



Environmental Roadmapping

NCMS Annual Technical Conference

Orlando, FL

May 4, 1998

Discussion Topics

- Where are we going?
 - The environmental end point
 - Sustainability and growth
- How do we get there?
 - Environmental roadmaps
 - The environmental business case
 - The environmental drivers

The Environmental End Point

- What is ‘optimally clean’?
 - Criteria:
 - Health and environmental effects (risk-based)
 - Feasibility (technology-based)
 - Political (choice-based)
 - Ideological (dogma-based)
- Self-defeating improvement?
 - Tradeoffs

Sustainability and growth

- Accommodating growth in a finite system
 - Capture market share
 - Increase process efficiency
 - Close loops (industrial ecology approach)
 - Create less resource-intensive products
 - Develop new resources (extend limits)
- Macro- and Micro-sustainability

Environmental roadmaps

■ Relevance

- Unpredictable compliance targets
- Core competence not environmental
- 'No regrets' options

■ Examples

The environmental business case

■ State of the art

- Full environmental cost accounting - issues:
 - apportioning to product
 - integration paradox
 - externalities paradox
 - avoided costs
- Life cycle analysis issues

The environmental drivers

- What are they?
 - Economic:
 - cost reduction
 - return on investment
 - market advantage
 - Legal:
 - compliance
 - liability avoidance
 - Social:
 - corporate image
 - public relations
 - corporate citizenship
- What should they be?

Points raised during session

- Need for global approach
 - Industries can move offshore to avoid compliance drivers
- “Open” vs. “closed” roadmaps
 - Open: specifies drivers and needs
 - Closed: specifies some solutions and excludes others
- Need for cross-sector environmental roadmap -- nobody doing it now.