



Developing business models with the Sustainable Business Canvas

Manual for conducting **workshops**

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Background

The Business Model Canvas was originally developed by Osterwalder and Pigneur and serves to visualize and analyze business models (Osterwalder & Pigneur, 2011). Today, it is the probably most widely-used tool for start-up management and has become the standard for start-up presentations and workshops (Blank & Dorf, 2012). In the context of the StartUp4Climate initiative, a model was developed on the basis of the Business Model Canvas that enables sustainability-oriented development of business models: the Sustainable Business Canvas.

In a first step, existing methodological approaches of (general as well as sustainability-oriented) business model development were examined and explained in a framework paper (Tiemann & Fichter, 2014). The analysis of existing approaches and specific features of sustainability-oriented business models provided the basis for developing a concept for integrating sustainability in the development of business models (Fichter & Tiemann, 2015). The Sustainable Business Canvas serves as a foundation for the systematic development of sustainability-oriented business models in the context of an interactive workshop. The present manual provides guidance for conducting such workshops. The workshop concept was tested and optimized at the Businessplan-Wettbewerb

Berlin Brandenburg (Business plan competition Berlin Brandenburg) 2014/2015 and in the class on Eco-Venturing taught at the University of Oldenburg in 2014/2015.

Besides the workshop concept, the Sustainable Business Canvas has been implemented as an online tool and is available on the www.start-green.net portal.



Thus, workshop participants have the opportunity to work iteratively both before and after the workshop. The integration of the relevant tools for in-depth analysis in business model development enables participants to go into greater detail.

Goals and prerequisites

The manual's target group

The manual was developed for workshop facilitators coaching entrepreneurs or students interested in starting a business. It is intended to enable facilitators to facilitate the workshop and help the participants to model/fine-tune/readjust a sustainability-oriented business model. To this end, the manual includes fundamental content and a general schedule as well as information for facilitators when preparing workshops.

Goals of the workshop

The following goals can be reached in the workshop:

The participants ...

- are made aware of sustainability issues.
- are able to model/fine-tune/readjust their business models, taking the **topic of sustainability** into account, or to develop complementary or modified sustainability oriented business ideas.
- learn a **methodology** which they can apply independently in the future to elaborate sustainable business models in a systematic and structured way.
- carry out rough **project planning** in the workshop (modeling the current state of development and planning further steps).
- obtain **information on relevant tools for more in-depth analysis and management**.

Prerequisites for workshop participation

For a workshop to be successful, all the participants should begin with a similar state of knowledge. If possible, these prerequisites should be communicated when recruiting workshop participants, and they are to be used for selecting participants, as appropriate.

- The business idea has been developed to such an extent that the **product or service and the potential field of application have been defined**.
- The participants are willing **to reflect** upon their business model critically and **from a sustainability perspective**. The business idea may concern either explicitly sustainability-oriented green products and services or start-up ideas not focusing on sustainability.
- The **group discussion** is an important step in the process of working on the business model during the workshop. For this reason, a group in the workshop consists of at least two persons.

Sustainable Business Canvas

Description of the concept

The analysis of studies on various business model concepts (*Tiemann & Fichter, 2014*) showed that numerous concepts for modeling businesses with various components of the business model exist (*Schallmo, 2013, pp. 49–113*). One widely used concept is the Business Model Canvas by Osterwalder and Pigneur (*Osterwalder & Pigneur, 2011*).

Visual approaches with a clear structure, low complexity, and room for experimentation are advantageous in particular for entrepreneurs. The Business Model Canvas fulfills these criteria. In addition, the approach is now being applied in many relevant contexts (*university teaching, business plan competitions*). The Business Model Canvas is therefore given priority here as a basic model to secure compatibility and broad application. The following adaptations were made to ensure systematic orientation toward sustainability:

(1) Following (*Müller-Stewens & Lechner, 2005, pp. 234 ff; Schallmo, 2013, pp. 118 ff*), development of the business model is preceded by defining a vision/mission. The vision of the business model describes what distinguishes the business model in the future (e.g., in the next three to five years) and which long-term goal it pursues. The mission of the business model, in contrast, models the central values of the business model and thus the actual purpose of the company to be established (*Müller-Stewens & Lechner, 2005, pp. 234 f.*). The vision and the mission furnish important orientation in the processes of establishing the company and developing the business model; they provide meaning and identity in the start-up team and the company, both internally and externally.

When developing a sustainability-oriented business model, entrepreneurs should examine whether the defined vision and mission take up the guiding idea of sustainability and to what extent the business model developed reflects this. The start-up team should develop a coordinated and unified understanding about the vision and mission. After all the elements of the business model have been developed,

the results must be compared with the vision and mission defined in advance and undergo another iteration loop, if necessary.

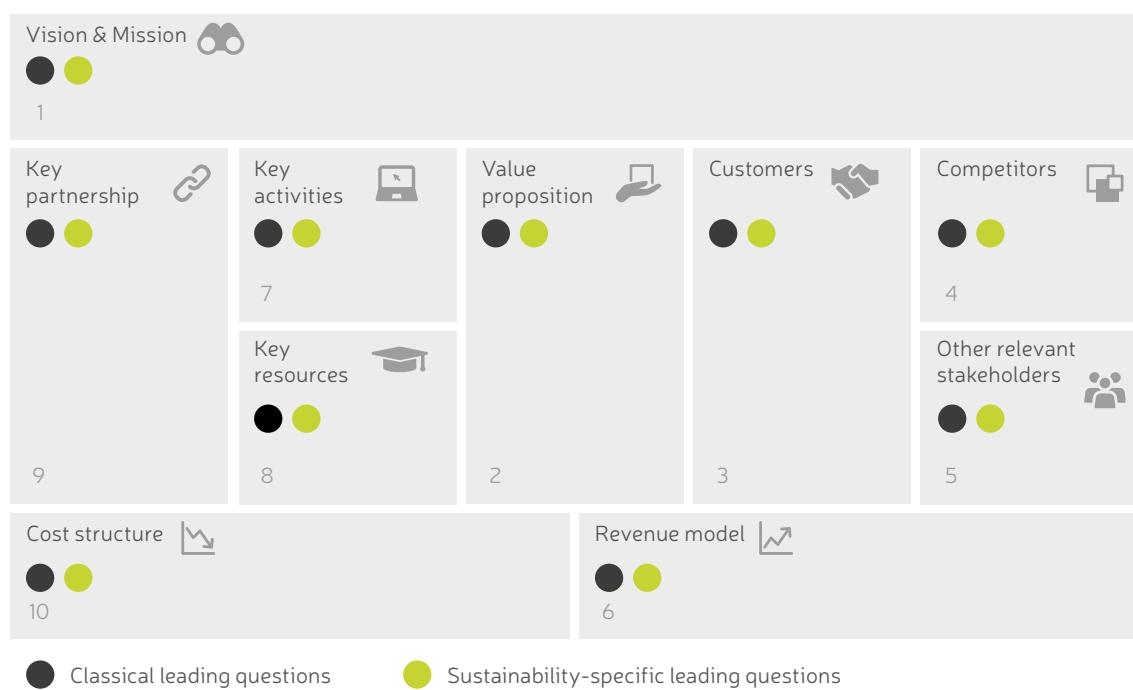
(2) In addition, two new business model elements (“*competitors*” and “*stakeholders*”) were added, and the fields “*business segments*,” “*customer relations*,” and “*customer channels*” were combined to form the field “*customers*.” In the classical Business Model Canvas, the external influences impacting a business model are analyzed only in a later phase (*Osterwalder & Pigneur, 2011*). The authors think that the business model should not be analyzed in isolation from its environment. Especially the competitive situation and the stakeholder perspective should be directly integrated in the development of the business model because of their relevance for the success of its implementation.

Introduced by Freeman (1984) into the field of strategic management, the stakeholder concept has been broadly adopted in economic sustainability research because of its holistic analysis of stakeholder groups internal and external to the company. Besides the fundamental duty of the company to make a contribution to societal progress by taking the relevant stakeholders into account, newer approaches emphasize the company’s own self-interest (*Porter & Kramer, 2011*). The term “*shared value*” is used to describe the creation of a balance between entrepreneurship and society in the company’s own interest: for example by accessing new markets through new sustainability-oriented product innovations or optimizing value creation while conserving critical resources at the same time. The “*Value Mapping Tool*” provides a systematic approach for taking the various stakeholder perspectives into account while developing

the business model (Bocken, Rana, & Short, 2015; Bocken, Short, Rana, & Evans, 2013). Four stakeholder groups are differentiated in the simplified form of the tool: customers, network partners, environment, and society. Generation of positive values, negative effects (value destroyed/missed), and value opportunities are elaborated, taking account of relevant stakeholders. Questions concerning the development of a business model, bearing the stakeholder perspective in mind, were developed on the basis of the approaches mentioned above.

(3) The new developed questions include both questions about the new elements of the business model and sustainability-specific questions for all elements of the business model. The special features and requirements of sustainability-oriented

business model development were derived from the relevant studies on the topic of sustainable innovations (Fichter, 2005; Fichter & Clausen, 2013; Fichter, Paech & Pfriem, 2005; Paech, 2011; Pfriem et al., 2006) in order to identify suitable starting points for elaborating the specific questions. The elements of the business case drivers for sustainability were also included when the questions were developed (Breuer & Lüdeke-Freund, 2014; Hockerts, 2014; Schaltegger, Freund, & Hansen, 2012). With a view to sustainability's normative aspiration of a „triple bottom line“ (Elkington, 1999), the question arises as to the „impact“ of the planned products/services or the business model. This „impact“ is discussed in the context of an integrated approach using specific questions in each element of the business model.



Source: (Fichter & Tiemann, 2015)

Figure 1: Sustainable Business Canvas

List of questions

The Sustainable Business Canvas concept employs an integrated approach in which both classical and sustainability-oriented questions concerning the business model are asked in relation to each of its elements.

The questions listed here are to be considered a collection of questions from which the facilitator selects the relevant ones depending on the situation: development phase and implementation field of the business idea. The following sequence of working on the elements serves as orientation and can be adapted to specific needs.



Business model vision/mission

- Describe your vision briefly and comprehensibly: Which long-term goal determines the course of your business model?

A vision is more than a company's economic goals. It states briefly what your company should stand for in the future. A vision is an attractive image of an attainable reality.

- What is the mission of your business model? Which values determine your business model?

The mission describes the purpose of the company and its goals. (It is derived from the vision and provides orientation. Values and standards of behavior are additional components of the mission.)

- Which sustainability principles play a role for your business idea? Explain your answer briefly.

- Efficiency: reduction of the amount of environmental resources per unit of output;
- Consistency: preventing harmful or toxic substances, using renewable resources and biological principles, ensuring closed material loops, recycling;
- Sufficiency: sustainable lifestyles and consumption patterns, limiting consumption to necessities;
- Preventing unjustifiable risks: avoiding highly invasive technologies with uncertain consequences such as atomic energy;
- Distributive justice: just distribution of resources and incomes within a generation; generational justice in successive generations

- How does your business model/your start-up benefit if you intensify the integration of sustainability principles? How does sustainability contribute to your business idea's economic success?
 - Cost reduction: cost savings for you or your customers, key partners, additional stakeholders, e.g., through more sustainable production processes with low energy consumption, longer operating life of the products, or through holistic concepts such as „using instead of owning“ or „cradle to cradle“
 - Risk reduction: actively dealing with and controlling risks, e.g., environmental risks, regulatory risks, avoiding losses of reputation
 - Increasing turnover and profit: e.g., approaching new customer groups, achieving higher margins through more sustainable products
 - Efficiency gains: e.g., advantages achieved through efficient waste management and reduced resource consumption
 - Reputation and branding: e.g., increasing customer loyalty and willingness to pay through sustainable products
 - Attractiveness for employees: increasing the start-up's attractiveness for additional employees, e.g., through meaningful activities and better identification with sustainability-oriented purposes of the company
 - Innovation advantage: sustainability as a source of innovation and strategic competitive advantage, e.g., commercialization of green technologies
 - Network advantage: advantages from cooperation with important actors and stakeholders relevant to success on the basis of shared economic and societal values (shared value)

- Which concrete contribution will your start-up have made in 5 or 10 years to reach sustainability goals?



Value proposition

- Describe your value proposition (product, service).

- Which customer problem will be solved with it?

Why should customers purchase your product/your service/your value proposition?
What is unique about the value proposition?

- How can your value proposition be aligned with the principles of sustainability in concrete terms?
 - Efficiency: reducing the amount of environmental resources per unit of output;
 - Consistency: preventing harmful or toxic substances, using renewable resources and biological principles, ensuring closed material loops, recycling;
 - Sufficiency: sustainable lifestyles and consumption patterns, limiting consumption to necessities;
 - Preventing unjustifiable risks: avoiding highly invasive technologies with uncertain consequences such as atomic energy;
 - Distributive justice: just distribution of resources and incomes within a generation; generational justice in successive generations

- Describe the positive impacts of your products and services on the environment and society.

Examples of positive impacts of the value proposition on the environment: e.g., saving resources, reducing CO₂ emissions, or contributing to preserving biodiversity. Examples of positive impacts on society: fair working conditions, providing education/training, or supporting disadvantaged groups.

- If a sustainability principle is violated, please describe which one. How can you compensate the negative impacts?

- How can customer utility be increased through sustainability?



Customers

- Who are your customers? Are there any key customers?

- Which customer segments are to be served? Describe your target group as precisely as possible.

- What are the features of the customer relationship? Which communication and distribution channels are suitable?

- What significance does „sustainability“ have for your customers, now and presumably in the future?
- If sustainability has had little relevance for your business model so far: Can additional customers be reached by bringing your business idea in line with sustainability?
- How can sustainable aspects of the business model be communicated advantageously?
Sustainability certification or labeling etc. Which one might be appropriate for your business model?



Competitors

- Who are relevant competitors?
- How strong is competition in the market?
- What is your competitive advantage?
- What role does sustainability play in the market relevant to the start-up?
- Which competitive advantage could be attained by taking additional sustainability principles into account? Would this advantage exist long-term?
 - Efficiency: reducing the amount of environmental resources per unit of output;
 - Consistency: preventing harmful or toxic substances, using renewable resources and biological principles, ensuring closed material loops, recycling;
 - Sufficiency: sustainable lifestyles and consumption patterns, limiting consumption to necessities;
 - Preventing unjustifiable risks: avoiding highly invasive technologies with uncertain consequences such as atomic energy;
 - Distributive justice: just distribution of resources and incomes within a generation; generational justice in successive generations

Stakeholders (relevant to the business model's success)



Stakeholders are actors affected by the company's activities or their outcomes. They are relevant if they can have decisive positive or negative impacts on the success of the company. E.g.:

- non-governmental organizations (NGOs)
- employees and their families
- financial interest groups, such as investors, banks, lenders, the government (through state funding/programs)
- scientific institutions
- municipalities
- the environment (concerning energy use and environmental pollution)—as a proxy for humanity
- the government as recipient of taxes and provider of social services and benefits

- Who are additional stakeholders (besides customers and key partners) relevant to the success of your business model?
- What is their power to impact the company? Is their attitude toward the company and the business idea positive, negative, or neutral?
- Does your business model generate additional value for other stakeholders, or can additional actors' needs which have not been satisfied so far be taken into account and utilized?
- Do certain stakeholders have to be integrated in the development of your start-up's business model?

Revenue model



- What kinds of revenue would you like to generate? How should the price model be designed?
- For which value are your customers really willing to pay for? How high is your customers' willingness to pay?

- Do several revenue sources exist? How much does each revenue source contribute to total turnover?
- Does orientation of the business model toward sustainability enable better access to revenue sources (e.g., governmental support programs, customers' increased willingness to pay)? If so, to which ones?
- Will your start-up become more attractive to financial backers if it is oriented toward sustainability? If so, to which ones?
Example: governmental support programs, increased customer willingness to pay, or higher customer retention



Key activities

- Which key activities are necessary in order to implement your value proposition?
- Which of the activities will you carry out yourself? For which ones will you need partners?
- At which stage of the value chain will you position yourself? What reasons can you give for this?
- What role does sustainability play in your key activities? To what extent is sustainable design/implementation of your key activities important for fulfilling your value proposition? (e.g., efficient and safe processes, certification)
- How do key activities have to be designed so that the company will be more sustainable? (For example, can procurement, manufacturing, transport, and/or consumption of energy, materials, or water be made more efficient, just, or safe?)
- What risks (e.g., changes in legal requirements, loss of reputation, etc.) can be avoided through more sustainable key activities?



Key resources

- Which key resources and skills are necessary in order to implement your value proposition?

- Which ones are already available, which ones must be obtained, or for which ones must partners be found?

- Does the start-up team already have resources and skills for complying with the defined sustainability requirements, or does it require external support for this?

- If environmentally critical production factors are among the key resources, how can their use be minimized or eliminated?

- Is the life-cycle approach applied to the usage of key resources? (For example, does a depositreturn/recycling system exist?)



Key partnerships

- Which key partners (suppliers, experts in the field, trade associations, supporters) do you need in order to fulfill your value proposition? How do you identify them?

- Which key resources do you source from partners? Which key activities do partners perform?

- Which partners do you need to make the products/services you offer sustainable? Who else can support you (e.g., trade associations, organizations)?

- Which sustainability requirements are relevant along your value chain?
How can you fulfill these sustainability requirements?

A value chain defines all the stages of the production/service process including all preceding and following activities.



Cost structure

● Which costs do your key activities entail? What are your start-up's main cost units (production, distribution, logistics, etc.)?

● Describe your cost structure. Discuss the fixed and variable costs.

● Which main investments will you have to make?

● Can costs be reduced by savings in resource consumption?

● Can additional costs arise in the future if activities are not sustainable?

● Does taking sustainability aspects into account entail additional costs?

Do additional costs, e.g. for environmental/sustainability certifications or for a deposit-return/recycling system have to be taken into account?)

Linking up to further analytical tools

The business model developed using the Sustainable Business Canvas should not be considered a final product, but a version to be optimized in several iterations (*Maurya 2012*). In the process, entrepreneurs should first identify open questions and potential weak points of the business model and work on them in suitable iteration loops.

Various analytical tools can be used for this purpose (*Breuer, 2013*). They can be differentiated as follows: classical tools from the field of strategic management (e.g., Porter's 5 forces), tools with a distinct reference to sustainability (e.g., stakeholder analysis), and tools with the potential to integrate sustainability aspects (e.g., expanded analysis of the value chain).

A selection of important in-depth analytical tools and further information is available at www.start-green.net/tools. Entrepreneurs can also develop business models further in an iterative process using the online tool. They need to create a profile in order to work on it, save the results, and make them available to others online.

Collection of relevant online videos and content

Explanatory videos on the topic Business Model Canvas:

- Episode 1: [Getting From Business Idea to Business Model](#)
- Episode 2: [Visualizing Your Business Model](#)
- Episode 3: [Prototyping](#)
- Episode 4: [Navigating Your Environment](#)
- Episode 5: [Proving It](#)
- Episode 6: [Telling Your Story](#)

Videos with a specific focus on sustainable business models:

- [Triple bottom line & sustainability: the science of good business](#)
- [Business Case for Sustainability](#)
- [Creating sustainable value for a business](#)

Information on Porter's shared-value approach:

- [Porter-Kramer Approach to Shared Value](#)
- [Creating Shared Value \(Artikel\)](#)

Information on the value mapping tool (Bocken u. a., 2015, 2013):

- [website of Nancy Bocken](#)

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Preparing for facilitators

Facilitators should **prepare** by taking the following steps:

- If you are not yet familiar with the Business Model Canvas method, then familiarize yourself with it (see, e.g., explanatory videos on the topic Business Model Canvas, p. 16).
- Familiarize yourself with the broadened concept Sustainable Business Canvas (p. 6).
- If possible, study the business idea of your groups in advance: What is the product? In which area of application is it to be used?
- If a classical Business Canvas has already been prepared, ask the participants to bring it along to the workshop in its current state.
- From the list of questions (p. 8), preselect questions appropriate to the business ideas (writing relevant questions on post-its or index cards for each element of the business model is recommended).
- Look at the schedule.

Facilitators, spatial requirements and materials needed:

One **main facilitator** directs the workshop. **Group facilitators** support each of the groups and guide them through the questions and discussions. It is highly advisable to select experienced facilitators who can provide intensive supervision to the groups throughout the entire workshop. In the case of a larger number of groups and a limited number of facilitators, each group can spend some time working on the canvas without a facilitator, but using a handout (see Appendix). In this case, it is important for the main facilitator to introduce the methodology at the beginning (10–15 minutes).

The **size of the room** should be appropriate for the number of groups. It is important for each of the groups to be able to work without interruptions during the group phase. Using one large room in which the groups can work on their canvases is recommended. If possible, there should be some space between groups, and they might be separated from each other e.g., by bulletin boards.

The following materials are needed:

- Sustainable Business Canvas template in the A0 format for each group ([Download](#))
- post-its (potentially in different colors to differentiate certain topics, e.g., value proposition for paying customers or for non-paying, important stakeholders),
- pens,
- index cards,
- round red stickers,
- 1bulletin board per group.

Schedule

The details of the workshop should be adapted to the participants' knowledge and experience with the Canvas method and the degree to which the business models have been developed and matured. If a Business Model Canvas has not yet been prepared, then the business model should be prepared using the Sustainable Business Canvas in such a manner that participants work on both the classical and the sustainability-specific questions (workshop type 1, 3–6 groups, duration 4–5 hours). However, if participants have already prepared a Business Model Canvas, the focus of the workshop should be on the sustainability-specific questions (workshop type 2, 3–6 groups, duration 4–5 hours).

Schedule for workshop type 1

Workshop type 1: All success factors at a glance! Business model development with the Sustainable Business Canvas

Business Model Canvas has not yet been prepared and is to be prepared now, including consideration of sustainability aspects.

Time	Activities	Didactical hints	Materials
Information to be provided prior to the workshop			
Responsible: group facilitators			
Call attention to the online tool: https://start-green.net/tools/grundlagen/ Indications due to time frame, schedule and venue			
Introduction (all participants and facilitators)			
Responsible: main facilitator			
15–20 minutes	Welcome and introduction: Clarify goal, background, time frame, requests for confidentiality Brief round of introductions by the participants, including their expectations	Group facilitators document their groups' expectations on index cards	Index cards, bulletin board (as appropriate)

Time	Activities	Didactical hints	Materials
Warm-up phase (group phase)			
Responsible: group facilitators			
15–20 minutes	<p>Group facilitators and their groups go to their group's spaces and their bulletin boards.</p> <p>Warm-up question:</p> <ul style="list-style-type: none"> • What does „sustainable entrepreneurship“ mean to you? • What are key characteristics of a sustainable company? <p>The result (common understanding of “sustainable entrepreneurship” by the group) is documented on the bulletin board.</p>	<p>Individual work: Group members write their perspectives on index cards</p> <p>Every group member briefly introduces his/her results to the group and pins his/her index cards to the bulletin board. Then, brief facilitated group discussion.</p>	Bulletin boards, Index cards
Development of the SBC, taking account of sustainability aspects (group phase)			
Responsible: group facilitators			
2,5 hours 1–2 10-min. breaks	<p>Group facilitators work through the individual fields.</p>  <p>The group facilitator asks the questions (potentially by affixing post-its) and facilitates the discussions.</p> <p>Questions: The facilitator first asks questions from classical business model development for each of the relevant business model elements.</p> <p>Participants discuss the questions under the direction of the group facilitators and prepare notes, which are then affixed to the canvas.</p>	<p>The order outlined in the graphics is a recommendation. The treatment can occur according to demand of the team, however, also in other order.</p> <p>Facilitators should ensure that the notes are legible. (brief catchwords, large handwriting, use easy-to-read pens and sufficiently large post-its)</p>	<p>Bulletin board with the Canvas template in A0 format</p> <p>Index cards or post-its with relevant questions, prepared and selected by the facilitators with a view to the individual start-ups and asked in appropriate situations,</p> <p>Handouts for the participants</p> <p>Pens and post-its</p>

Time	Activities	Didactical hints	Materials
	<p>The group facilitators observe whether the participants introduce sustainability-specific aspects by themselves when working on the business model fields. If not, or if only partly, then the group facilitator asks additional sustainability-specific guiding questions about the relevant business model element.</p> <p>Groups discuss the questions again under the direction of the group facilitators and make additional notes (potentially using green post-its or pens). The notes are affixed to the canvas.</p>		
Discussion of the business model (group phase)			
Responsible: group facilitators			
15–20 minutes	<p>Group analysis and discussion of the results</p> <ul style="list-style-type: none"> • What follows from the results? • What are the ecological and societal benefits of the business model? • Which questions/assumptions are still to be more clarified/reviewed? (Use round red stickers to indicate fields with open questions) • Which approach should be used to work on the parts of the business model highlighted with round red stickers? Which concrete tasks/steps for further work does this entail? (as appropriate, cards with specific tasks for participants to take with them) 	<p>Business model fields with open questions with red points pretend</p> <p>Call attention to additional in-depth analytical tools in the online tool.</p>	<p>Round red stickers</p> <p>Index-cards to write down next steps</p>

Time	Activities	Didactical hints	Materials
Preparation of final presentation			
Responsible: participants			
10 min.	<p>Teams prepare the short presentation:</p> <ul style="list-style-type: none"> • Who is going to speak? • Which business model fields are most important for the team and should be presented? 	If Internet access is available headwords could also be filled in the online-tool and presented via digital projector. That's advisable when there are many participants or too less space near by the boards	In case of online presentation: laptop, internet access, digital projector
Presentation of the results (all participants and facilitators)			
Responsible: main facilitator			
30–60 minutes Depending on the number of groups	Each group presents its results (5 minutes). Facilitators and participants provide feedback and ask questions for clarification (5 minutes).	<p>Presentation in front of canvas, only selected business model fields</p> <p>All participants meet in front of the poster</p>	
Final and feedback round (all participants and facilitators)			
Responsible: main facilitator			
15–20 minutes	Participants' feedback and closing remarks	Brief reference to the index cards with expectations prior to the workshop: Were expectations met?	Board with expectation cards from the beginning
	Documentation of the results for participants and facilitators	Documentation by means of photos taken by group facilitators	Camera

Schedule for workshop type 2

Workshop type 2: Sustainably successful! Further development of the business model with the Sustainable Business Canvas

Business Model Canvas has already been prepared and is now to be reviewed against the background of sustainability-oriented business model development.

Time	Activities	Didactical hints	Materials
Information to be provided prior to the workshop			
Responsible: group facilitators			
Call attention to the online tool: https://start-green.net/tools/grundlagen/ Indications due to time frame, schedule and venue			
Introduction (all participants and facilitators)			
Verantwortlich: Hauptmoderator			
15–20 minutes	Welcome and introduction: Clarify goal, background, time frame, requests for confidentiality Brief round of introductions by the participants, including their expectations	Group facilitators document their groups' expectations on index cards	Index cards, bulletin board (as appropriate)
Introduction of business ideas so far (group phase)			
Responsible: group facilitators			
15–20 minutes	Group facilitators and their groups go to their group's space and their bulletin boards. Participants are asked to present their thoughts on individual fields of the canvas so far using a hard copy of the canvas they have brought with them. The facilitator obtains an overview and asks questions for clarification.		Hard copy of canvas brought by participants

Time	Activities	Didactical hints	Materials
Warm-up phase (group phase)			
Responsible: group facilitators			
15–20 minutes	<p>Warm-up question:</p> <ul style="list-style-type: none"> • What does „sustainable entrepreneurship“ mean to you? • What are key characteristics of a sustainable company? <p>The result (common understanding of “sustainable entrepreneurship” by the group) is documented on the bulletin board.</p>	<p>Individual work: Group members write their perspectives on index cards</p> <p>Every group member briefly introduces his/her results to the group and pins his/her index cards to the bulletin board. Then, brief facilitated group discussion.</p>	Bulletin boards, Index cards
Development of the SBC, taking account of sustainability aspects (group phase)			
Responsible: group facilitators			
2,5 hours 1–2 10-min. breaks	<p>Group facilitators work through the individual fields.</p>  <p>The group facilitator asks sustainability-specific questions (potentially by affixing Post-its) and facilitates the discussions.</p> <p>Participants discuss the questions with the group, under the direction of the group facilitators, and take notes. The notes are affixed to the canvas.</p> <p>This procedure is repeated for each business model element.</p>	<p>The order outlined in the graphics is a recommendation. The treatment can occur according to demand of the team, however, also in other order.</p> <p>Facilitators should ensure that the notes are legible. (brief catchwords, large handwriting, use easy-to-read pens and sufficiently large post-its)</p>	<p>Bulletin board with the Canvas template in A0 format</p> <p>Index cards or post-its with relevant questions, prepared and selected by the facilitators with a view to the individual start-ups and asked in appropriate situations,</p> <p>Handouts for the participants</p> <p>Pens and post-its</p>

Time	Activities	Didactical hints	Materials
Discussion of the business model (group phase)			
Responsible: group facilitators			
15–20 minutes	<p>Group analysis and discussion of the results</p> <ul style="list-style-type: none"> • What follows from the results? • What are the ecological and societal benefits of the business model? • Which questions/assumptions are still to be more clarified/reviewed? (Use round red stickers to indicate fields with open questions) • Which approach should be used to work on the parts of the business model highlighted with round red stickers? Which concrete tasks/steps for further work does this entail? (as appropriate, cards with specific tasks for participants to take with them) 	<p>Business model fields with open questions with red points pretend</p> <p>Call attention to additional in-depth analytical tools in the online tool.</p>	<p>Round red stickers</p> <p>Index-cards to write down next steps</p>
Preparation of final presentation			
Responsible: participants			
10 min.	<p>Teams prepare the short presentation:</p> <ul style="list-style-type: none"> • Who is going to speak? • Which business model fields are most important for the team and should be presented? 	<p>If Internet access is available headwords could also be filled in the online-tool and presented via digital projector. That's advisable when there are many participants or too less space near by the boards</p>	<p>In case of online presentation: laptop, internet access, digital projector</p>
Presentation of the results (all participants and facilitators)			
Responsible: main facilitator			
30–60 minutes Depending on the number of groups	<p>Each group presents its results (5 minutes). Facilitators and participants provide feedback and ask questions for clarification (5 minutes).</p>	<p>Presentation in front of canvas, only selected business model fields</p> <p>All participants meet in front of the poster</p>	

Time	Activities	Didactical hints	Materials
Final and feedback round (all participants and facilitators)			
Responsible: main facilitator			
15–20 minutes	Participants' feedback and closing remarks	Brief reference to the index cards with expectations prior to the workshop: Were expectations met?	Board with expectation cards from the beginning
	Documentation of the results for participants and facilitators	Documentation by means of photos taken by group facilitators	Camera



Developing business models with the Sustainable Business Canvas

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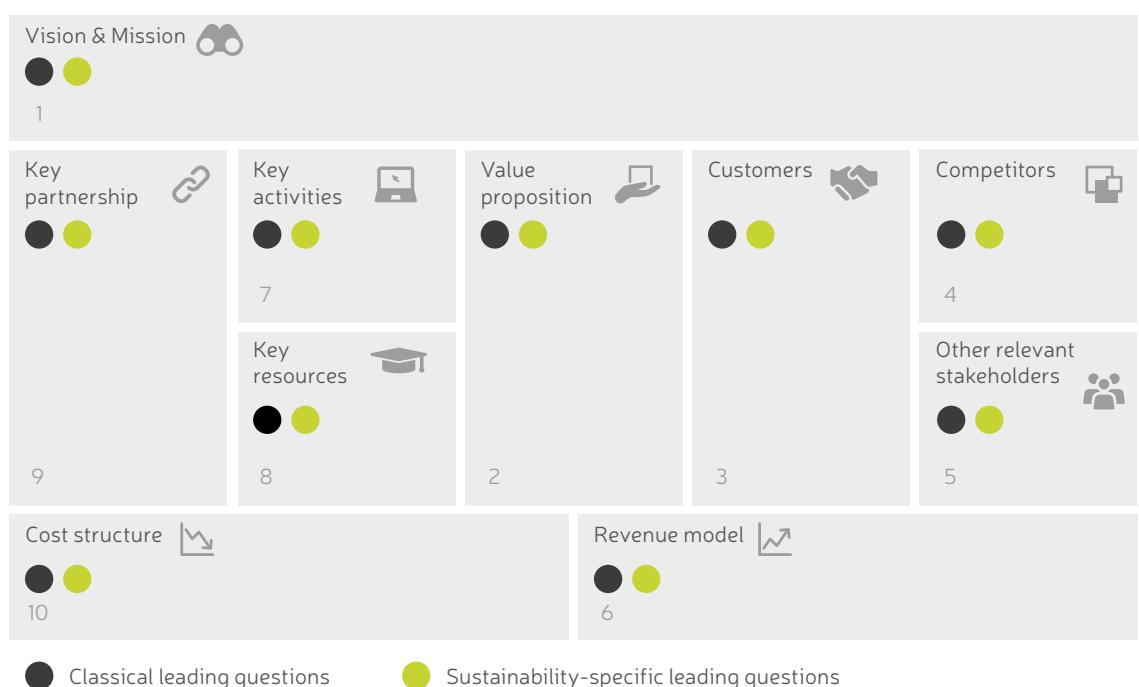
based on a decision of the German Bundestag



Sustainable Business Canvas

In the context of the StartUp4Climate initiative, a model was developed on the basis of the Business Model Canvas (*Osterwalder & Pigneur, 2011*) that enables sustainability-oriented development of business models: the Sustainable Business Canvas. The Sustainable Business Canvas concept uses an integrated approach. Classical questions about the business model as well as sustainability-specific questions are discussed concerning each element of the business model.

The following order serves as orientation and can be varied during preparation of the canvas.



Source: (Fichter & Tiemann, 2015)

Figure 1: Sustainable Business Canvas

Please note:

-  The fields should be filled in as specifically as possible. If the majority of the individual elements include information that could just as well be given for many other companies, then you are presumably not giving enough detail.
-  In each case, focus on the important, strategic factors, and do not aim for completeness. For instance, it is not necessary to mention each item in the cost structure, but only the (roughly) three largest ones.
-  Avoid overly general phrases. If you speak in general terms about "better service," "higher quality," "more innovative than competitors," or other supposed advantages, you should make clear how you will actually reach these goals and whether the potentially higher costs are matched by willingness to pay.
-  Especially in the case of sustainability-oriented start-ups, the (paying) customers are not always identical to the users. In this case, marking the different relationships with different colors in the canvas is advisable so that customers and users can be separated analytically
-  The business model developed using the Sustainable Business Canvas should not be considered a final product, but a version to be optimized in several iterations. In the process, entrepreneurs should first identify open questions and potential weak points of the business model and work on them in suitable iteration loops.

List of questions

The questions listed here are to be considered a collection of questions from which you can select those relevant to your business idea. Begin with considerations of your vision & mission. Here you lay the foundations for the other fields of the canvas. Then, it is best to focus on your value proposition and your customers in order to take a customer-oriented approach from the outset. If the customer groups and customer value are unclear, then you run the risk of designing a detailed business model for a non-existing market.



Business model vision/mission

- Describe your vision briefly and comprehensibly: Which long-term goal determines the course of your business model?

A vision is more than a company's economic goals. It states briefly what your company should stand for in the future. A vision is an attractive image of an attainable reality.

- What is the mission of your business model? Which values determine your business model?

The mission describes the purpose of the company and its goals. (It is derived from the vision and provides orientation. Values and standards of behavior are additional components of the mission.)

- Which sustainability principles play a role for your business idea? Explain your answer briefly.

- Efficiency: reduction of the amount of environmental resources per unit of output;
- Consistency: preventing harmful or toxic substances, using renewable resources and biological principles, ensuring closed material loops, recycling;
- Sufficiency: sustainable lifestyles and consumption patterns, limiting consumption to necessities;
- Preventing unjustifiable risks: avoiding highly invasive technologies with uncertain consequences such as atomic energy;
- Distributive justice: just distribution of resources and incomes within a generation; generational justice in successive generations

- How does your business model/your start-up benefit if you intensify the integration of sustainability principles? How does sustainability contribute to your business idea's economic success?
 - Cost reduction: cost savings for you or your customers, key partners, additional stakeholders, e.g., through more sustainable production processes with low energy consumption, longer operating life of the products, or through holistic concepts such as „using instead of owning“ or „cradle to cradle“
 - Risk reduction: actively dealing with and controlling risks, e.g., environmental risks, regulatory risks, avoiding losses of reputation
 - Increasing turnover and profit: e.g., approaching new customer groups, achieving higher margins through more sustainable products
 - Efficiency gains: e.g., advantages achieved through efficient waste management and reduced resource consumption
 - Reputation and branding: e.g., increasing customer loyalty and willingness to pay through sustainable products
 - Attractiveness for employees: increasing the start-up's attractiveness for additional employees, e.g., through meaningful activities and better identification with sustainability-oriented purposes of the company
 - Innovation advantage: sustainability as a source of innovation and strategic competitive advantage, e.g., commercialization of green technologies
 - Network advantage: advantages from cooperation with important actors and stakeholders relevant to success on the basis of shared economic and societal values (shared value)

- Which concrete contribution will your start-up have made in 5 or 10 years to reach sustainability goals?



Value proposition

- Describe your value proposition (product, service).

- Which customer problem will be solved with it?

Why should customers purchase your product/your service/your value proposition?
What is unique about the value proposition?

- How can your value proposition be aligned with the principles of sustainability in concrete terms?
 - Efficiency: reducing the amount of environmental resources per unit of output;
 - Consistency: preventing harmful or toxic substances, using renewable resources and biological principles, ensuring closed material loops, recycling;
 - Sufficiency: sustainable lifestyles and consumption patterns, limiting consumption to necessities;
 - Preventing unjustifiable risks: avoiding highly invasive technologies with uncertain consequences such as atomic energy;
 - Distributive justice: just distribution of resources and incomes within a generation; generational justice in successive generations

- Describe the positive impacts of your products and services on the environment and society.

Examples of positive impacts of the value proposition on the environment: e.g., saving resources, reducing CO₂ emissions, or contributing to preserving biodiversity. Examples of positive impacts on society: fair working conditions, providing education/training, or supporting disadvantaged groups.

- If a sustainability principle is violated, please describe which one. How can you compensate the negative impacts?

- How can customer utility be increased through sustainability?



Customers

- Who are your customers? Are there any key customers?

- Which customer segments are to be served? Describe your target group as precisely as possible.

- What are the features of the customer relationship? Which communication and distribution channels are suitable?

- What significance does „sustainability“ have for your customers, now and presumably in the future?
- If sustainability has had little relevance for your business model so far: Can additional customers be reached by bringing your business idea in line with sustainability?
- How can sustainable aspects of the business model be communicated advantageously?
Sustainability certification or labeling etc. Which one might be appropriate for your business model?



Competitors

- Who are relevant competitors?
- How strong is competition in the market?
- What is your competitive advantage?
- What role does sustainability play in the market relevant to the start-up?
- Which competitive advantage could be attained by taking additional sustainability principles into account? Would this advantage exist long-term?
 - Efficiency: reducing the amount of environmental resources per unit of output;
 - Consistency: preventing harmful or toxic substances, using renewable resources and biological principles, ensuring closed material loops, recycling;
 - Sufficiency: sustainable lifestyles and consumption patterns, limiting consumption to necessities;
 - Preventing unjustifiable risks: avoiding highly invasive technologies with uncertain consequences such as atomic energy;
 - Distributive justice: just distribution of resources and incomes within a generation; generational justice in successive generations

Stakeholders (relevant to the business model's success)



Stakeholders are actors affected by the company's activities or their outcomes. They are relevant if they can have decisive positive or negative impacts on the success of the company. E.g.:

- non-governmental organizations (NGOs)
- employees and their families
- financial interest groups, such as investors, banks, lenders, the government (through state funding/programs)
- scientific institutions
- municipalities
- the environment (concerning energy use and environmental pollution)—as a proxy for humanity
- the government as recipient of taxes and provider of social services and benefits

- Who are additional stakeholders (besides customers and key partners) relevant to the success of your business model?
- What is their power to impact the company? Is their attitude toward the company and the business idea positive, negative, or neutral?
- Does your business model generate additional value for other stakeholders, or can additional actors' needs which have not been satisfied so far be taken into account and utilized?
- Do certain stakeholders have to be integrated in the development of your start-up's business model?

Revenue model



- What kinds of revenue would you like to generate? How should the price model be designed?
- For which value are your customers really willing to pay for? How high is your customers' willingness to pay?

- Do several revenue sources exist? How much does each revenue source contribute to total turnover?
- Does orientation of the business model toward sustainability enable better access to revenue sources (e.g., governmental support programs, customers' increased willingness to pay)? If so, which ones?
- Will your start-up become more attractive to financial backers if it is oriented toward sustainability? If so, to which ones?
Example: governmental support programs, increased customer willingness to pay, or higher customer retention



Key activities

- Which key activities are necessary in order to implement your value proposition?
- Which of the activities will you carry out yourself? For which ones will you need partners?
- At which stage of the value chain will you position yourself? What reasons can you give for this?
- What role does sustainability play in your key activities? To what extent is sustainable design/implementation of your key activities important for fulfilling your value proposition? (e.g., efficient and safe processes, certification)
- How do key activities have to be designed so that the company will be more sustainable? (For example, can procurement, manufacturing, transport, and/or consumption of energy, materials, or water be made more efficient, just, or safe?)
- What risks (e.g., changes in legal requirements, loss of reputation, etc.) can be avoided through more sustainable key activities?



Key resources

- Which key resources and skills are necessary in order to implement your value proposition?
- Which ones are already available, which ones must be obtained, or for which ones must partners be found?
- Does the start-up team already have resources and skills for complying with the defined sustainability requirements, or does it require external support for this?
- If environmentally critical production factors are among the key resources, how can their use be minimized or eliminated?
- Is the life-cycle approach applied to the usage of key resources? ((For example, does a depositreturn/recycling system exist?)



Key partnerships

- Which key partners (suppliers, experts in the field, trade associations, supporters) do you need in order to fulfill your value proposition? How do you identify them?
- Which key resources do you source from partners? Which key activities do partners perform?
- Which partners do you need to make the products/services you offer sustainable? Who else can support you (e.g., trade associations, organizations)?

- Which sustainability requirements are relevant along your value chain?
How can you fulfill these sustainability requirements?

A value chain defines all the stages of the production/service process including all preceding and following activities.



Cost structure

● Which costs do your key activities entail? What are your start-up's main cost units (production, distribution, logistics, etc.)?

● Describe your cost structure. Discuss the fixed and variable costs.

● Which main investments will you have to make?

● Can costs be reduced by savings in resource consumption?

● Can additional costs arise in the future if activities are not sustainable?

● Does taking sustainability aspects into account entail additional costs?

Do additional costs, e.g. for environmental/sustainability certifications or for a deposit-return/recycling system have to be taken into account?)