

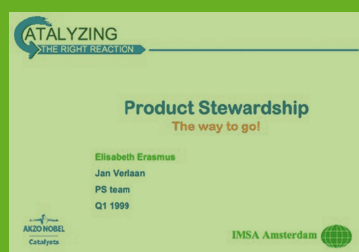


IMSA AMSTERDAM

Akzo Nobel Catalysts Product Stewardship 1998-2001

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History of preceding Akzo Nobel - IMSA projects

1987: Local conflict resolution with Diosynth Oss.
1988-1990: Comprehensive environmental policy developed with Akzo Delfzijl.
1995-2001: General sustainability and product-stewardship workshops and consultancy at corporate level.
1996-1998: Product stewardship developed with Akzo Nobel Coatings.

What are catalysts?

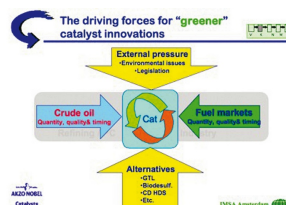
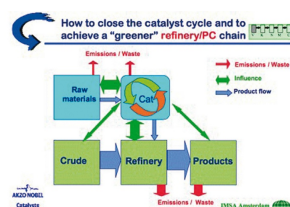
Catalysts are substances that are used in small quantities in chemical processes, such as oil refining, to improve the characteristics of the process, such as energy use and reaction speed. They are not a functional ingredient of the end product. Nevertheless they might end up in waste or emissions, causing environmental problems, and can often be recovered.

Problem

- How to assign priorities in the enormous list of issues?
- What are the opportunities?
- How to deal with different views internally, externally and between global regions?
- How to motivate line management and employees?

Approach

• Vision: scope is to close the catalyst cycle and green the refinery chain. The largest opportunities for environmental improvement lie within the use phase: improving catalysts to improve the environmental characteristics of the oil product chain. Catalysts determine what crudes can be used, they influence emissions and waste of the refining process and of product use.



- Ten external and ten internal interviews are conducted.
- IMSA toolkit is applied:
 - IMSA policy cycle is used as overall process model
 - Four sails model is applied to order actions: commitment, incentives, innovations, checks
 - Issues are inventoried and priorities assigned
 - Actions are based on issue management and identified opportunities.

Results

- Policy is formulated and integrated in quality program and product development.
- Education & training program for employees.
- Internal responsibilities are assigned, employees are encouraged to act.
- HSE information is shared with customers and suppliers.
- Proper handling, use & disposal is fostered with distributors.