



**SME ESG  
HUB** 



# TRANSFORM

---

Sustainable Impact  
Canvas

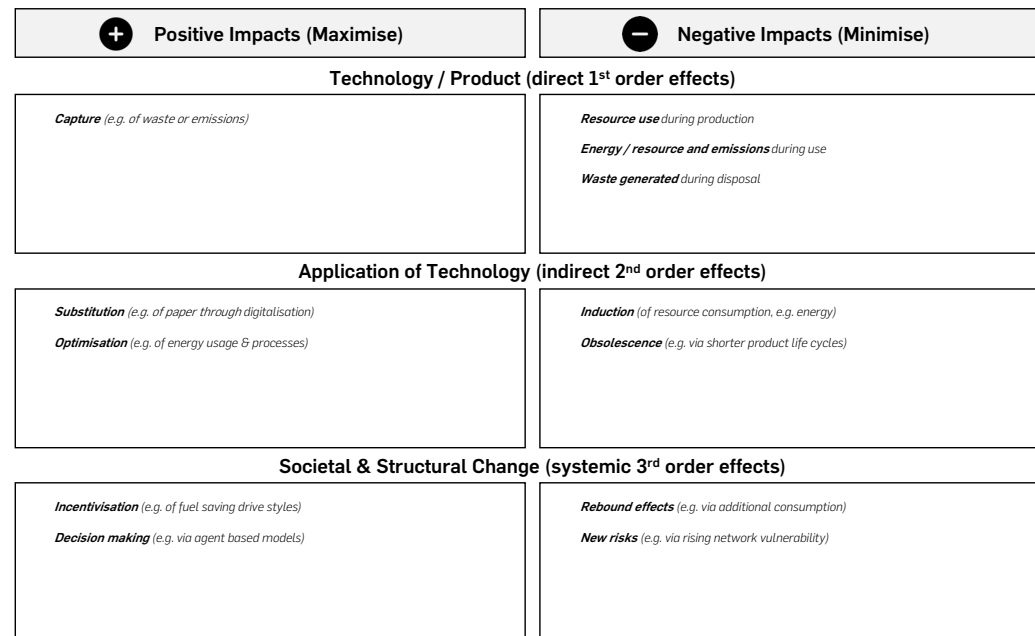


OVERVIEW

The Sustainability Impact Canvas is a tool to incentives sustainable product- and business model design by helping designers to identify and optimise positive and negative effects of the respective business activities. The SIC forces designers to look at the positive as well as the negative impacts of their product or business idea, therefore generating the first input for a realistic impact assessment. It is structured along three levels, which take into account all potential impact categories at the technology level, the application level and the systems level.

Major advantages of this tool are that it balances a thorough methodology with an easy to use tool and that it can be used as an input generator for the Sustainable Business Model Canvas.

Most importantly, however, the SIC is an ideal tool to incentivise "honest accounting" by preventing designers form ignoring the potential negative effects of their products and business models, a common tendency and related to the confirmation bias.





**Positive Impacts (Maximise)**



**Negative Impacts (Minimise)**

**Technology / Product (direct 1<sup>st</sup> order effects)**

*Capture* (e.g. of waste or emissions)

*Resource use* during production

*Energy / resource and emissions* during use

*Waste generated* during disposal

**Application of Technology (indirect 2<sup>nd</sup> order effects)**

*Substitution* (e.g. of paper through digitalisation)

*Optimisation* (e.g. of energy usage & processes)

*Induction* (of resource consumption, e.g. energy)

*Obsolescence* (e.g. via shorter product life cycles)

**Societal & Structural Change (systemic 3<sup>rd</sup> order effects)**

*Incentivisation* (e.g. of fuel saving drive styles)

*Decision making* (e.g. via agent based models)

*Rebound effects* (e.g. via additional consumption)

*New risks* (e.g. via rising network vulnerability)



**HOW TO USE**

The SIC is best used by systematically analysing and completing the 6 main fields in the canvas, from first order effects to third order effects. The purpose of this exercise is to first identify, and then maximise and minimise the positive and negative effects, respectively.

**1] Maximise capture of waste or emissions** (*technology / product level*)

**Main Principles**

- Wherever possible, use materials for your product which are considered "waste" and are currently polluting the environment
- If feasible, engage in "industrial symbiosis" with relevant industrial partners
- Explore the potential of long-term or permanent capture of greenhouse gasses in your product

**Benefits for provider and consumer**

- Potentially lower manufacturing costs
- Potential eligibility for subsidisation
- Benefits for brand

**Risks**

- Unstable future supply of resources
- Immature technology

**Examples**

- Glasses (Sea2See), Shoes (Adidas) and Fashion (Ecoalf) made from recycled ocean plastic (Sea2See)
- Plastic partially made from captured greenhouse gasses (Newlight Technologies)

+ Positive Impacts (Maximise)
<i>Capture (e.g. of waste or emissions)</i>



**HOW TO USE**

**2] Minimise life-cycle impact of technology** (*technology / product level*)

**Main Principles**

- Design for longevity and resilience, i.e. via modularity
- Design for timeless product appeal
- Identify and utilise product as a service strategies
- Use low eco-impact raw materials
- Optimise production processes
- Decarbonise distribution processes

**Benefits for provider and consumer**


- Pre-empting of tightening regulations
- Higher customer appeal for eco-aware customers
- Energy and material savings
- Lower manufacturing costs
- Independence of volatile commodity prices

**Risks**

- LCA time and cost extensive, long-term performance of materials may be unknown
- Set up costs of recycling system
- Increased durability as threat to future sales

**Examples**

- Modular phone (Fairphone)
- Pre-emptive replacement of lead solders ahead of law banning the use of lead solders (HP)
- Electronics recycling as profit centre (Cisco)

 <b>Negative Impacts (Minimise)</b>
<p><i>Resource use</i> during production</p> <p><i>Energy / resource and emissions</i> during use</p> <p><i>Waste generated</i> during disposal</p>



HOW TO USE

### 3] Maximise optimisation and substitution potential *(application level)*

**Main Principles**

- Optimisation
- Improve technology to optimise energy, fuel or capacity usage
- Substitution :
- Identify potential disruptive qualities of application
- Digitalise, virtualize, dematerialise

**Benefits for provider and consumer**

- Higher customer value
- Higher market potential

**Risks**

- Rebound effects
- Difficulty to asses impact of substitution process

**Examples**

- Reduced passenger car fuel consumption (Smart Drive)
- Reduced home energy consumption (Nest)
- Paperless billing, virtual meetings
- Managed services (sharing economy)



**Positive Impacts (Maximise)**

*Substitution* (e.g. of paper through digitalisation)

*Optimisation* (e.g. of energy usage & processes)



HOW TO USE

## 4] Minimise planned obsolescence and induction *(application level)*

### Main Principles

- Induction
- Identify and minimize previously non existent forms of resource consumption
- Obsolescence
- Match real software life cycles to HW life cycles

### Benefits for provider and consumer

- Lower energy and resource usage
- Lower obsolescence induced replacement costs

### Risks

- Challenge to internalize external costs
- Difficulty to adapt life cycles of products of different providers

### Examples

- Rising paper consumption due to cloud connected printers
- Shorter product life cycle of STBs due to faster SW development cycles
- Shorter Smartphone life cycles though rising App performance



### Negative Impacts (Minimise)

*Induction* (of resource consumption, e.g. energy)

*Obsolescence* (e.g. via shorter product life cycles)



HOW TO USE

## 5] Maximise incentivisation and smart decision making *(system level)*

### Main Principles

- Incentivisation
- Use gamification elements (personification, virtual incentives and rewards, community challenges) to 'nudge' users towards sustainable behavior patterns
- Decision making
- Create improved management tools to enable user directed optimization through better decisions

### Benefits for provider and consumer

- Soft mentoring ('nudging') of user towards beneficial behavior
- More efficient decision processes

### Risks

- Importance to not patronize users with excessively high 'nudge' frequency
- Complexity of decision processes

### Examples

- Driving behaviour tips and incentives to save fuel (Smart Drive) or insurance (PHYD)
- Improved policy decision making via Agent Based Models



### Positive Impacts (Maximise)

*Incentivisation* (e.g. of fuel saving drive styles)

*Decision making* (e.g. via agent based models)





HOW TO USE

## 6] Minimise systemic risks and rebound effects *(system level)*

### Main Principles

- Rebound effects
- Take into account increasing resource consumption on aggregated scale (Jevons paradox)
- Risks
- Prevent over-optimized processes at expense of resilience
- Take into account rising complexity of systems

### Benefits for provider and consumer

- Reliable products and services

### Risks

- Challenge to internalize costs of rebound effects
- Difficulty to assess complexity of related risks

### Examples

- Smart Vending machine with reduced energy consumption increases aggregated vending machine spread and energy use
- Over-optimised processes for vehicle management can be prone to complete breakdown



### Negative Impacts (Minimise)

*Rebound effects* (e.g. via additional consumption)

*New risks* (e.g. via rising network vulnerability)



HOW TO USE

Once the Sustainability Impact Canvas has been completed, you can summarise the results of the left and right columns respectively and use them as input for the Sustainable Business Model Canvas:

⊕ Positive Impacts (Maximise)	⊖ Negative Impacts (Minimise)
<b>Technology / Product (direct 1<sup>st</sup> order effects)</b>	
<i>Capture</i> (e.g. of waste or emissions)	<i>Resource use</i> during production <i>Energy / resource and emissions</i> during use <i>Waste generated</i> during disposal
<b>Application of Technology (indirect 2<sup>nd</sup> order effects)</b>	
<i>Substitution</i> (e.g. of paper through digitalisation) <i>Optimisation</i> (e.g. of energy usage in processes)	<i>Induction</i> (of resource consumption, e.g. energy) <i>Obsolescence</i> (e.g. via shorter product life cycles)
<b>Societal &amp; Structural Change (systemic 3<sup>rd</sup> order effects)</b>	
<i>Incentivisation</i> (e.g. of fuel saving drive styles) <i>Decision making</i> (e.g. via agent based models)	<i>Rebound effects</i> (e.g. via additional consumption) <i>New risks</i> (e.g. via rising network vulnerability)

Sustainability Impact Canvas



Input content from Impact Canvas into S-BMC

⊕ Positive Impact (Maximise) <small>What are positive 2<sup>nd</sup> and 3<sup>rd</sup> order effects of your product on planet, society, the economy or your organisation (e.g. brand)? How can these impacts be maximised along the complete product life cycle?</small>		⊖ Negative Impact (Minimise) <small>What are negative 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> order effects, and how can these be minimized? Is harmful waste generated that requires expensive disposal? Are there rebound &amp; induction effects or new technological risks?</small>	
<b>🤝 Sustainable Partners</b> <small>Who are possible partners in becoming more sustainable? How can we make the whole supply chain sustainable, transparent and circular? Can we cooperate with partners from other industries to form an industrial symbiosis? Can we shape anticipated environmental regulations by partnering and cooperating with relevant regulatory bodies?</small>	<b>🏭 Sustainable Value Creation</b> <small>Which are our key activities? How can we adjust them (e.g. manufacturing) to ensure sustainability? Which enabling sustainable technologies can be used?</small>	<b>🎯 Sustainable Value Proposition</b> <small>Which problem do we solve, which value do we create? What are function &amp; form of our product or service? Can we solve our customers' problems more sustainably? Can we transform sustain-ability into customer value?</small>	<b>❤️ Sustainable Customer Relation</b> <small>Which customer relationships satisfy customer expectations and are sustainable? How can we make current relationships more sustainable?</small>
	<b>🔧 Sustainable Tech &amp; Resources</b> <small>Which 1) natural, 2) energy and 3) technical resources do we need? Can we substitute any for more sustainable resources?</small>	<small>Is ownership necessary or is the product as a service model applicable? Can we extend the product life cycle?</small>	<b>🚚 Sust. Channels</b> <small>How can we make our distribution channel more sustainable and circular? How do we best communicate the sustainable aspect of our product / service?</small>
			<b>♻️ End of Life</b> <small>What happens at the end of the product life cycle? Can the product be profitably recycled, upcycled, reused, returned?</small>
<b>💰 Cost Structure &amp; Additional Costs</b> <small>What are the required costs and investments for my endeavour? Which resources / activities are the least sustainable? Do sustainable alternatives exist? Is switching economically reasonable?</small>	<b>👉 Subsidisation</b> <small>Do tax bonuses &amp; subsidies or 3<sup>rd</sup> party funding exist for my endeavour?</small>	<b>👤 Revenue &amp; Sustainability Premium</b> <small>Which are existing and possible revenue sources? Are customers willing to pay a premium for sustainability? Can we create a unique advantage due to sustainable proposition elements? Do price structures exist that incentivize sustainable customer behaviour?</small>	

Sustainable Business Model Canvas



# SME ESG HUB

A small icon consisting of a grey arrow pointing right, with several colorful dots (red, blue, green, orange) above it, suggesting a hub or network.

Developed By:

**UN Global Compact Network Malaysia & Brunei**

B2-8-1, Block 2, VSQ @ PJ City Centre, Jalan Utara,  
46200 Petaling Jaya, Selangor, Malaysia.

T: +6 03 2935 9051 · E: [info@ungcmalaysia.org](mailto:info@ungcmalaysia.org)

**[www.ungcmyb.org](http://www.ungcmyb.org)**