



# **Ecological Optimization of the Value Chain for Consumer Goods and Sustainable Development**



**Khairul Naim Bin Adham**  
**KKEF Young Environmentalist Award 2005**



# Systain Consulting GmbH





## Systain Consulting GmbH

- Attached to Systain Consulting in Hamburg, Germany from 27th August to 10th September 2005 under the supervision of Dr. Joachim Slinger the Managing Director
- Systain Consulting is a member of OTTO Group – one of the world's largest trading and service groups with 86 companies in 21 countries and 37 purchasing offices
- Opportunity to work together with the consultants from Systain Consulting to provide consulting service in sustainable management based on economy, ecology and social harmonization
- Ideal starting point for me to obtain first-hand information and gain greater understanding on how to integrate environmental and social standards in the management process

# German Companies

- The visit to Beiersdorf AG, Shell Refinery Harburg and Axel Springer AG enabled me to gain an insight into the German company's best practice in line with the environmental protection
- Pursue environmental activities as a means for improving competitive edge and operational efficiency, reducing production costs and developing new products
- Proactive in their efforts to protect the environment by appointing environmental officers, obtaining certifications such as ISO 14000 and Eco-Management Audit Scheme (EMAS), drawing up internal environmental guidelines and issuing environmental reports





## The House of the Future

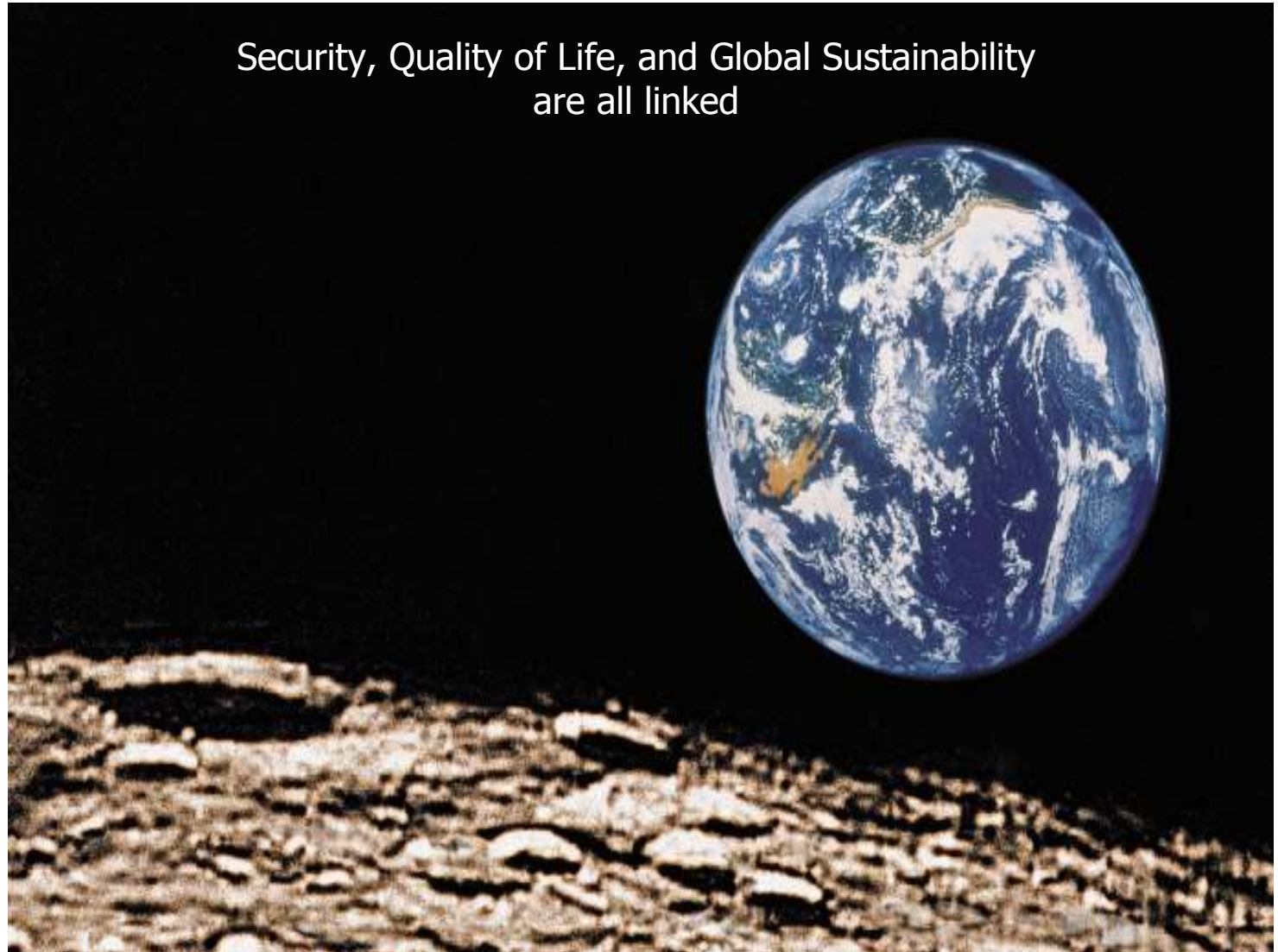
- International model project – accommodates some 20 non-profit associations (INEM, BAUM, NABU etc.) together with companies on the borderline between environment and commerce, and give them the added value of mutual synergy
- Open by Dr. Georg Winter (pioneer in environmental management – German Environmental Award 1995)
- Design systematically meeting environmental principles and became the first building to receive the Eco-Building Pass for environmentally sound building





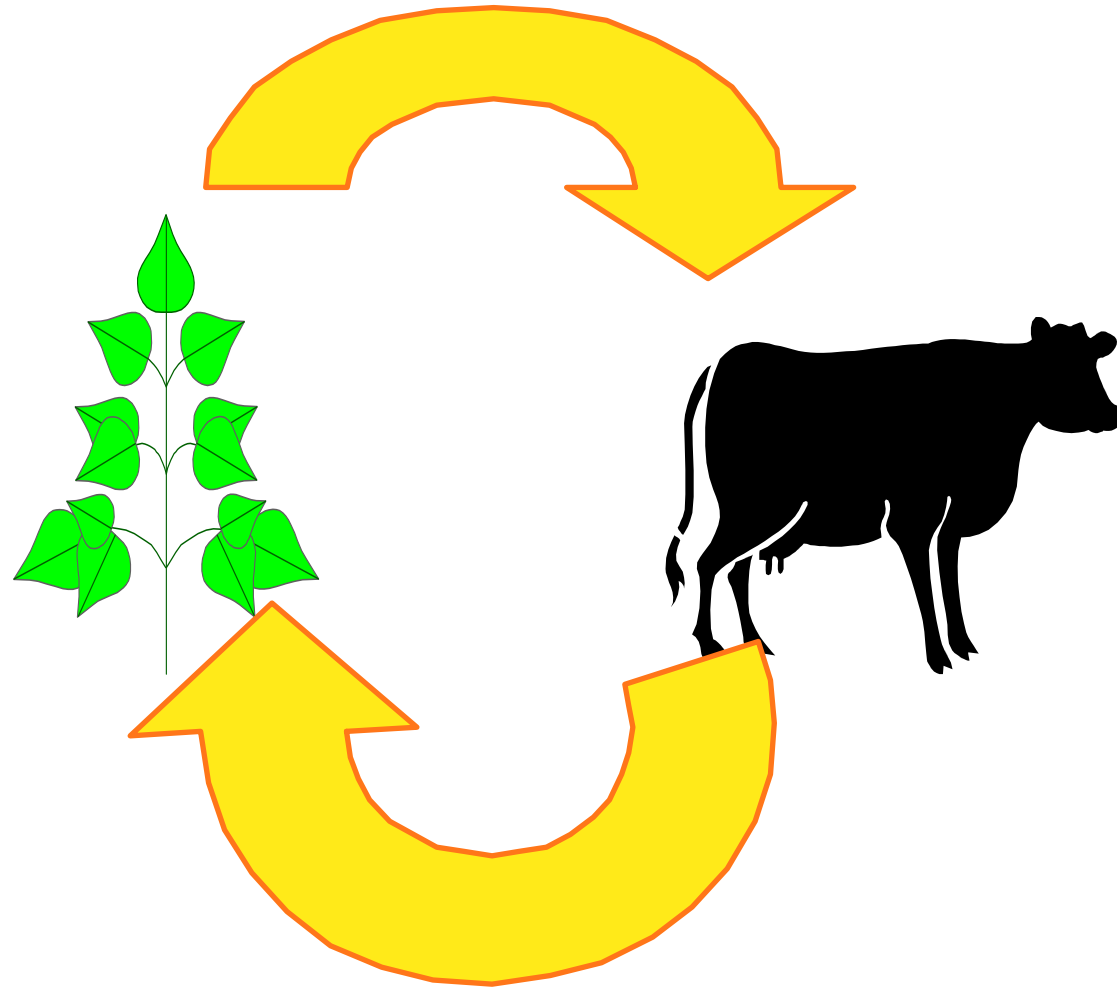
## The Earth is One System

Security, Quality of Life, and Global Sustainability  
are all linked





## Materials Flow



**In cyclical natural systems, waste does not exist  
Waste = Food**



# Linear Industrial Processes

**Waste is created faster than it can be reconstituted to quality resources**  
**Take-make-waste**



**It is estimated that 99% of the original materials used in the production of, or contained in, the goods become waste within 6 weeks of sale**



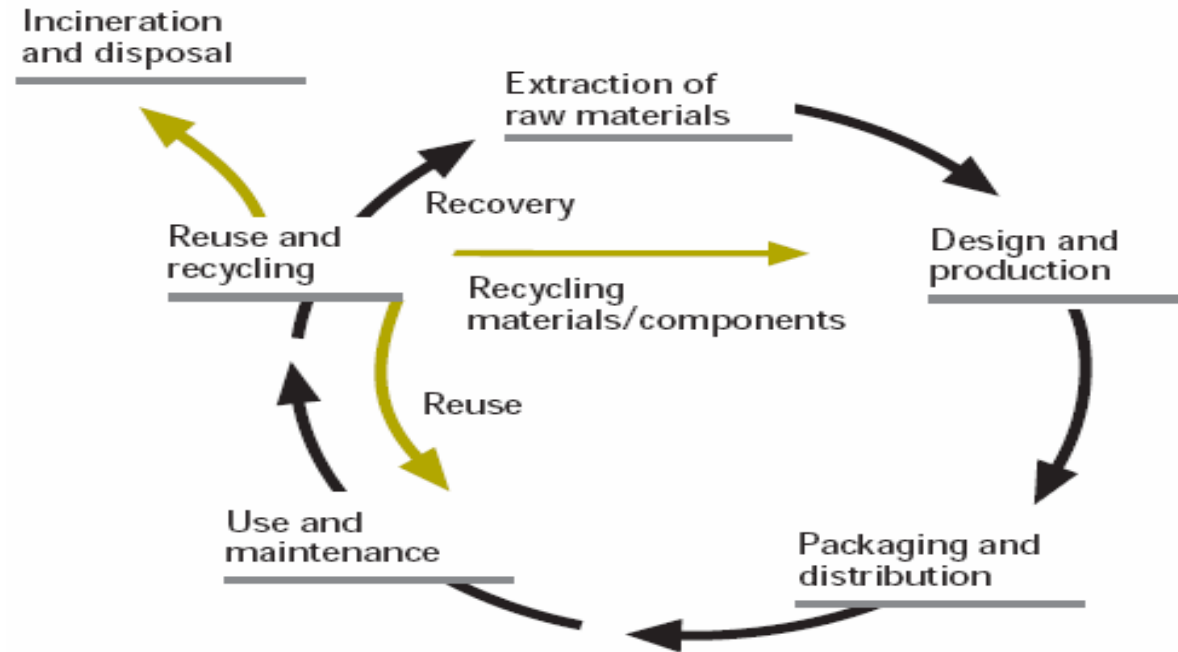
# Ecological Optimization

- Ecological and social considerations must be optimized for all products and along the entire value chain
- Ecological optimization as one of the environmental management tools can increase profits and ensure the long-term survival of a company through cost-cutting, improved reputation, increase sales, reduced risks and motivated employees
- Ecological optimization could be done at all levels of product development and production: by designing for frequent reuse and recycling, by producing with less waste and fewer emissions and by reducing transportation and packaging
- The holistic understanding of ecological optimization is very important, as we are a part of the world in which we live





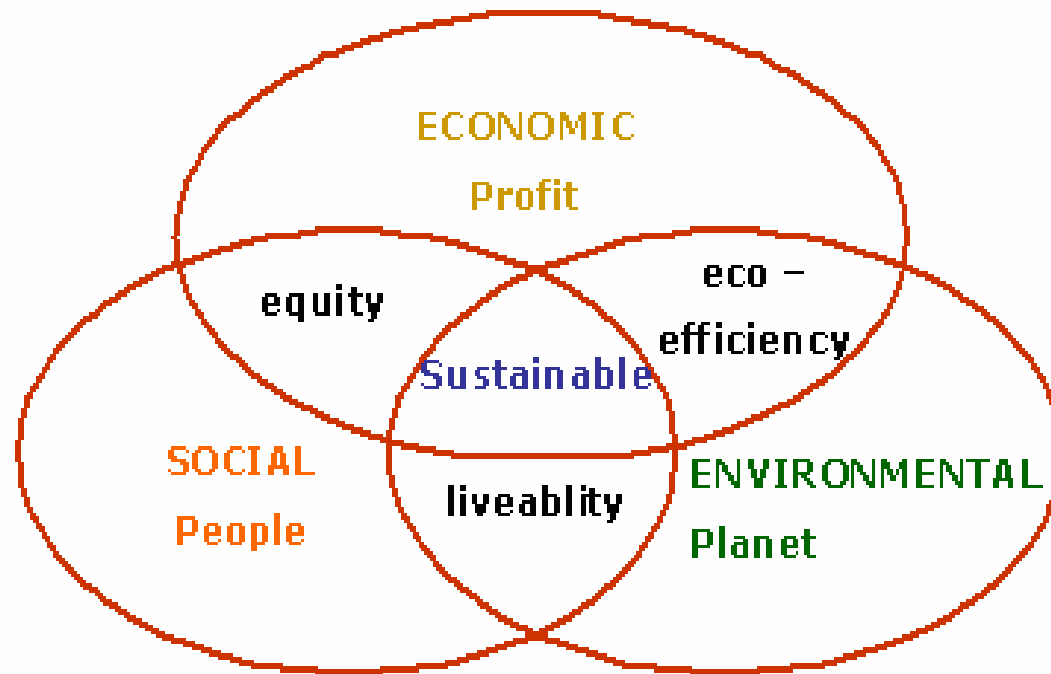
# Ecological Optimization Thinking



- Reduce resource use and emissions from/to the environment as well as to improve the social performance in various stages of a product's life
- Expands the traditional focus on manufacturing processes to incorporate various aspects associated with a product over its entire life cycle



## Sustainability and Triple Bottom Line



**In the business community sustainability is coined 'the triple bottom line', expressing that industry has to expand the traditional economic aspects to include environmental and social dimensions - to create a more 'sustainable business'**

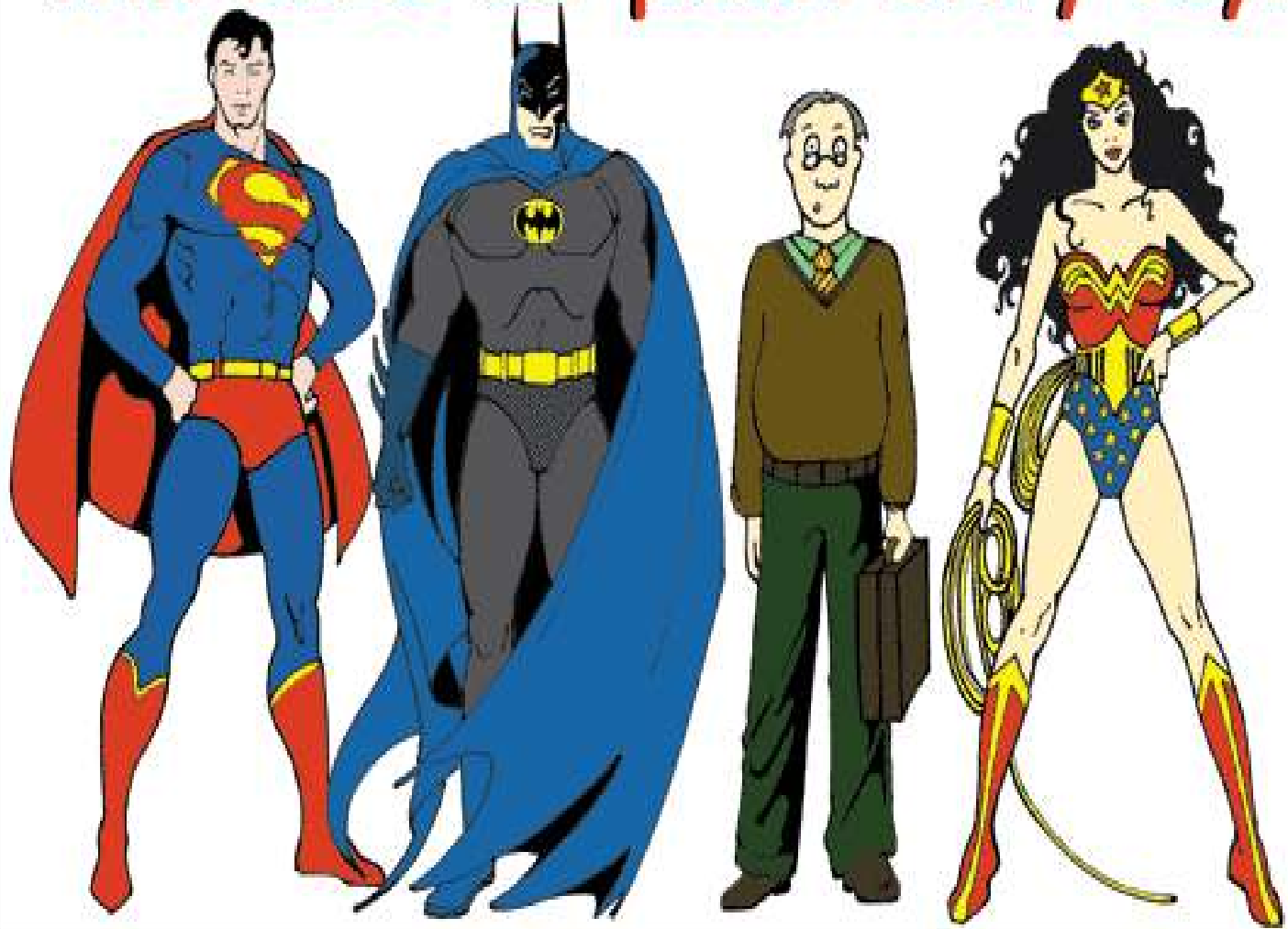


## As a Results...

- Producer becomes responsible for the products from cradle to grave and has, for instance, to develop products with improved performance in all phases of the product life
- Companies can achieve cleaner products and processes, a competitive advantage in the marketplace, and an improved platform to meet the needs of a changing business climate



# Who saves our planet every day?



In order to maintain the importance of environmental protection among the public, its advantages in the everyday life had to be clearly shown - **It is very important to make people aware of sustainability**



## Environmental Protection

- **Re-think** the product and its functions. The product may be used more efficiently, thereby reducing use of energy and other natural resources
- **Re-duce** energy and material consumption throughout a product's life cycle
- **Re-place** harmful substances with more environmentally friendly alternatives
- **Re-cycle** - Select materials that can be recycled, and build the product such that it is disassembled easier for recycling
- **Re-use** - Design the product so parts can be reused
- **Re-pair** - Make the product easy to repair so that the product does not yet need to be replaced

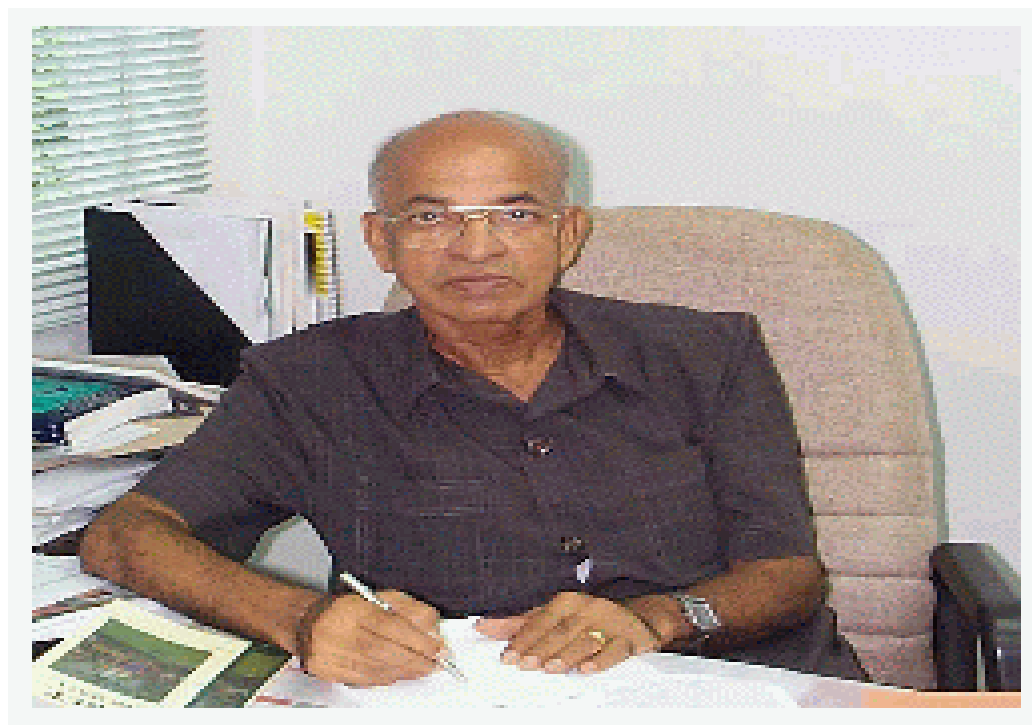
# Our Challenge

Our challenge would be to manage and protect our environment, and to include environmental imperatives as an integral part of our development planning and decision making





## In Memory



- Thank you for his innovative, active contributions and efforts towards conservation of the environment
- Let us strive all together to carry on Ir. K. Kumarasivam's dedication and commitment





Thank You