

technopolis_{group}

Business models for radical eco-innovation

Main findings and insights of the study

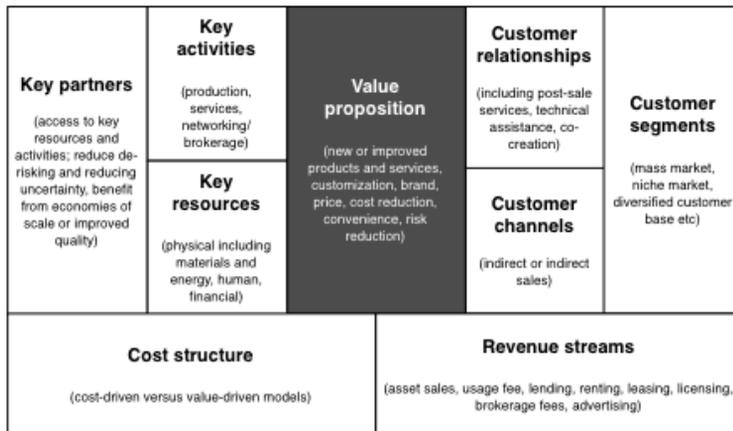
Copenhagen, 19-20 January 2012

technopolis_{group}

Why business models?

- Underlie and guide business strategies
 - *Focus on competitiveness and market creation*
 - *Aim at creating and capturing value by companies through “value propositions”*
- Guide innovation activities
 - *Changes in business model, notably in value propositions, may lead to radical changes of the core business of companies*

Business model canvass

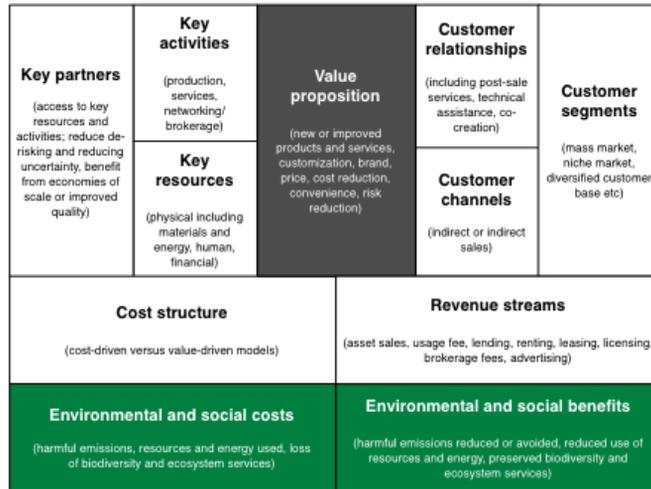


Source: Osterwalder et al 2011

...but where is the link with radical eco-innovation?

- Business models focus on profit maximisation and economic sustainability
- The focus is mainly on relations with customers and immediate business partners
- Wider social and environmental effects of value propositions are not the main concern of business models

“Triple bottom” business model



Source: Osterwalder et al 2011

Environmental values in business models

- Improved resource and energy efficiency
 - *More efficient use of natural resources and reduced emission intensity*
- Alternative systems
 - *More effective use of energy and natural resources and reduced emissions*
 - *Alternative delivery of services e.g. mobility, shelter (possible radical change of production and consumption patterns)*
- Green branding
 - *Better environmental performance information for customers (customer choice)*

technopolis_[group]

Types of business models analysed

- Eco-innovative products and processes
- Waste regeneration systems
- Alternative energy-based systems
- Efficiency optimisation by ICT
- Functional sales and management services
- Innovative financing schemes (including ESCO)
- Sustainable mobility systems
- Industrial symbiosis
- Green cities

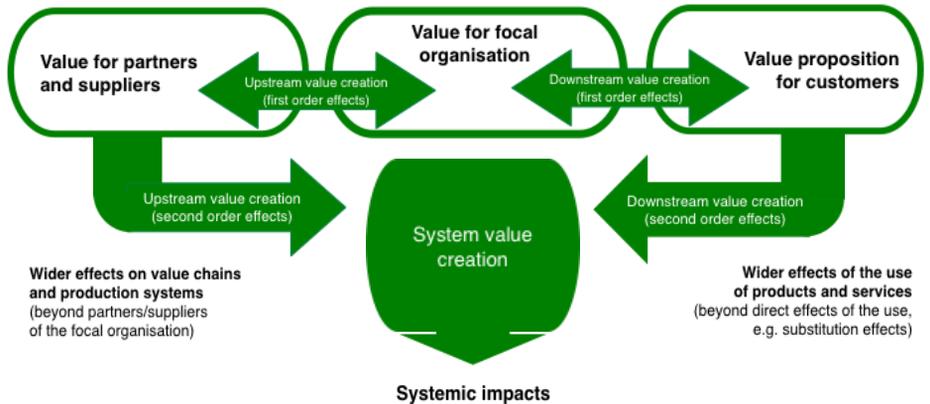
technopolis_[group]

Tracking changes in business models of eco-innovators

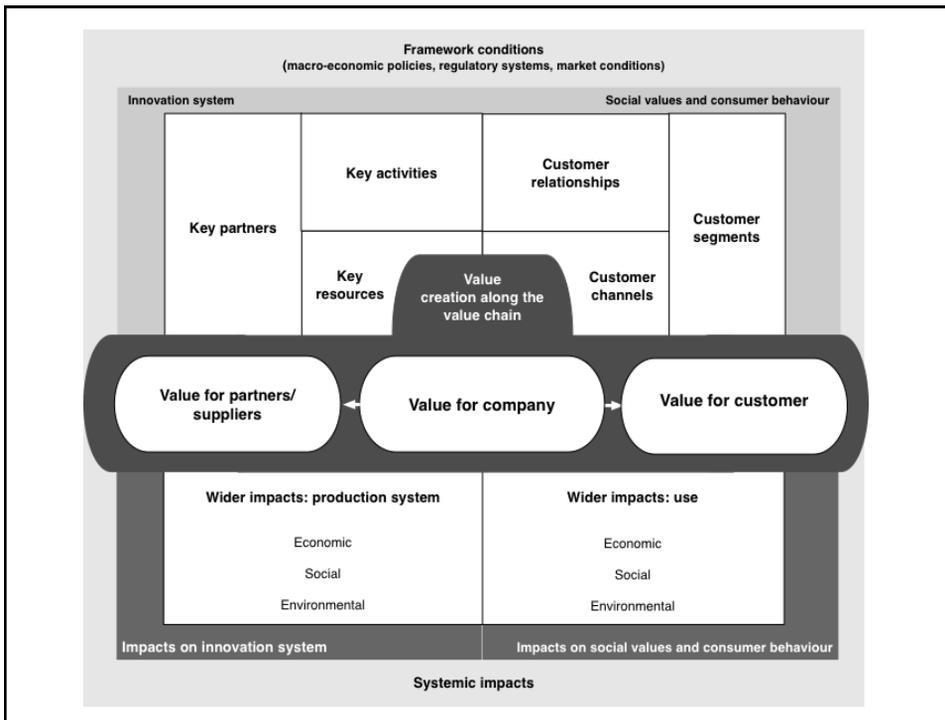
- Incremental to radical changes in both production and customer related components
- Change in value propositions ranges from “better” to “different” products and/or services
 - *“Better”: improved products; mostly production related components (→ efficiency approaches)*
 - *“Different”: new products/services; both production and customer components (→ alternative systems)*
- Environmental benefits rarely a prime aspect in value proposition, but often an important factor
 - *“Green cities” an exception*

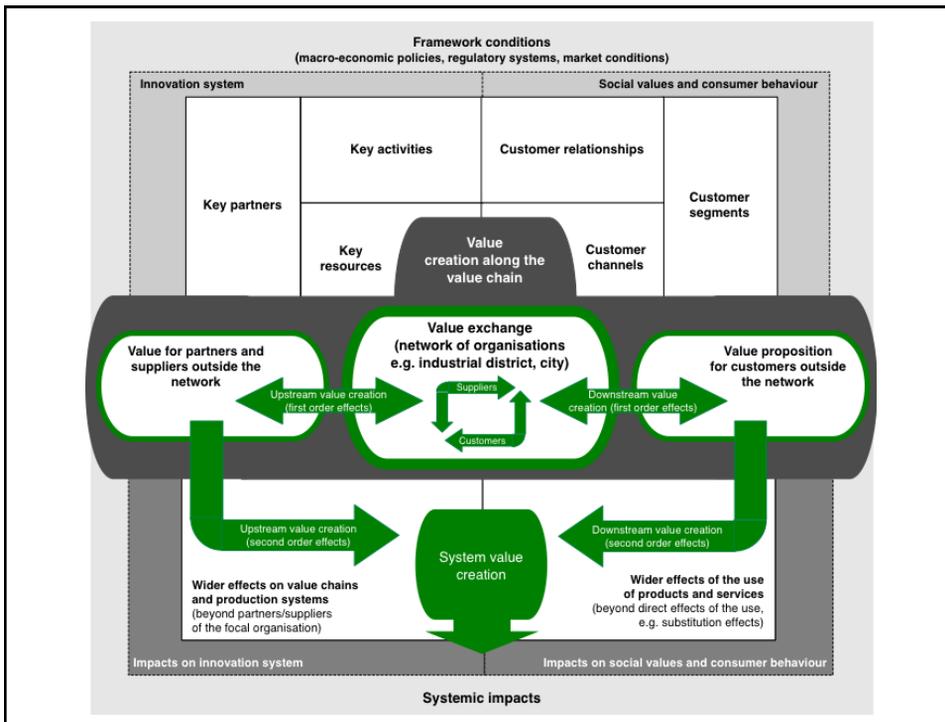
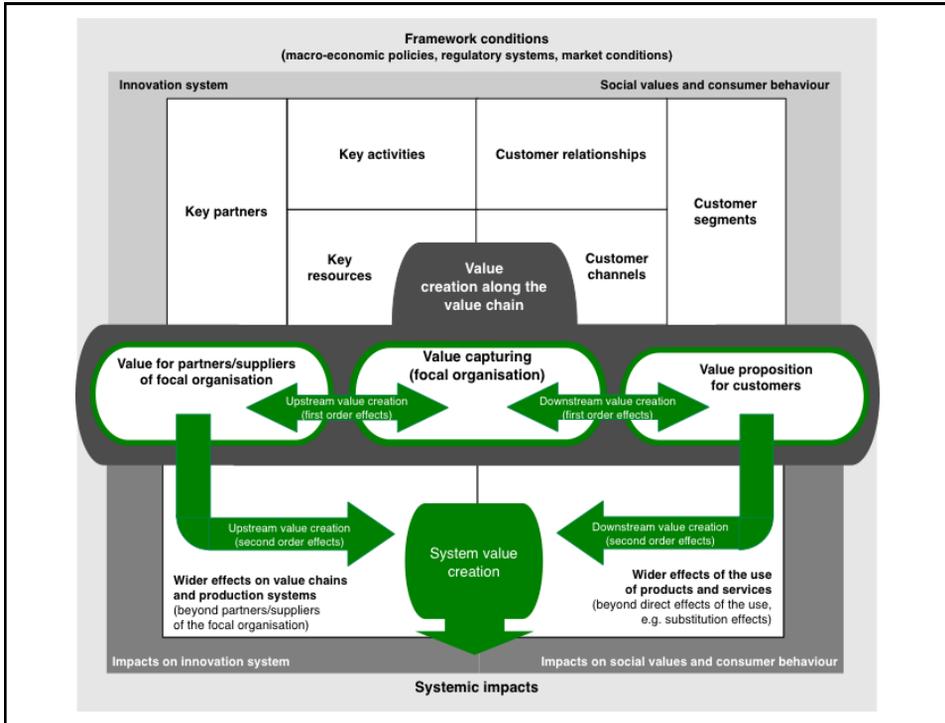
technopolis_{group}

Understanding of value chain and system effects



Source: Technopolis Group





technopolis_{group}

First-order value creation (customer and partners)

- Economic
 - *cost savings*
 - *new markets*
- Social/cultural
 - *comfort, convenience, flexibility*
 - *“green image”*
- Environmental
 - *rarely explicit: reduced environmental impact of a product/service compared to available alternatives*
 - *often driven by compliance / regulatory requirements*
 - *“green cities”: quality of life and quality of environment*

technopolis_{group}

Second-order effects (wider effects)

- Sphere of impact
 - *impact on use patterns and production process*
 - *value chain reconfiguration (substitution and/or new patterns)*
 - *systemic impact*
- Complex attribution
 - *from change of “value proposition” to change of production and consumption patterns*
 - *risk of rebound effects*
- Parameters
 - *scale of diffusion / demand for eco-innovative solutions*
 - *replicability of (components of) business models*

technopolis_{group}

Second-order effects (wider effects) (2)

- Economic
 - *Aggregated cost savings*
 - *New markets / new eco-innovative companies*
 - *Structural shift in value chains*
- Social/cultural
 - *Change of consumption patterns*
 - *Demand for information on environmental benefits*
- Environmental
 - *Absolute reduction of resource use*
 - *Reduced emissions of harmful emissions, notably CO₂*
 - *Improved / sustained ecosystem services*

technopolis_{group}

General remarks

- Environmental values rarely at the core of value proposition behind eco-innovation; values proposed to customers most often economic and/or social/cultural (as expected!)
- Analysed companies did adapt, to a larger or smaller extent, their business models in order to deliver their eco-innovative products or services
- Provided new business models diffuse wider (e.g. sharing schemes), significant economic and environmental impacts may be expected in medium term
- Changes in business models often determined by policy framework, providing business rationale for inclusion of environmental perspective to value propositions

technopolis_[group]

Issues for discussion

- Are business models of eco-innovators specific? What is the relation between business models and propensity to eco-innovate?
- What are key reasons to change business models to encompass environmental aspects in the value proposition?
- Can “environmental values” become business-as-usual element of business models without a radical change of framework conditions?
- To what extent are business models replicable / scalable?
- If widely diffused, can new eco-innovation business models themselves be one of factors changing value systems or even framework conditions (e.g. market demand)?

technopolis_[group]

Thank you

technopolis **[group]** has offices in Amsterdam, Ankara, Brighton, Brussels, Frankfurt/Main, Paris, Stockholm, Tallinn and Vienna