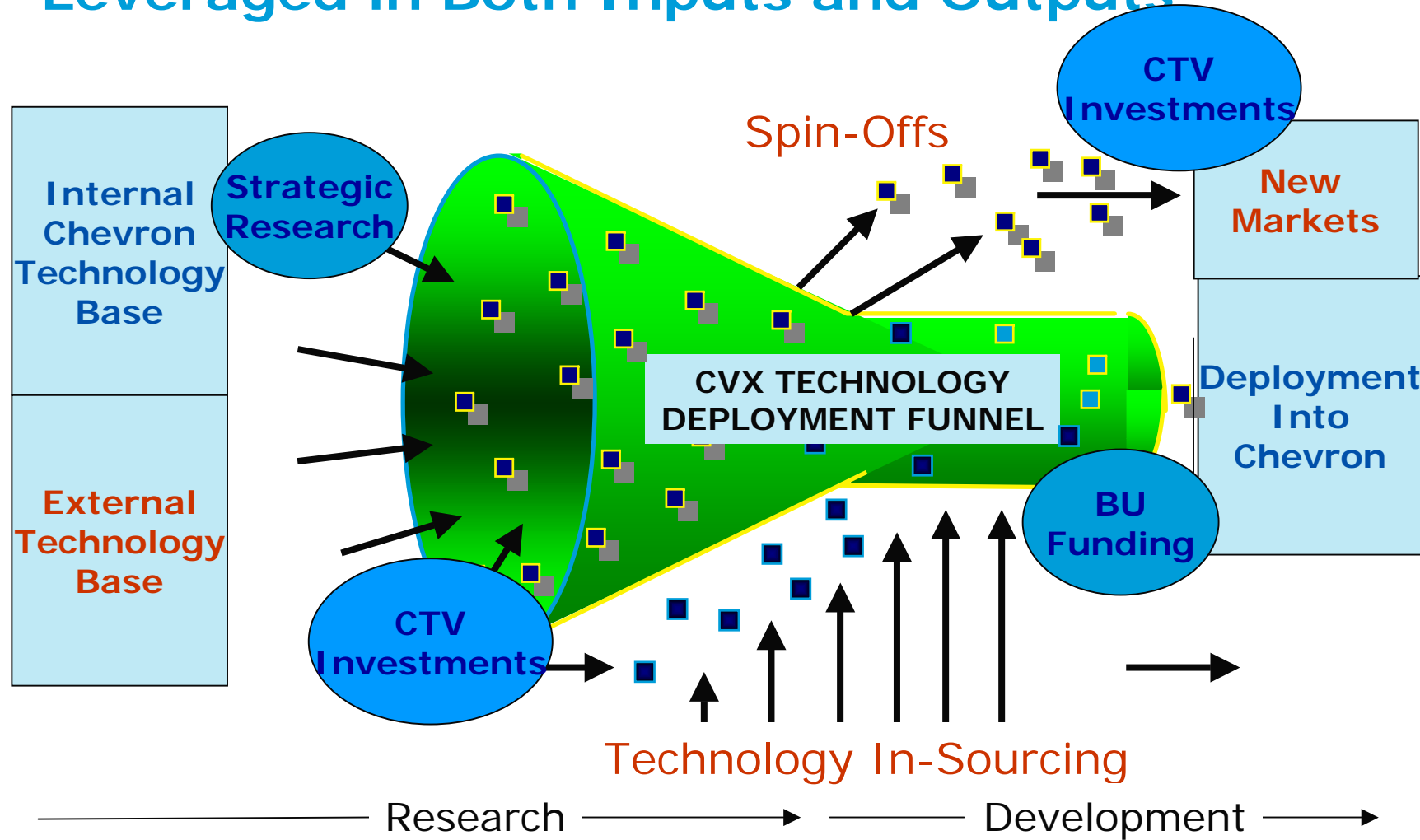
Leaders —————> Followers



*Based on R&D spend, growth, spend/revenue, spend/employee

Source: Standard And Poor's; Technology Review 2005 R&D Scorecard

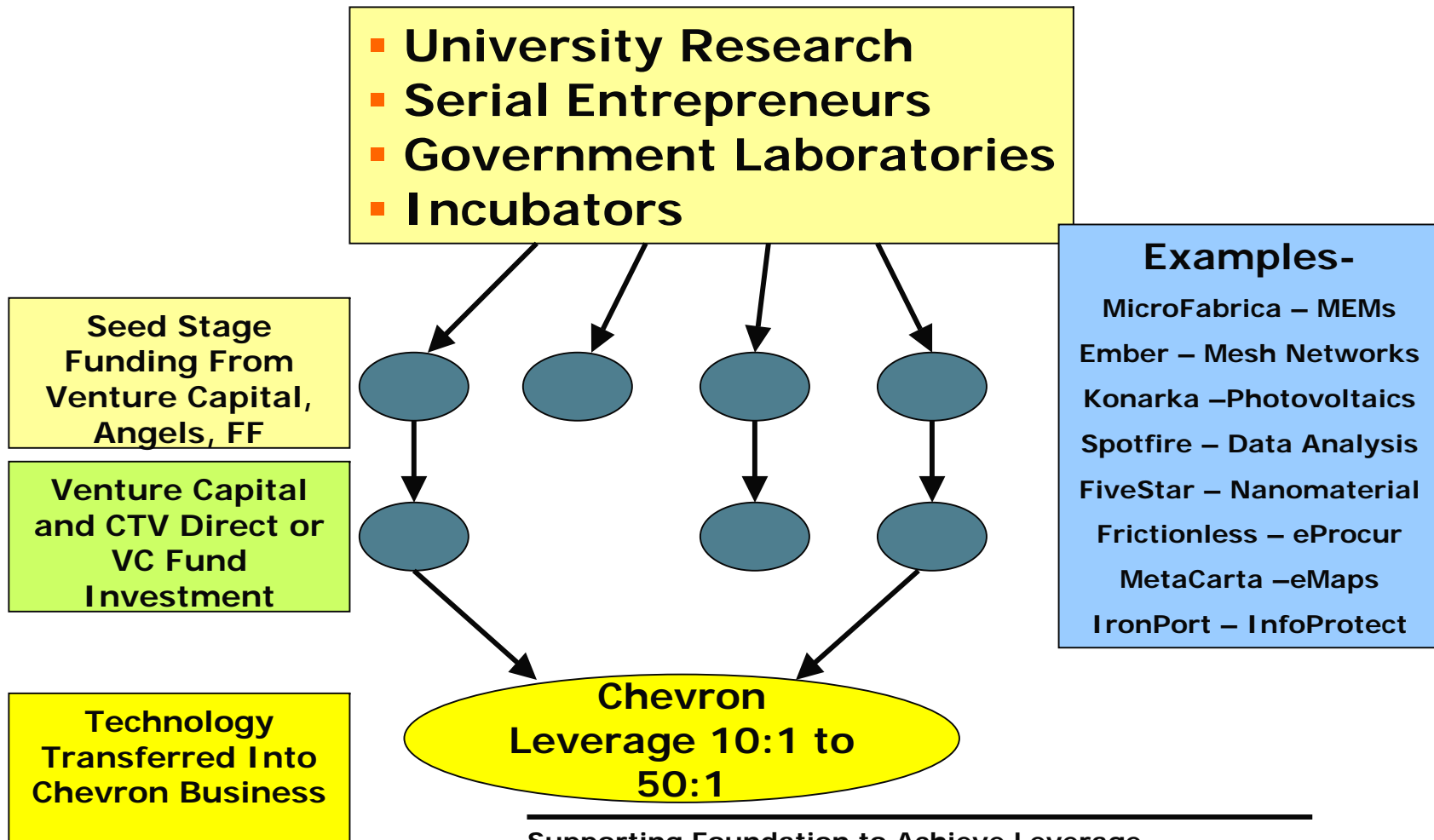
Open Innovation System – R&D Is Leveraged in Both Inputs and Outputs



Corporate Venture Capital accesses Technologies and Markets not accessible in a Closed Innovation System

After Chesbrough - 2003

Leverage Money, People and Time to More Effectively Identify, Access and Transfer New Technology



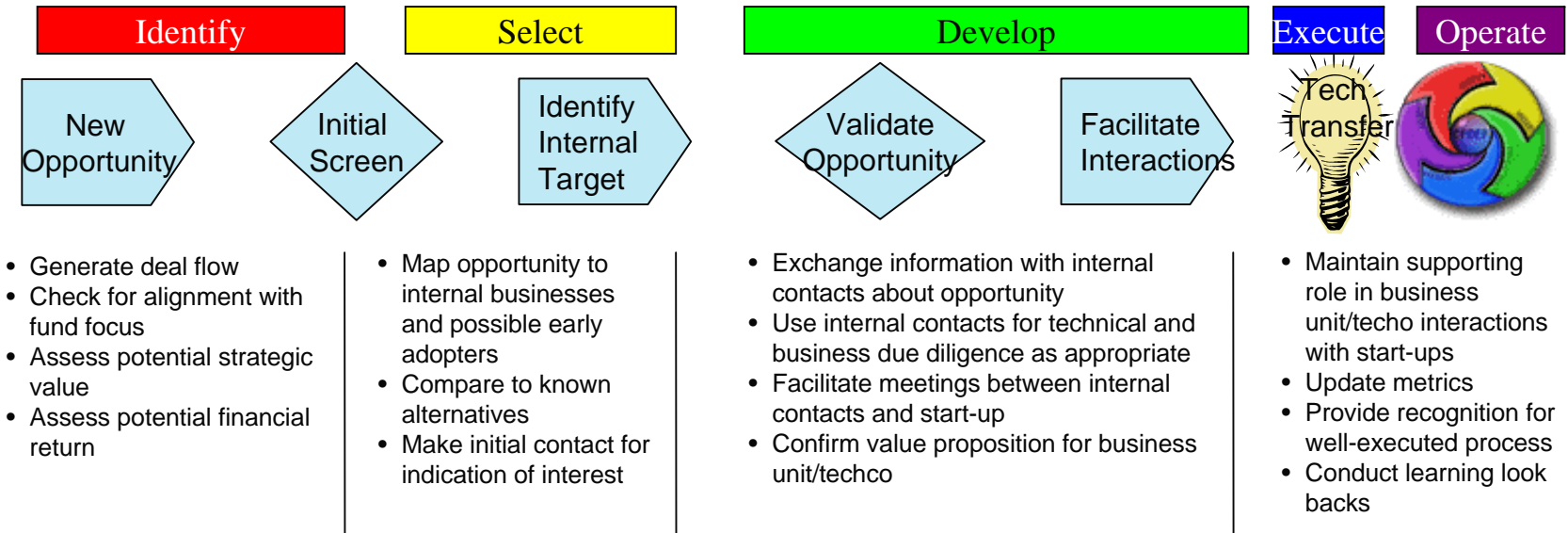
Supporting Foundation to Achieve Leverage

- Strong VC Network – Co-investors and Quality Deal Flow
- Partnership with Portfolio Companies, Universities and Gov't
- Stay in Game for the Long Haul – Build VC Brand
- Use World Class Processes

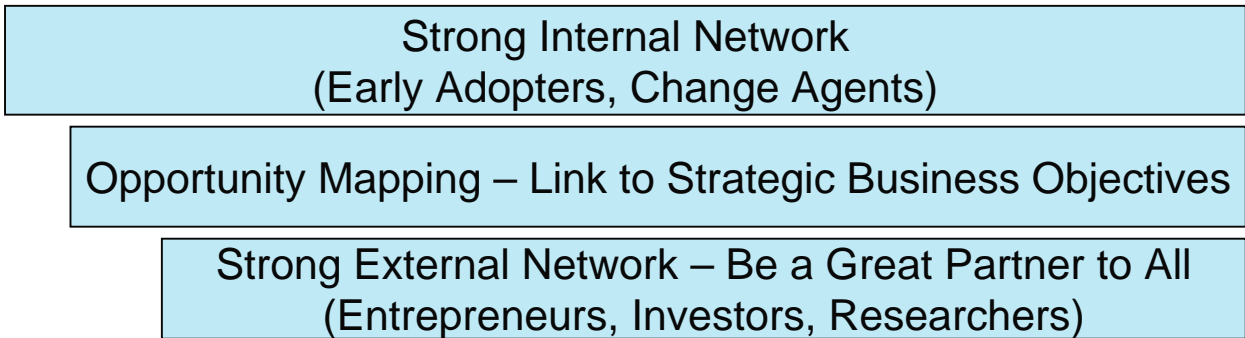
A Process For Transferring Technology Through Corporate Venture Capital



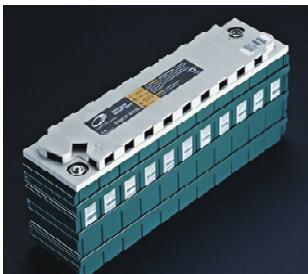
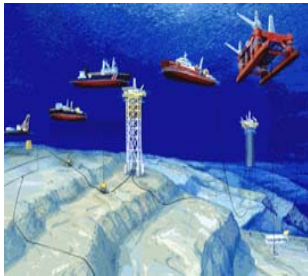
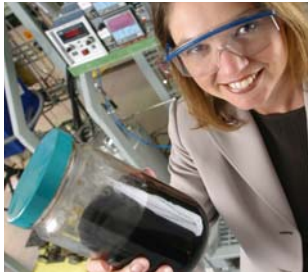
The Process: From Opportunity to Execution



The Foundation: Key Supporting Elements



Strategic Technology-Enabled Business Objectives -> Drives Technology Focus



- Heavy oil extraction and processing
- Deepwater exploration and production
- Global gas business development
- Advanced energy business development
- Incident-free operations
- Zero-impact environmental performance



**Chevron Venture Capital
Investment Focus**

Chevron Technology Ventures: Diversifying The R&D Portfolio



Traditional

- Proprietary R&D
- Contract R&D
- University consortia
- Industry joint ventures
- Industry-government partnerships

Enhanced

- Venture capital investments
- Technology business development
- Formal industry-university partnerships and joint ventures

Challenges For Energy Technology Companies



Customer market

- Very large, but very narrow
- Dominated by a few giant companies
- Competitors are also partners in many ventures

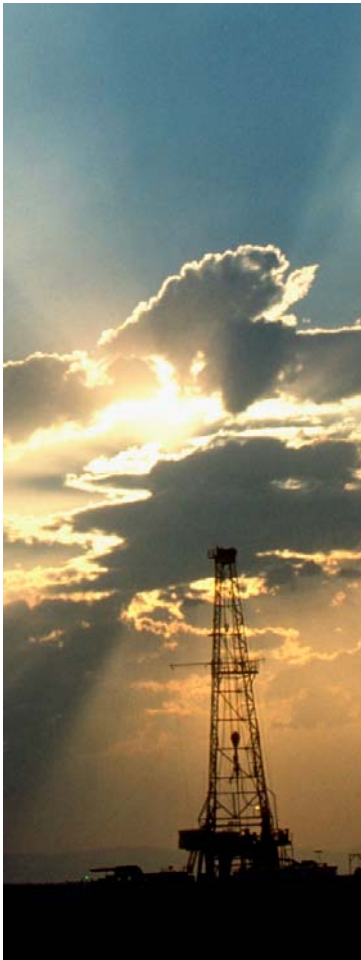
Energy technology business model

- O&G customers will generally only pay cost-plus
- Valuations for new companies are very modest

Research & development model

- Low internal R&D intensity
- High adaptation and application intensity
- Largest customers are also the largest R&D spenders
- Integration value and repeatability are often the primary drivers
- Costs are always a factor and global support is essential

Opportunities In Energy For Emerging Technology Companies



- Venture Funding – More Than Adequate
- Focus on Niche Markets
 - Upgraded substitution products
 - Adapt technology from another vertical with joint development agreements
 - Bundle in an integrated offering with a major technology supplier or energy company
- Master Interaction Complexities