Enabling Technologies for Environmental Sustainability

A toolkit for businesses, policy-makers and academics

Project Objectives Case studies
to support
business cases,
policy decisions
and lobbying.





The Academy of Business in Society



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U N I V E R S I T Y



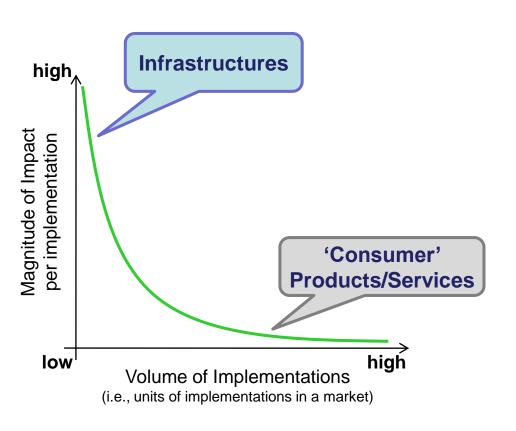




Enabling Effects of ICT: A Complex Landscape

Two fundamentally different categories of enabling ICT

... but in driving transformation technology is not always the problem



- 'supply-side' uncertainties will enabling technologies be developed enough?
- 'demand-side' uncertainties will the products/services/infrastructures be adopted widely enough?
- policy/business practice uncertainties
 - are business leaders employing the best strategies in conducive public policy environments?

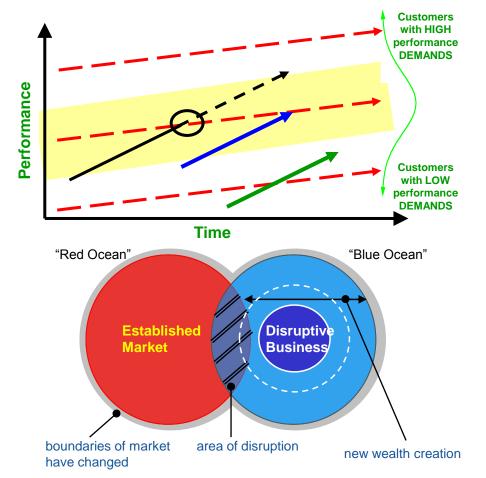






Driving transformation: what can we learn from disruptive innovation?

Disruptive innovations transform industries by introducing technological and business model innovation to low-end or new, emerging 'niche' markets



Disruptive innovations...

- usually technologically straightforward recombining existing technology in new platforms;
- do not initially offer what established core markets currently demand;
- do offer attributes valued by 'niche markets' considered unimportant to mainstream incumbents, whether low-end or emerging;
- consolidate 'foothold' markets, then drive transformation through 'niche marketing' (crossing the chasm)
- key: patient for growth but impatience for profit/benefits

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Microsoft Christensen (1997, 2000, 2003, 2004)

Towards a Standardised Toolkit

We have developed a 5-step process to systematically analyse specific products, services or infrastructures applied in specific countries

1. Define Scope

Describe product, service or infrastructure

- •boundaries of performance/ function
- •the 'in scope' applications
- •scope of the downstream impacts

2. Scenario
Analysis:
"Best Case"

Build and apply model to assess carbon abatement impact

 Assess potential impact assuming 'full adoption'



Understand Barriers

Assess feasibility of enabling technologies

- Gaps
- Weaknesses

Assess barriers to market adoption

- Social
- · Economic, and
- Political

4. Scenario Analysis: "BaU"

Adapt the best case scenario to factor in barriers

- Technological gaps
- Adoption issues

5. Recommend Actions

Actions to overcome technological barriers

PolicyIndustry

Actions to overcome barriers to adoption

- Policy
- Industry



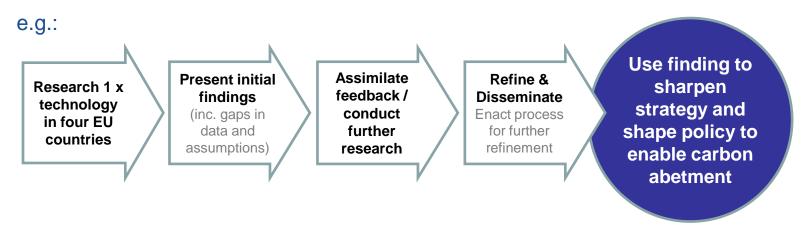




Research Process and Case Study Development

An iterative feedback process with members of the project coalition

- This will produce:
 - a series of independent case studies
 - validated business tool



- There are three coalition membership levels:
 - Bronze reviewers
 - Silver commissioners
 - Gold commissioners and directors





