



# **Business Model Innovation for Sustainability**

A whitepaper by WWF Switzerland  
and Impact Hub Zürich

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Impressum  
Publisher  
WWF Switzerland  
Impact Hub Zürich

Date  
August 2018

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The authors would like to thank the following, who have provided input on the conception, writing, design and promotion of this white paper: Nico Frey, Damian Oettli, Samuel Wille, Leo Caprez, Dario Grünenfelder, Christian Som, Daniela Hoffmann (WWF Switzerland), Marius Schlegel, Res Witschi (Swisscom AG), Anne Merkle (Impact Hub Global / WWF), Olena Bolger (Impact Hub Basel), Carmen Romero (Impact Hub Zurich)

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# Preface

## Thomas Vellacott, CEO WWF Switzerland

Many of the world's leading companies have made strong commitments to sustainability. These include setting science-based climate targets, contributing to the Sustainable Development Goals (SDGs), and taking action on zero waste, deforestation-free supply chains and water stewardship. However, the level of ambition of the Paris Climate Accord and the Sustainable Development Goals, and the transitions they entail challenge many more companies to examine the viability of their existing business models.

For decades, WWF has been collaborating with companies and investors in efforts to take meaningful collective action on sustainability. Through Panda Labs, WWF's decentralised innovation accelerator, WWF and

its partners support innovative, new solutions to the Sustainable Development Goals. For our partners, sustainability is more than a passing trend; investors, employees and customers have come to expect strong sustainability performance as a prerequisite to doing business. At the same time, innovation, whether in products, processes or business models, has become an ever more important competitive advantage. Still, the connection between sustainability and innovation, particularly as it pertains to companies' underlying business models, has, up until recently, only rarely been made. This is changing fast. As climate change and resource overconsumption disrupt value chains and with digital innovations opening up entirely new opportunities, CEOs and Boards

increasingly look to business model innovation for sustainability to ensure the longer-term viability of their companies.

With this white paper, WWF aims to contribute to this next-level development of private sector sustainability. It explores how companies, in collaboration with other stakeholders such as Impact Hub and WWF, can co-create resilient new business models. These new business models aim to be financially viable and tackle environmental and social challenges, by making effective use of a company's unique competencies. At times, this ambition for transformational change can appear overwhelming. But despite the scale of the challenge, we believe this is a story we can start writing together today, #forgenerationstocome.



## **Lorena Kreis, Business Strategist Impact Hub Zurich (IHZ)**

Impact Hub is a global entrepreneurial community with 15,000 innovators, start-ups and corporate partners who come together to build a radically collaborative world. Impact Hub is the place where innovation and impact happen on a daily basis. We are inspired by the Sustainable Development Goals of the United Nations; and at Impact Hub Zürich we work closely with corporates to foster innovation and collaboration for a sustainable future.

By leveraging the experience of our members we support corporates in building an innovation culture, running intrapreneurship programmes, connecting them with our inspiring community, and providing training on innovation and

collaboration. Last but not least, we provide hands-on support in the development of new and sustainable products, services and business models.

Collaboration is crucial to achieve our mission: we believe the grand challenges of our time will never be solved by one person or organization alone. The shared experience of two strong partners – WWF Switzerland and Swisscom – confirms this belief. But it has also shown that there are challenges to overcome if businesses want to develop sustainable business models and strengthen their positioning in the market.

In this white paper, we want to share our experience of a collaborative project aimed at creating a sustainable business model: we hope that the lessons we have learned will be useful for other companies taking the same path.







# WHY transformational change?

The future way of life & the power of markets

## The future way of life - and why it will transform businesses

How will we live, travel, work or eat in the future? And how will this influence businesses, business cases and the environment? Our world is rapidly being redefined by digitization and disruptive technologies like the blockchain, changing customer needs, demographic shifts, and environmental pressures including scarce resources and climate change. Under these circumstances, traditional business models often lose their competitive edge and fail. There are numerous examples: print media has drastically declined, online and sharing platforms in the retail sector have expanded widely, digital devices and services have revolutionized the music industry.

## The power of markets for a sustainable future

Transformational change, however, can create new opportunities, both from an economic and environmental perspective. Businesses are one of the drivers of environmental degradation, but they can also promote environmental protection. WWF's vision is to stop the degradation of our natural environment and to build a future in which people live in harmony with nature. We believe we have an ethical responsibility towards the planet and its future generations, which means we must consider the Earth's ecological boundaries and its limited resources. WWF's Living Planet Report<sup>1</sup>, however, demonstrates that we're currently consuming natural resources and services as if we had 1.6 Earths at our disposal.

## New business models for sustainability

Forward-looking CEOs, boards and intrapreneurs are exploring how to rebuild their businesses to get ready and fit for the future. The new ambition is not only to reduce negative impacts in operations and supply chains, but to tap into opportunities arising from scenarios for a sustainable future within and beyond current sector boundaries.

## WHY transformational change?

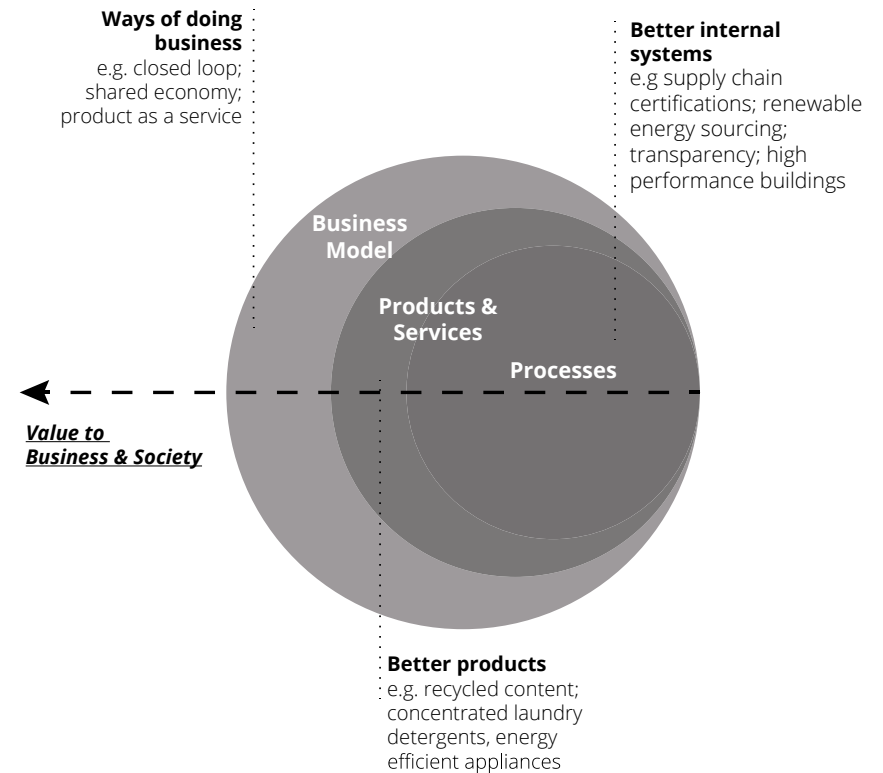


Figure 1: Innovation Framework<sup>2</sup>

With this aim in mind, companies have started using business model innovation to transform their core businesses. New sustainable business models should enable corporates to operate within planetary boundaries, but in an economically viable way. Business model innovation can involve rethinking an entire business case, but also challenging the system (market) in which the business operates. Because it involves a set of multidimensional activities, executing business model innovation is ambitious. If successful, however, creating new business models can give a company competitive advantage, thanks to first-mover status and an increased internal capacity for transformational change.

### ***Supporting Trends***

SEVERAL STRONG TRENDS ARE CURRENTLY CREATING WIDE OPPORTUNITIES FOR SUSTAINABLE BUSINESS MODEL INNOVATION:

#### **Sustainability competencies**

Many companies now have the skills needed to move to the next level of sustainability. In recent years they have substantially increased internal sustainability management competencies, or have bought them in from specialized consulting firms.

#### **Unconventional collaboration – an innovation driver**

Collaboration between the private and NGO sectors – as well as other stakeholders such as academia, governments and the broader public – has increased, and has proved to boost innovation. Cross-sector collaboration promises to become another supportive factor for companies implementing new sustainable business models.

#### **Digital revolution – disruptive opportunities**

The digital revolution will further accelerate market disruption. Innovations including the Internet of Things, digitalization, artificial intelligence, blockchain and automation are game-changers in many industries. They also provide opportunities for more precision, transparency and connectivity, potentially leading to more inclusive, socially and environmentally impactful business models.

#### **Circular economy, sufficiency, science-based targets as guiding concepts**

Guiding concepts such as the circular economy (closed-loop systems), sufficiency (reductionist strategies) and science-based target setting (e.g. absolute greenhouse gas and footprint reduction paths) have been around for years, but they have recently been gaining increasing traction. In some sectors, business model innovation will be key to unlocking the potential they offer.

### ***Potential challenges<sup>3</sup>***

THERE ARE, HOWEVER, CHALLENGES FOR COMPANIES AIMING FOR BUSINESS MODEL INNOVATION, SUCH AS:

#### **Managing business model innovation**

Top management buy-in is necessary a) to create new business models, which could compete with current business models (cannibalism); and b) to prioritize investment in new business models vis à vis financing existing activities (opportunity costs).

#### **Benefits from business model innovation are uncertain**

However carefully the effects of a new business model are forecasted, it's often hard to be certain if it will eventually pay off financially or meet its sustainability goals.

#### **Testing and implementing new business models**

Companies need to test new business models in an efficient and effective way in order to understand their benefits and potential drawbacks early in the process. This requires the right testing set-up and definition of criteria for success (key performance indicators), adapted to the respective testing stage. It's also important to note that new business models are introduced in many different circumstances, and finding the right solution is not always straightforward: should it live alongside the existing business model? For how long? Does it need the same legal structure or an independent one?

#### **Business model innovation and changes in the ecosystem**

Every business is embedded in a broader system. While every innovation will be tested and iterated in collaboration with multiple stakeholders, it's the subsequent responses of a company's suppliers, clients, partners and competitors that will either enable or constrain the new business model.





# WHAT is business model innovation for sustainability?

Business model innovation & sustainability

**Business model innovation is not about better products or services, but changing the way of doing business.**

A business model is a blueprint of how a company creates and captures value. It provides answers to questions including:

- Who is the target customer?
- What is offered to the customer?
- How is the value proposition created and delivered to the customer?
- Why is the business profitable?<sup>4</sup>

That said, innovating a business model goes beyond product, service and/or technological innovation, or changes in single-function strategies such as the sales model. Through business model innovation, several elements of a business model are changed, allowing value to be delivered in new ways. When companies innovate for sustainable business models, sustainability issues and goals (such as operating within planetary boundaries) are incorporated into the design of the business model.

**Incremental vs. disruptive change for sustainability**

The sustainability efforts of both the private and public sector have led to many improvements in recent years. However, most efforts have been focused on incremental innovations, such as efficiency improvements in supply chains or more sustainable products. When we take into account today's global sustainability challenges, it becomes clear that incremental improvements are not enough. The Earth also needs disruptive transformation, which means the creation of entirely new business models.

**Business model innovation for sustainability: the theory**

The aim of business model innovation from a sustainability perspective is to drastically reduce the resources and material input needed in sector value chains, and to bring sectoral environmental impacts in line with planetary boundaries and the Sustainable Development Goals. In some cases it will result in the

WHAT is business model innovation for sustainability?

replacement of unsustainable business models. Ideally, new business models will deliver positive social and ecological effects.

New models can, for example, follow the principles of sufficiency and/or circular economy. Sufficiency covers reductionist strategies, such as consuming

producing less and slowing down. Circular economy is based on closed-loop systems, repairing and sharing.

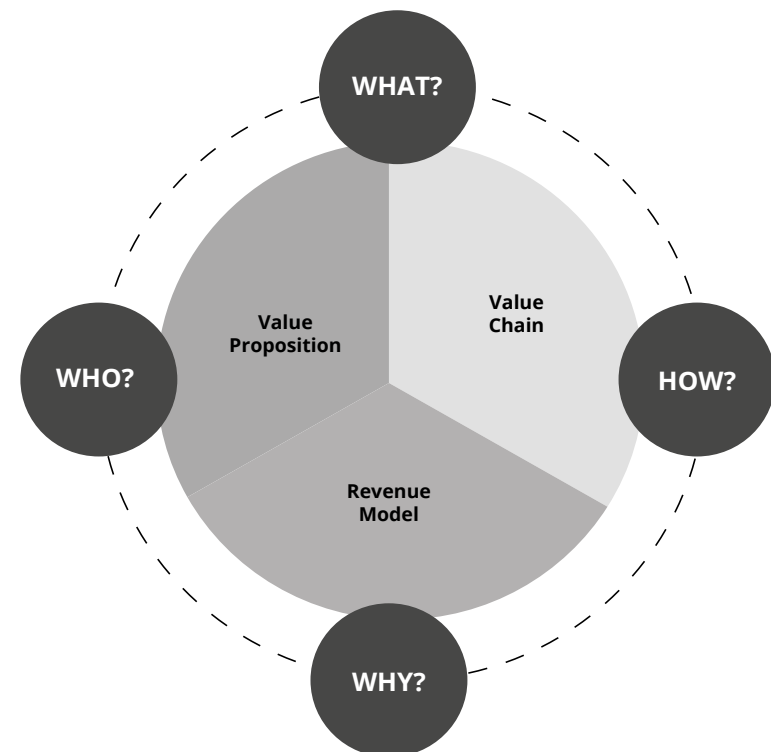


Figure 2: Components of a business model <sup>5</sup>

According to research from SustainAbility, the following business model innovations have been particularly successful<sup>6</sup>:

**Environmental impact:** closed-loop production, physical to virtual, produce on demand, rematerialization.

**Social impact:** buy one give one, cooperative ownership, inclusive sourcing.

**Base of the pyramid:** building a marketplace, differential pricing, microfinance, micro-franchise.

**Financing innovation:** crowdfunding, freemium, innovative product financing, pay for success, subscription model.

**Diverse impact:** alternative marketplace, behaviour change, product as a service, shared resource.

Of these, the following are particularly relevant for WWF's aim of developing and fostering more sustainable markets:

**Product as a service** – e.g. renting instead of selling products

**Physical to virtual** – replacing physical infrastructure such as retail stores with virtual services

**Produce on demand** – producing products only when customer demand has been quantified, thereby minimizing waste

**Re-materialization** – sourcing materials from recovered waste.

## Inspirations

THERE ARE NUMEROUS INITIATIVES AND PROJECTS WHICH SHOWCASE INNOVATIONS AND GUIDE BUSINESSES TOWARDS NEW SUSTAINABLE MODELS. TO MENTION A FEW:

## System (markets) level

- [2012: WWF Green Game Changers](#)<sup>7</sup> – WWF gathered the stories of 50 green game-changers to highlight some of the innovative ways in which businesses and entrepreneurs are tackling the challenges of living in the resource limits of our one planet.
- [2014/2015: Model Behaviour](#)<sup>8</sup> – SustainAbility produced research and a series of reports to define and showcase notable business model innovations for sustainability.
- [2018: UNGC Breakthrough Project](#)<sup>9</sup> – An initiative to share the knowledge and ideas of leading innovators for achieving the SDGs.
- [2017: WBCSD CEO guide to the circular economy](#)<sup>10</sup> – Signed by 14 leading CEOs, this guide aims to give business leaders the tools they need to implement circular economy principles and respective business models.

## Company level

- Patagonia<sup>11</sup> – Outdoor clothing and gear: Worn Wear offers customers an opportunity to re-sell used Patagonia products, which creates incentives for more sustainable consumption, offers additional value to customers, and creates a new business case for the company.  
> Behaviour change, alternative marketplace
- FLOOW2<sup>12</sup> – B2B sharing marketplace: this enables businesses to share equipment, knowledge and personnel skills in various industries from healthcare to construction.  
> Shared resources
- DESSO<sup>13</sup> – Flooring producer (B2B): the company takes back used carpets which are recycled to create new carpets. After the separation stage, the yarn is purified to create new yarn, which can be used over and over again. The recycled material from the backing is sold to the road and roofing industries. All non-recyclable fractions are used as secondary fuel in the cement industry. > Closed loop production, rematerialization.





# HOW to bring innovation for sustainability into action

Roles, collaboration & processes



# ROLES AND COLLABORATION IN SUSTAINABILITY INNOVATION

This chapter describes the general innovation process for sustainability provided and tested by WWF and Impact Hub Zurich.

We believe that collaboration leads to more successful innovation. Bringing different experts, stakeholders and points of view into the innovation process broadens the range of ideas, know-how and critical voices. WWF, as a global expert in environmental topics, supports companies that want to innovate in an environmentally sustainable way. Impact Hub, as a global community of innovators and entrepreneurs that live innovation on a daily basis, is an expert in accompanying businesses through the innovation process.

The process of innovation for sustainability involves the following roles:

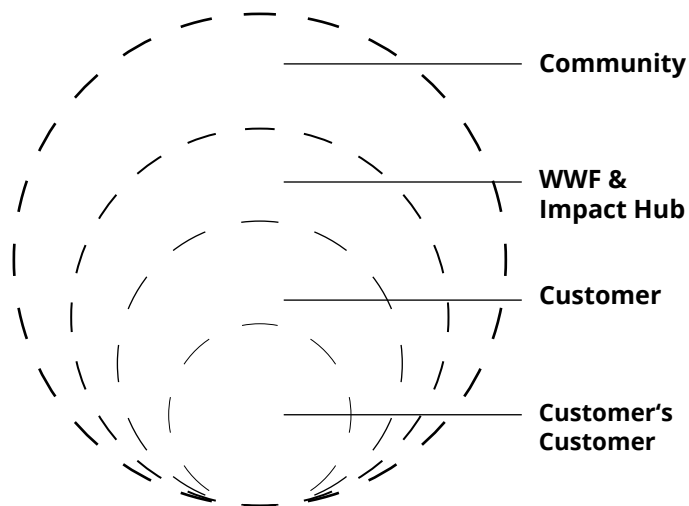


Figure 3: Key roles for innovating a business model

These roles are key to the business model innovation process as it is proposed in this white paper. However, both WWF and Impact Hub are also keen to promote other forms of business model innovation. This could involve other specialist NGOs (e.g. with more social expertise) being invited to participate in the process. It could also mean that the customer (the company or other institutions) relies generally on its own sustainability or innovation expertise, while looking for external collaboration in specific areas.

**Customer's customer:** Following a human-centred approach, new business models must provide additional value to the customer they target. The customer's customer has the role of validating or disproving assumptions and features of the new business model.

**Customer:** The customer is the decision-maker and project owner, and is internally accountable for the outcome of the process. Furthermore, the customer is the industry expert and can leverage existing internal know-how, capabilities and skills. An innovation-friendly culture is crucial for an efficient and effective process. In the pilot case, as described in the next chapter, the customer is a company, but it could also be a public or academic institution, or another form of entity.

**WWF:** WWF acts as a challenger and provides expert input on environmental issues.

**IHZ:** Impact Hub also challenges ideas, while providing expert guidance on innovation.

**Community:** WWF and Impact Hub collaborate with other networks to bring in further expertise and in-depth knowledge if required.

# THE PROCESS

## Triggers for innovation

There are different triggers for initiating an innovation process. They could include the ambition to develop new markets, to make use of new technologies, to create positive impact, to react to competition, customer needs or regulatory changes, or for bottom-line improvements. The triggers are WHY a company wants to innovate, and there can be several of them involved. There is also the question of WHO comes up with the framework for an innovation process or a specific idea. In this context, the so-called intrapreneur is becoming more and more important.

### ***Intrapreneur***

An intrapreneur is an individual, working on the payroll of a company, who acts like an entrepreneur. They may be a social intrapreneur, defined as: “A passionate individual, who thinks and acts like an entrepreneur, working inside a major corporation or organization, who develops and delivers innovative, profitable and sustainable solutions to social or environmental challenges.” In 2015, [Deloitte Digital published a white paper](#)<sup>14</sup> with five insights regarding intrapreneurship:

- 1: Intrapreneurship describes a people-centric, bottom-up approach to developing radical innovations in-house.
- 2: Intrapreneurship pays off many times over in terms of company growth, culture, and talent.
- 3: It's not about creating intrapreneurs, it's about finding and recognizing them.
- 4: Intrapreneurs know the rules and break them effectively.
- 5: Intrapreneurship requires a different management approach.

## The key is not the idea, but the implementation

New sustainable business models combine innovative approaches (lean innovation, business model generation etc.) with sustainability themes (materiality assessment, sustainable supply chain management, environmental management, etc.). In each case, the process must be adapted to the specific needs and circumstances of the company, e.g. by:

- Creating a culture of innovation, increasing innovation and sustainability capacity, and establishing processes for innovation management;
- Aiming to co-create new business models, but potentially starting with innovation in sustainable products, services or processes;
- Combining this proposed approach with innovation processes and cultures already in place; or
- Varying and adapting the tools used, partners involved and level of external support depending on the business' capabilities, needs, sector, scope and goals.

### Three steps for innovating the business model

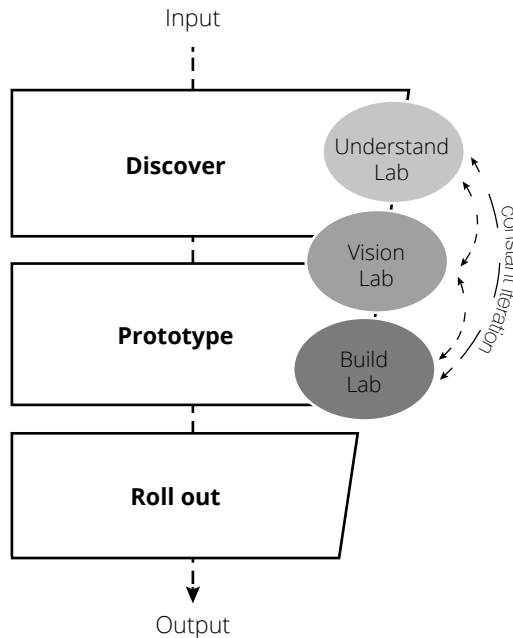


Figure 4: Discover, prototype and roll out a new business model

**Discover:** In the discover phase, areas of opportunity are assessed. These can build on prior research regarding trends, sustainability impact, disruptive technologies or market developments, but don't necessarily have to. Depending on the situation of the company, the first step can also include the setting-up of an innovation process. We customize the process to the needs of the company, by adjusting the tools used, the speed of the process and the level of support provided by WWF and Impact Hub. Because innovation requires funds - be it for developing prototypes, human resources, or investment for the roll-out - it is crucial to have the commitment of decision-makers (usually management) at the beginning of the process.

**Prototype:** In the second phase, the innovation is shaped, tested and improved in an iterative process. To do this, we have to explore WHY we do WHAT and HOW for WHOM. We include tools of various disciplines or "schools" such as design thinking, agile and lean start-up in order to answer these questions. Tools can include personas, customer journeys, value proposition canvases, sketching, expert interviews or benchmarking (see infobox on page 16). Furthermore, the potential sustainability impact of the new business model will further be examined and improved during the prototyping phase.

**Roll-out:** Once the business model and its sustainability impact has been validated, the roll-out begins. Again, this can happen in different ways. Depending on whether an existing business model is altered or a new one created alongside it, on whether the new idea should be delivered by a new organisation, a spin-off, joint venture etc., the roll-out can take many different forms.

The roll-out is a two-sided process: externally in the sense of 'getting to the market', internally – and this is especially relevant for innovation alongside other existing business models – by adjusting internal processes, structures, contracts, etc.

Depending on internal structures and policies, several ideas may have to compete for budget at the same time, once or several times a year. Internal thresholds (e.g. expected return on investments) affect the decision of "if" and "when" an innovation should be implemented. This is why the commitment of the management mentioned above is crucial to the success of the process.

## ***Tools for Innovation***

### **Why**

A method to consider WHY a specific innovation should happen is to simply ask “Why?” over and over again (based on Sakichi Toyoda’s “5 Whys”<sup>15</sup>).

### **For whom**

- Persona<sup>16</sup>: A persona is a character with habits, desires, a certain age and background we see using the product or service
- Empathy map<sup>17</sup>: An empathy map helps understand what the targeted customer sees, feels and does
- Value proposition canvas (problem side)<sup>18</sup>: Similar to the persona, the value proposition canvas helps clarify what “jobs” (in the sense of tasks around a certain topic) a customer has as well as related pains and gains.
- Stakeholder map<sup>19</sup>: A stakeholder map includes various stakeholders and helps identify potential levers for action, depending on existing market relations, positionings or desires of various actors.
- Interviews<sup>20</sup>: Interviews are useful to test assumptions about customers and give insights into their needs and behaviour. This tool can also be used for testing a prototype.
- Observation<sup>21</sup>: Observations help to understand how customers act, what habits and routines they have. This tool can also be used for testing a prototype.

### **How & what**

- Customer journey<sup>22</sup>: A tool for identifying innovation opportunities by systematically sketching the sequence of actions for a customer in a given situation.
- Value proposition canvas (solution side)<sup>23</sup>: Building on the problem side, directions for innovation are brainstormed in the categories of pain relievers, gain creators and solutions.
- Benchmarking<sup>24</sup>: Examples for entire business models or single aspects such as processes, products/services or forms of transaction, in the same or different industries, can trigger ideas on how innovation can happen.
- Business model/lean canvas<sup>25</sup>: The business model canvas and lean canvas are both tools to design, challenge and pivot the business model. The lean canvas targets start-ups, while the business model canvas focuses on established companies innovating new or existing business models.
- Prototyping<sup>26</sup>: Prototypes bring an idea out of the (subjective) mind into the real, physical world to be experienced and tested with users/customers. Prototypes vary in form (physical, digital, role play or simulation) and level of detail.
- Testing<sup>27</sup>: Testing is essential in innovation to find out which aspects are worth pursuing and where there is a need to pivot. Testing can happen in different ways, depending on the goal and object of the testing. If the idea cannot be validated in the first testing, a next version can be built, prototyped and tested (iterative process).



A close-up photograph of a fan palm leaf, showing the intricate, radiating veins of the frond. The leaf is a vibrant green, with some areas appearing slightly lighter due to lighting. A semi-transparent green rectangular box is positioned in the lower right quadrant of the image, containing the text 'Case study' and 'The pilot case and its context'.

# Case study

The pilot case and its context

# CONTEXT: JOINT INNOVATION FOR SUSTAINABILITY AT SWISSCOM

## Enabling factors

Swisscom is a major telecommunications provider in Switzerland and had been a partner of both WWF and Impact Hub for many years. Swisscom brought several positive factors to the table:

- Experience with innovation (bottom-up innovation process in the form of the Kick Box Programme, see below)
- Mindset and company culture (e.g. willingness to change, ability to openly collaborate and innovate, courage to fail forward)
- Commitment of internal stakeholders and decision-makers
- A specific topic for innovation, based on prior research conducted by Swisscom, WWF and the University of Zürich<sup>28</sup>
- Internal innovators (intrapreneurs) who were willing to develop ideas and drive innovation.

## Roles

The roles in the project were the following (as defined in the previous chapter):

The Swisscom Corporate Sustainability and Innovation teams were experts with regard to internal benchmarks and processes and connecting the right people. They had based their proposed solutions on insights from customer behaviour (customer's customer). WWF and Impact Hub accompanied the project with their respective expertise in sustainability and innovation. The project was overseen by a steering committee which consisted of WWF, Impact Hub and representatives of the Swisscom Corporate Sustainability and Innovation teams.

## The process

The business model innovation project started in November 2017. The first phase included defining the timeline, defining the roles and calling for ideas from intrapreneurs in a Kick-Call for Sustainability (ideas with both a business case and a positive impact on the environment or society). By the end of January 2018, 17 ideas had been handed in for the Red Box for market validation and rapid prototyping. Every team had a time budget of 20% over two months (10 days in total) and a financial budget of up to CHF 1'000. The latter could be used for prototyping, conducting surveys or accessing coaching services. Out of the 17 ideas, three made it past market validation and reached the Blue Box for the proof of concept. In the Blue Box, the teams had a time budget of 20% per person over four months and a financial budget of CHF 10'000.

On the "proof day" held in July 2018, the three projects pitched their business model in front of a jury made up of Swisscom management, WWF, Impact Hub and Bertrand Piccard. One of these three projects – smart home as a service – will be further explained on the following two pages.

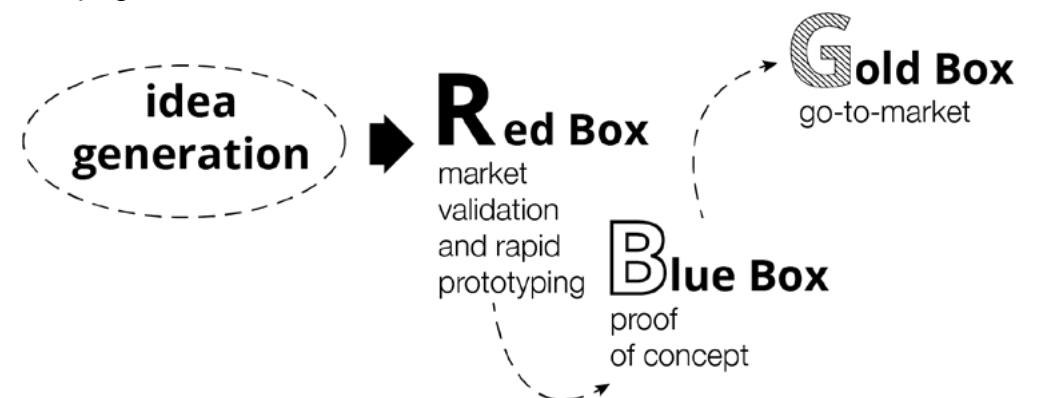


Figure 5: Innovation process at Swisscom (based on Swisscom Kickbox)

## THE CASE: SMART HOME AS A SERVICE

The following case of “smart home as a service” (SHaaS) is an example of innovation for sustainability in a collaborative and intrapreneurial setting.

In the study Opportunities and Risks of Digitalization for Climate Protection in Switzerland<sup>29</sup>, WWF, Swisscom and the University of Zürich described ways in which the ICT industry can reduce its environmental footprint. The study also explored the potential of ICT and digital solutions for climate protection in Switzerland; and it found that there is significant greenhouse gas abatement potential, for example in the field of smart buildings: “Smart Buildings describes the integration of ICT devices into building infrastructure, which measure changes in the environment and react accordingly (e.g. automatic adaption of heating to presence of residents). Smart Buildings avoid unnecessary energy consumption, which does not contribute to the residents’ comfort”<sup>30</sup>. However, the study also revealed that new business models would need to be invented to achieve the climate protection potential of digital solutions.

### Discover

Based on the research and the potential use case of ICT for positive environmental impact, a team of four Swisscom employees handed in the idea of “smart home as a service”. WWF, co-author of the research and project partner, was already on board to provide expert know-how, and Impact Hub contributed expertise for the innovation process. As Swisscom already had experience in the field, no additional technological or product know-how was necessary. The defined goal of the project was to develop a business model around SHaaS in order to increase sales while at the same time achieving the greenhouse gas abatement potential through digital solutions in the field of smart buildings.

### Prototype

#### WHY?

Swisscom was already selling products in Swisscom shops that could be used in a smart home (as an integrated system). The team found that on the one hand the customers were overwhelmed by the complexity and variety of the offering for heating systems, security installations, entertainment and so on; while on the other they also had to carry out or arrange the installation themselves. Furthermore, certain products could only be used by single family house owners, where the decision-making power was aligned with the technical independence of installations, such as heating or security systems. As a consequence, i) customers missed the opportunity to choose the right solution or didn’t choose one at all; and ii) reduction in energy consumption (and thus greenhouse gas emissions), particularly through heating, was not achieved due to the complexity of the respective products, their installation and configuration.

### For WHOM?

After having identified the potential reasons for the problem, the project team defined the target group they were designing the solution for. In a joint workshop with Swisscom, Impact Hub and WWF we identified different target groups and their motivation for wanting and eventually buying products that enable SHaaS. Tools such as personas and value proposition canvas were used. This was necessary, as it would have implications for the product range, the communication content and channels through which the products would be sold, as well as the potential sustainability impact. The effect of the workshop was to add the customer perspective into the innovation process, allowing for the testing of assumptions concerning customer behaviour and the circumstances in which they would buy the product.

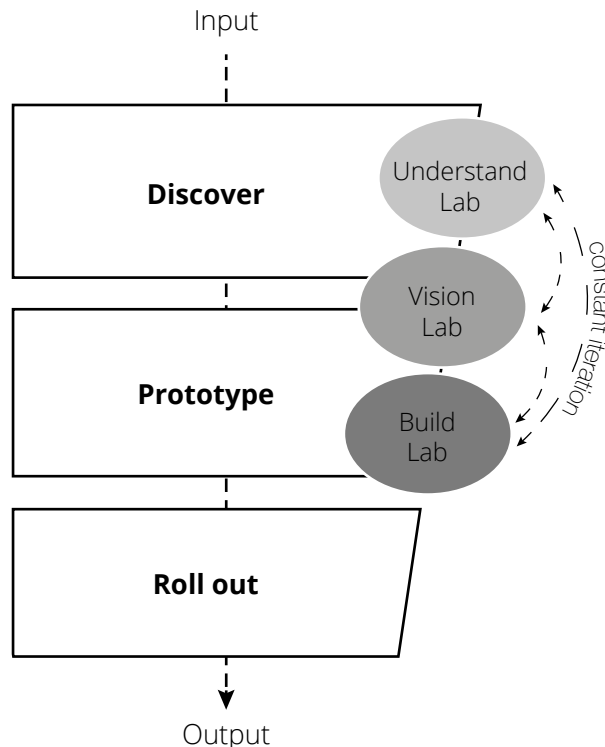


Figure 4: Discover, prototype and roll out a new business model

### HOW & WHAT (solution)

The project team tested a first solution in the form of a prototype. The prototype was a shop display, presenting a range of smart home products (e.g. smart heating), as well as an accompanying consumer interview. They also developed a business model with prices, suppliers, the route to market (shops), and how the products would be installed at customers' homes. Furthermore, they made calculations around the greenhouse gas reduction potential: this would directly feed into the company's overall sustainability and climate protection strategy, which had been set at group level. The implementation would be handled by a subsidiary of Swisscom which specialized in the construction, maintenance and operation of high-performance ICT and network infrastructure solutions, as well as the planning and implementation of forward-looking 'Smart Infrastructure' projects. As a crucial success factor, the subsidiary was in the project lead from the start of the process.

During this solution generation process, WWF and Impact Hub challenged the project team on the prototype, focusing on the customer journey, the business model (points of sale, the role of Swisscom in the value chain of the SHaaS industry), the sustainability impact and communication, as well as the customer testing of the prototype and role play. Interactions between the project team and the external stakeholders (WWF and Impact Hub) took the form of a workshop as well as regular exchanges and support by email.





# Conclusions

Learnings & next steps

# LEARNINGS

Business model innovation for sustainability requires investment in time and money (directly and as opportunity costs), but it is often essential if a company wants to ensure success and contribute to a sustainable future. Experience from Impact Hub, WWF and our pilot project has revealed several success factors:

## Culture

**Awareness:** foster culture for innovation and sustainability by raising awareness and capacity-building. One way to achieve this can be through establishing routines (informally) or processes (formally, see “innovation process” below).

**Willingness to change:** accept that innovation is a painful process, because it shows how things can be done differently than they are done today – implying that what is done today is not as good. Embrace it and be open for these inputs.

**Failing forward:** testing new grounds means not knowing everything from the beginning. A first prototype might not be accepted by its users; learn from their feedback, iterate and test again.

## Organisation and setting

**Space:** create and offer space that allows for the current business model, products/services and processes to be challenged. Ways to create space include inviting employees to give input, conducting research (e.g. on sustainable business solutions), or engaging with peers from other companies.

**A strong, multidisciplinary core team:** apart from those developing ideas, there is a need for a strong, multidisciplinary core team of sustainability and innovation experts from the company and potentially also from external organizations. The core team drives the innovation for sustainability process, creates space (see above) and connects innovators with top management.

**Community, cross-organizational and cross-sector collaboration:** talk and collaborate with peers from other organizations and sectors, engage in discussions with regional or thematic communities, NGOs, academia and experts.

**Low entry barriers for ideas:** keep entry barriers for ideas low to get as many ideas as possible.

**Diversity and collaboration in innovation teams:** form strong multi-disciplinary and multi-organizational teams and include different perspectives and ideas.

**Decision-makers on board:** include decision-makers (management) who commit resources (people/time, money, support) before the project starts; and deciders in the project team, to avoid the risk of heading in a direction that would not get support.

## Process

**Innovation process and selection criteria:** define the process and expectations that need to be fulfilled for projects to get started and be continued, in order to give guidance to the innovation team(s). The selection criteria should include a strong business case and a competent team, as well as the anticipated sustainability impact.

**KPIs:** define realistic and useful criteria to measure the success of a sustainable innovation. For instance, forecasting a turnover of XY in one year before even knowing what the innovation should be would not be helpful.

**Reduce complexity:** if the innovation culture is not yet established within your organization, start with product/service or process innovation, but aim for business model innovation.

**Research:** conduct research in different sectors to give guidance on where / in which field to develop new business models for a more sustainable economy.

**Prototyping and testing:** validate assumptions as soon as possible to limit the costs of swimming in the wrong direction. Ask your customers, listen, and learn.

# NEXT STEPS

WWF and Impact Hub are keen to foster business model innovation for sustainability on a global scale. Based on our previous experience, we can offer the following to companies and other interested organizations that are willing to explore new business models:

## WWF

### Discover

- Executive dialogue on the importance of future business models for sustainability
- Conduct joint research on the sustainable future of a business and entire sectors
- Motivate employees to become intrapreneurs for sustainability

### Prototype

- Participate as an external stakeholder in business model innovation processes
- Contribute WWF's sustainability expertise in a broad range of topics and sectors during the "build" process, particularly in regards to eco-design of new business models, consumer engagement and communication

### Roll-out

- Support the company in measuring the sustainability impact of new business models (impact measurement)
- Joint communications on sustainability to increase credibility with investors and customers.

## Impact Hub

### General

- Accompany the building of an innovation community or programme within your organization
- Connect your innovation teams with our community of innovators
- Coaching of your innovation team, e.g. for the process, use of tools

### Discover

- Identify areas of opportunity for new sustainable products, services and business models
- Support and coach innovation team

### Prototype

Hands-on co-creation of new sustainable products, services and business models (including prototyping and testing)

### Roll-out

Support for rolling out the new business model

More concretely, companies or organizations – in collaboration with WWF and Impact Hub – could take the following next steps:

### One day workshop

for setting the scene and brainstorming or strategy dialogue on business model innovation for sustainability with Executive Board members

### 3-5 days sprint

for instance an Understand Lab to discover potential areas of opportunity

Run a full business model innovation for sustainability programme



# References

- 1 WWF, Living Planet Report 2016 - Risk and resilience in a new era, 2016; [http://awsassets.panda.org/downloads/lpr\\_living\\_planet\\_report\\_2016.pdf](http://awsassets.panda.org/downloads/lpr_living_planet_report_2016.pdf)
- 2 SustainAbility, Model Behavior II - Strategies to Rewire Business, June 2015; p. 8  
[http://s10458.pcdn.co/wp-content/uploads/2016/07/model\\_behavior\\_ii\\_strategies\\_to\\_rewire\\_business.pdf](http://s10458.pcdn.co/wp-content/uploads/2016/07/model_behavior_ii_strategies_to_rewire_business.pdf)
- 3 Björkdahl, J. and Holmen, M., Business model innovation – the challenges ahead, Int. J. Product Development, Vol. 18, Nos. 3/4, 2013; p. 218 ff.
- 4 Gassmann, O., Frankenberger, K., Csik, M., The Business Model Navigator – 55 Models That Will Revolutionize Your Business, London: Pearson/Financial Times, 2014;
- 5 Based on Gassmann, O., Frankenberger, K., Csik, M., The Business Model Navigator – 55 Models That Will Revolutionize Your Business, London: Pearson/Financial Times, 2014
- 6 SustainAbility, Model Behavior 20 - Business Model Innovations for Sustainability, February 2014;  
[http://s10458.pcdn.co/wp-content/uploads/2016/07/model\\_behavior\\_20\\_business\\_model\\_innovations\\_for\\_sustainability.pdf](http://s10458.pcdn.co/wp-content/uploads/2016/07/model_behavior_20_business_model_innovations_for_sustainability.pdf)
- 7 WWF, Green game-changers - Insights for mainstreaming business innovation, 2012;  
[http://assets.wwf.org.uk/downloads/1121\\_1\\_wwf\\_greengamechange\\_aw\\_web\\_2\\_.pdf](http://assets.wwf.org.uk/downloads/1121_1_wwf_greengamechange_aw_web_2_.pdf)
- 8 SustainAbility, Clinton, L., The Launch of Model Behavior: 20 Business Model Innovations for Sustainability, February 2014;  
<http://sustainability.com/our-work/insights/the-launch-of-model-behavior-20-business-model-innovations-for-sustainability/>
- 9 United Nations Global Compact, Project Breakthrough - The Breakthrough mindset, 2018; <http://breakthrough.unglobalcompact.org/briefs/the-breakthrough-mindset/>
- 10 WBCSD, CEO guide to the circular economy, 2017; <https://www.wbcsd.org/Programs/Energy-Circular-Economy/Factor-10/Resources/CEO-Guide-to-the-Circular-Economy>
- 11 <https://wornwear.patagonia.com/>
- 12 <https://www.floow2.com/sharing-marketplace.html>
- 13 <http://www.desso.ch/>
- 14 Deloitte Digital, Five Insights into Intrapreneurship - Strategies to Rewire Business, 2015;  
[https://www2.deloitte.com/content/dam/Deloitte/de/Documents/technology/Intrapreneurship\\_Whitepaper\\_English.pdf](https://www2.deloitte.com/content/dam/Deloitte/de/Documents/technology/Intrapreneurship_Whitepaper_English.pdf)
- 15 [https://www.mindtools.com/pages/article/newTMC\\_5W.htm](https://www.mindtools.com/pages/article/newTMC_5W.htm)
- 16 <http://opendesignkit.org/methods/personas/>
- 17 [www.designthinkinguk.com/empathy-mapping/](http://www.designthinkinguk.com/empathy-mapping/)
- 18 <https://strategyzer.com/canvas/value-proposition-canvas>
- 19 <http://www.servicedesigntools.org/tools/36>
- 20 <http://www.designkit.org/methods/2>
- 21 <http://www.designkit.org/methods/47>
- 22 [www.ideo.com/blogs/inspiration/use-customer-journey-maps-to-uncover-innovation-opportunities](http://www.ideo.com/blogs/inspiration/use-customer-journey-maps-to-uncover-innovation-opportunities)
- 23 <https://strategyzer.com/canvas/value-proposition-canvas>
- 24 [www.innovation-portal.info/toolkits/benchmarking/](http://www.innovation-portal.info/toolkits/benchmarking/)
- 25 <https://canvanizer.com/how-to-use/business-model-canvas-vs-lean-canvas>
- 26 <http://www.servicedesigntools.org/taxonomy/term/3>
- 27 dito
- 28 University Of Zurich, Hilty L. M., Bieser J. C.T., Opportunities and Risks of Digitalization for Climate Protection in Switzerland, 2017;  
[https://www.ifi.uzh.ch/dam/jcr:066776d8-d2b0-4c7c-b75d-6b7283cb5791/Study\\_Digitalization\\_Climate\\_Protection\\_Oct2017.pdf](https://www.ifi.uzh.ch/dam/jcr:066776d8-d2b0-4c7c-b75d-6b7283cb5791/Study_Digitalization_Climate_Protection_Oct2017.pdf)
- 29 dito
- 30 dito, pg.29