

Abstracts

Transitions to Sustainability: Evolution or Revolution

Format

1. Moderator and keynote presenter:
Nicholas A. Ashford
(ashfordn@aol.com)
Fax: +1 617 253-7140)

Possible Panelists and Focus:

2. Andrew Gouldson,
London School of Economics:
Differences Between UK and Dutch Approaches in Fostering Technological
Change
[a.gouldson@lse.ac.uk; fax: +44 171 405 7412]

Alternate:

- David Wallace,
International Energy Agency (Paris)
[david.wallace@iea.org; fax: +331 4057-6759]
3. From Technical University Delft either
Philip Vergragt
[philip.vergragt@wtm.tudelft.nl; fax +31 15 278-3177] or
Han Brezet
[j.c.brezet@io.tudelft.nl]: New Products from Old Firms
 4. Rene' Kemp,
Maastricht Economic Research Institute on Innovation and Technology
[r.kemp@merit.unimas.nl; fax: +31 43 321-6518]: Technological Regime Shifts
 5. A Third World Perspective: Does Technology Transfer encourage self-reliance and
innovation or is it a vehicle for diffusion of first-world technology?
 6. Wim Hafkamp, Erasmus University: Summary Commentary
[Hafkamp@mil.fsw.eur.nl; fax: +31 15 262-0834]

Abstract:

It is generally acknowledged that a sustainable future requires technological, managerial, and cultural changes. However, whether an evolutionary pathway is sufficient is increasingly being called into question. Factor ten or greater improvements in eco and energy-efficiency may require significant and revolutionary changes. Three factors are considered necessary for significant technological transformation: willingness, opportunity, and capacity to change. The latter may be the limiting factor.

Different visions of an industrial transformation will be discussed: evolution, entailing continuous learning, lca, chain management, and environmental management systems and revolution, requiring products and processes that displace existing technologies -- including a transition from products to services. The importance of implementing an industrial policy for the environment will be addressed. Differences between product and process transformations will be highlighted. Product changes -- especially in industries which are always changing their products -- may be justifiably enthusiastic about the existing industry's ability to move towards sustainable products. But where the product line is mature -- as was the case of PCB's -- change is not easy, and revolutionary "creative waves of destruction" replace the product via new entrants to the market. Rigid industries whose processes have remained stagnant may also face considerable difficulties in becoming more sustainable.