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Business Model Innovation - the How-to for STP Managers

PARALLEL 4

New business models for incubators in STPs

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Executive Summary

Companies worldwide innovate in respect to new products, new technologies or more efficient processes. Business Model Innovation (BMI) goes beyond these areas of innovation and is the number one business topic today for leaders, consultants and entrepreneurs.

STPs are striving at shaping the future not only of its park and its tenant companies. Moreover, STPs contribute largely to the economic development of cities and whole regions. The task of STP managers is to create value to companies, to scientific institutions, to municipalities, and to society in general.

Business Model Innovation is about value creation. Today, business models are “designed”. The most common concept for creating, visualizing, testing and executing innovative business models is the ‘Business Model Canvas’ (BM Canvas). In the paper, the concept and the design process are outlined, as well as a program how to facilitate BMI in STPs.

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Subject Index

Theme:

The paper on “Business Model Innovation - the How-to for STP Managers” will contribute to THEME 3: Managing STPs and areas of innovation.

Key discussion issues:

New business models for STPs, design process, business incubation, analyzing business models, assessing the business model environment, city/regional challenges, entrepreneurship, practical tools for STP managers, innovation ecosystem

1. Introduction: Why Business Model Innovation is Crucial

Even six years ago in 2007, Henry Chesbrough, famous for his Open Innovation approach, claimed: “Today, innovation must include business models, rather than just technology and R&D. Business models matter. A better business model often will beat a better idea or technology.”¹

A 2005 survey by the Economist Intelligence Unit reported more than 50% of executives believe that between now and 2010, business model innovation will be even more important for success than product or service innovation. A 2006 IBM survey of corporate CEOs² echoed these results. Nearly all of the CEOs polled reported the need to adapt their business models; more than two-thirds said that extensive changes were needed. Over the past decade (1997-2007), 14 of the 19 entrants into the Fortune 500 owed their success to business model innovations that either transformed existing industries or created new ones.

The Boston Consulting Group (BCG), a leading management consulting firm, titles: “Business Model Innovation - When the Game Gets Tough, Change the Game”³ In this study BCG illustrates that business model innovators outperform traditional innovators over time. As the greater frequency of disruption and dislocation in many industries is shortening business model lifecycles, Business Model Innovation becomes an imperative to business leaders, executives, academics, and entrepreneurs - as well as to STP managers.

2. The Concept: The Business Model Canvas as the Core Tool to Design, Visualize and Test Innovative Business Models

As other concepts for developing and implementing new business models are too complex and not practical for self-experimenting, we need a business model framework⁴ that is simple, relevant, and intuitively understandable, while not oversimplifying the complexities of how enterprises function.

To address this need the Business Model Generation came out in 2010 with a tool which is used today around the world by leading business schools, by startups as well as by large organizations: the Business Model Canvas. The BM Canvas is a handy tool formed by 9 building blocks: Customer segments (CS), value propositions (VP), channels (CH), customer relationships (CR), revenue streams (R\$), key resources (KR), key activities (KA), key partnerships (KP), cost structure (C\$).

¹ Chesbrough, Henry (2007), *Strategy & Leadership*, 2007, Vol. 35 Issue 6, p12-17, 6p

² Business model innovation matters, George Pohle and Marc Chapman, IBM's global CEO report 2006

³ Business Model Innovation - When the Game Gets Tough, Change the Game, Zhenya Lindgardt, Martin Reeves, George Stalk, and Michael S. Deimler, December 2009

⁴ Business Model Generation, A. Osterwalder, Yves Pigneur, Alan Smith, and 470 practitioners from 45 countries, self-published, 2010

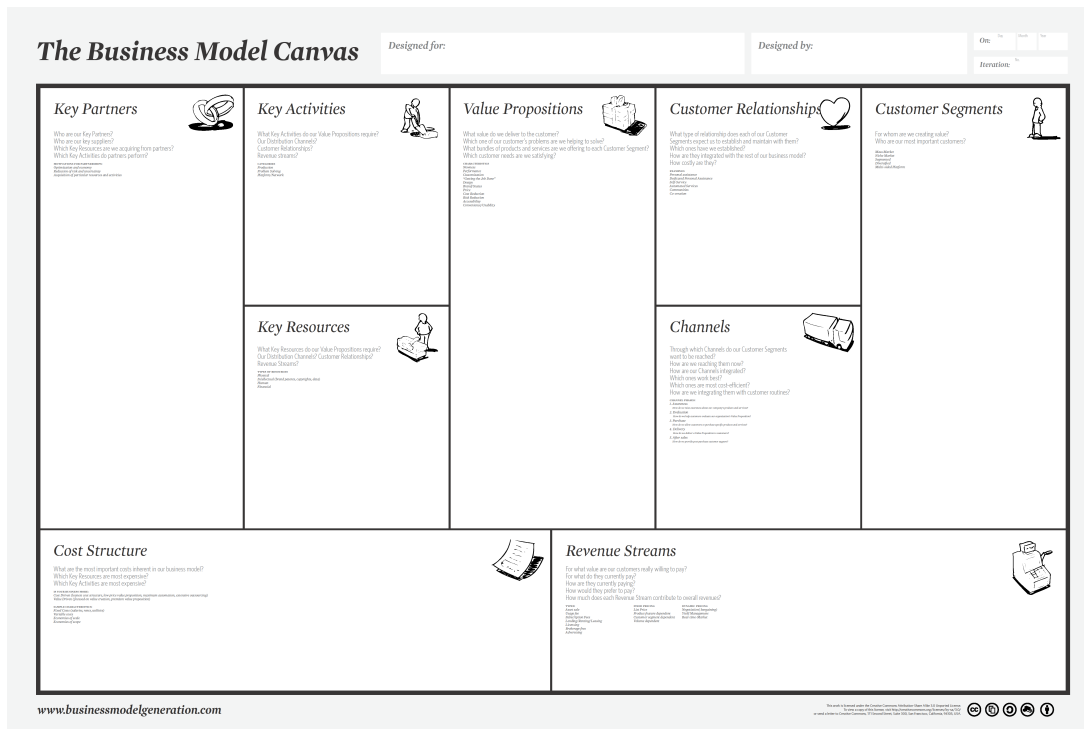


Figure 1: BM canvas, under Creative Commons, <http://www.businessmodelgeneration.com/>

The building block ‘Value Propositions’ is intentionally in the center of the BM Canvas, because it’s all about value creation. This being said, the Business Model Generation has got a common understanding of what a business model actually is and came up with this definition: A business model describes the rationale of how an organization creates, delivers and captures value.

The concept of the BM Canvas serves as a shared language. It has been applied, tested and is becoming a standard in all forms of organizations. We at TPH and in the Aachen/Germany area work with the BM Canvas in large corporations such as Ericsson, in non-profit organizations, in our incubator (s. chapter 4.) as well as in start-up companies and R&D teams. We apply the BM Canvas as the core tool and surrounding tools in a permanent innovation and design process. Some of these tools will be introduced in this paper.

To say it very clearly: The BM Canvas is not a substitute of a business plan. Business model design is a process, whereas a business plan is a rather static document with a specific purpose, e.g. to attract investors. As better the work in the BM design process is, as better will be the business plan.

3. The Business Model Design Process

The Business Model design process starts with the BM Canvas, the core tool for describing, analyzing, creating, and testing business models.

Secondly, BM patterns describe business models with similar characteristics. Examples for BM patterns are ‘Long Tail’, the ‘Freemium Model’, ‘Unbundling’ and ‘Open Business Models’. Understanding the BM patterns is extremely useful in the BM design process.

Thirdly, adapting design principles are key to innovate and to master the BM design process. BM design practitioners apply techniques such as ‘Customer Insights’, ‘Ideation’, ‘Visual Thinking’, ‘Prototyping’ and ‘Storytelling’.

The fourth step of a generic BM design process is re-interpreting strategy through the business model lens. The ‘strategy part’ of the process is about scanning the business model environment, evaluating business models, the perspective on Blue Ocean strategy, and managing multiple business models.

Following the 30th IASP world conference theme “Science Parks Shaping New Cities” and due to the leading role of STPs in a local/regional change process, we will focus on how to scan the STP’s environment, namely the Business Model environment .

3.1. The Business Model Environment

Continuous environmental scanning is more important than ever to STP managers because of the growing complexity of political and economic landscapes - locally city-wise, regionally and globally.

The external environment of an STP’s business model may be conceived as a sort of “design space”. The environment is the context in which to conceive or adapt a business model, taking into account some design drivers (eg. new customer needs, new technologies, etc.) and design constraints (eg. space or budget limits, regulatory trends, etc.). This environment should not predefine business models, but influence design choices and help to make more informed and reflected decisions. With a breakthrough business model, an STP might “shape” or transform its environment.

As the business model is “embedded” in its environment it is suggested to map the four main areas of the STPs environment as follows.

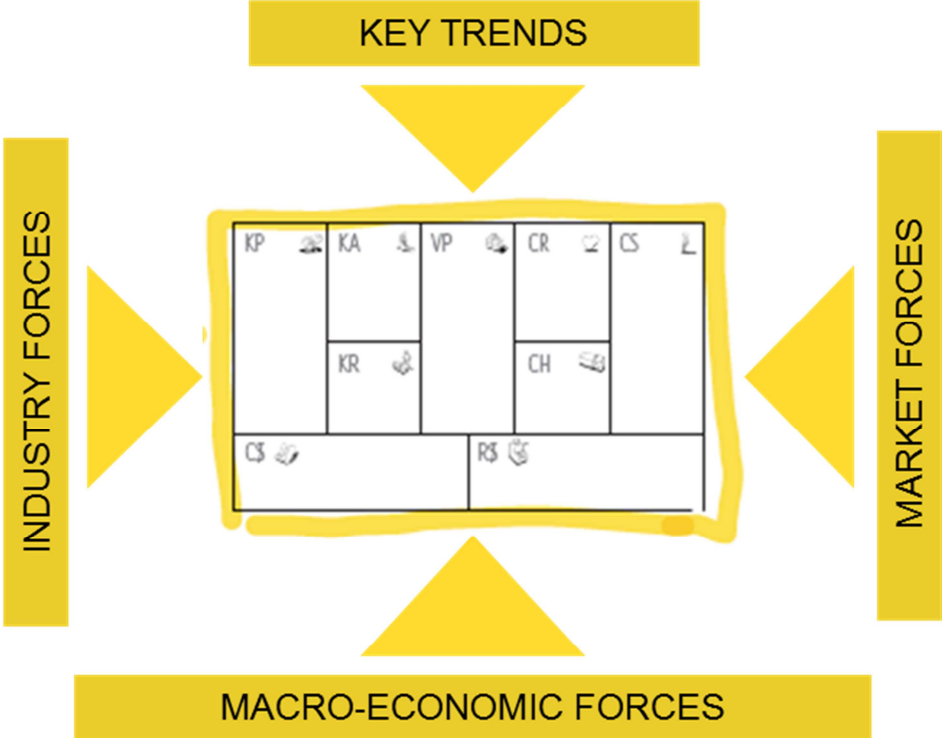


Figure 2: The four main areas of the Business Model environment ⁵

⁵ Business Model Generation, A. Osterwalder, Yves Pigneur, Alan Smith, and 470 practitioners from 45 countries, self-published, 2010

In the following table, the four main areas of the Business Model environment are generally described. In the right column, examples for questions to be analyzed and addressed by STP managers are given.

| Areas of Business Model environment | Examples for questions to be addressed by STPs, linked to BM Canvas building blocks |
|---|--|
| Market forces eg. market segments, needs & demands, market issues, revenue attractiveness | What CS have the highest growth potential? How can our VP address these customers' jobs-to-be-done? What KR, KA and KP do our VP require? Additional R\$ potential? |
| Industry forces eg. suppliers, stakeholders, new entrants/competitors, substitute services | Which new entrants/competitors (co-working etc.)? Key players in the value chain? How to involve suppliers/stakeholders (risk sharing)? Substitute of office services due to technology? |
| Key trends eg. technology, regulatory, societal, cultural, or socioeconomic trends | Which tech trends (mobile etc.) represent opportunities or disruptive threats? Which regulations and taxes affect customer demand, which societal values? Which behavior changes? Describe patterns in your market, eg. work-life balance, housing, leisure, etc. which are relevant to your BM. |
| Macro-economic forces eg. regional/national economic conditions & infrastructure, capital markets, resources/energy, personnel/talent | What about the economy: growth rate, unemployment, etc.? State of capital markets for real-estate, for seed/growth financing? How good is the (public) infrastructure: transportation, education, health, R&D spending etc.? |

Due to permanent changes in all four areas, the key challenge is to describe not only the present environment, but to make assumptions for the future. This projected environment provides the “design space” to develop potential business model options and prototypes.

3.2. Focus on the Value Proposition

Inspired by Clayton Christensen’s jobs-to-be-done concept ⁶, Alex Osterwalder and other drivers of the Business Model Generation created a dedicated and complementary Canvas that helps organizations sketch out and analyze the fit between their value propositions and the customers they target in a more granular way than the Business Model Canvas mapping does. It is called the Value Proposition Canvas.

⁶ Marketing Malpractice - The Cause and the Cure, Clayton M. Christensen, Scott Cook, Taddy Hall, Harvard Business Review Article, Dec 2005

The Value Proposition Canvas (VP Canvas) is like a plug-in tool to the Business Model Canvas. It helps to design, test, and build a company's Value Proposition to Customers in a more structured and thoughtful way, just like the Canvas assists in the business model design process.

The Canvas with its 9 building blocks focuses on the big picture. The Value Proposition Canvas zooms in on two of those building blocks, the Value Proposition and the Customer Segment. Companies need to get both right, the “fit” and the business model. The two tools, the BM Canvas and the VP Canvas work best in combination.

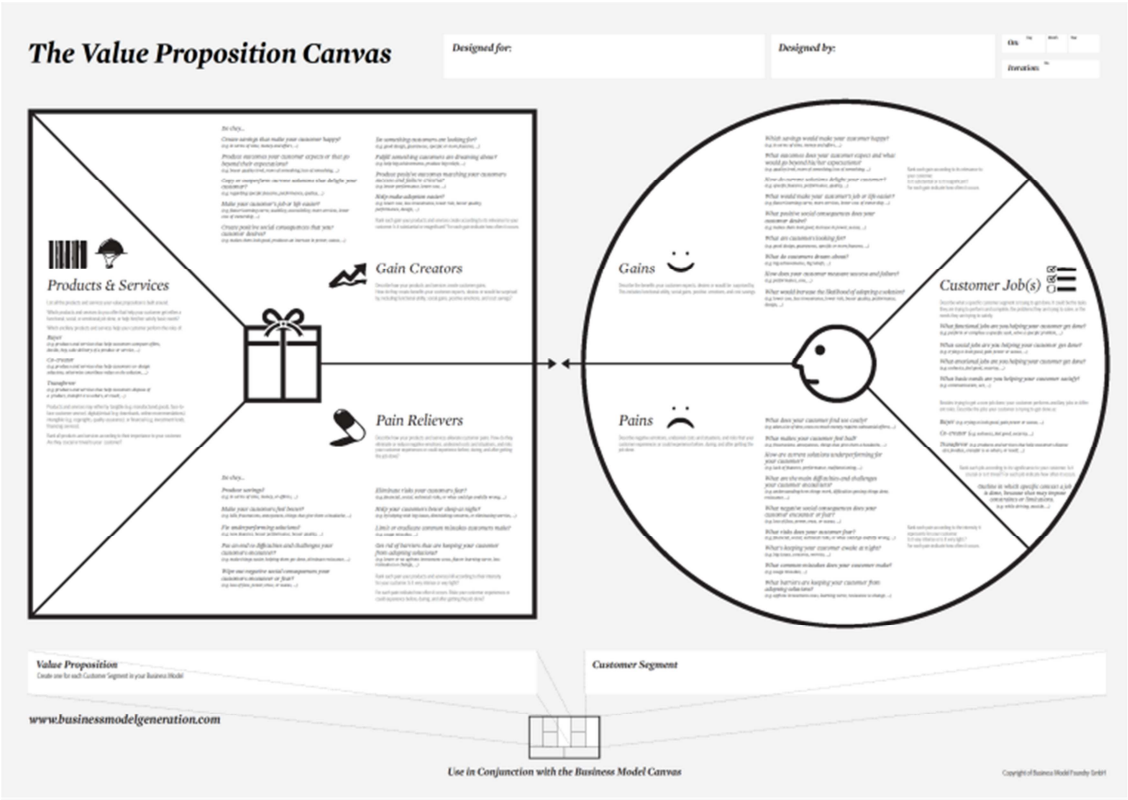


Figure 2: Value Proposition Canvas, under Copyright of Business Model Foundry GmbH, <http://www.businessmodelgeneration.com/>

The VP Canvas enables STP managers to develop really customer-focused value propositions, i.e. bundles of products and services. How to add more detail to a specific Customer Segment (CS) in the Business Model Canvas is described in 10 steps:

- (1) Select a specific Customer Segment (eg. international companies, university start-ups, investors etc.) in the BM Canvas
- (2) That Segment will become the one you outline in more detail on the right hand side of the VP Canvas
- (3) Specify the specific job(s) that Customer Segment is trying to get done. Let's take university start-ups as Customer Segment. For those, the jobs-to-be-done would be managing IP, getting a multi-functional team, developing and testing of prototypes (product and business model prototypes), acquiring pilot customers, getting funded, etc.
- (4) Now outline all the things that represent a gain to the customer for the outlined job. For the previous example that might be providing access to expert IP know-how from patent lawyers, business model workshops, providing a test market, access to business angels and venture capital companies, etc.
- (5) Finally, outline all the things that represent a pain to the customer for the outlined job. For university start-ups that might be non-affordable offices and labs, administrative jobs, conflicts with university, personal uncertainty due to lack of business experience, etc.

Then, the second - value focused - left part of the VP Canvas is to be developed in order to add more detail to the Value Proposition that targets the Customer Segment outlined above.

(6) Select the Value Proposition aimed at the Customer Segment outlined on the right-hand side of the VP Canvas

(7) That's the Value Proposition you outline in more detail on the left hand side of the VP Canvas

(8) Specify the specific bundle of products and services targeted at the selected Customer Segment.

(9) Now outline how exactly that bundle of products and services should create gains.

(10) Finally, outline how exactly the bundle of products and services should relieve the customer's pains regarding the outlined job.

(8-10) For the university start-ups that might be fully-equipped workplaces at low price, free office hours with experts in law, matching events with scientists and entrepreneurial talents, "start-up roadshows" at STP's tenant companies, mentoring by experienced entrepreneurs, etc.

The resulting VP Canvas now allows you to map out and analyze how the Value Proposition you designed fits the Customer Segment's job and the customer's pains and gains. While the right hand customer-side is something you *observe* in the market (= studying the customer), the left-hand value-side is something you *design* (= make choices).

The Value Proposition Canvas connects with Steve Blank's Customer Development Process, outlined in his invaluable books "The Four Steps to the Epiphany"⁷ and "The Startup Owner's Manual"⁸. Steve Blank invites people to "get out of the building" and talk to customers. The VP Canvas is a tool besides the Business Model Canvas to map the outcomes of those customer observations and, moreover, to test Business Model hypotheses by getting-out-of-the-building .

The work on the VP Canvas as well as the whole Business Model design process is very much about prototyping in the sense of testing hypotheses. IDEO, the global design consultancy puts prototyping in its slogan "Fail often to succeed sooner". This slogan is especially true and the paradigm for all Business Model innovators, regardless whether they innovate in large corporations, in small start-ups or in STPs.

4. Case on BMI in an STP: CO:FORWARD® Business Incubation

CO:FORWARD® is a state-of-the-art Business Incubation programme for high tech and digital startup teams already in the pre-seed phase. These teams originate from university, from institutes or from large companies (spin-outs).

By supporting to build new innovative companies, CO:FORWARD® creates value for various stakeholders, i.e. for university/research institutes by commercialization of technology and by fostering entrepreneurial education, for the regional economy by strengthening the competitiveness and creating new jobs, and for the STP itself by feeding the own growth funnel.

CO:FORWARD® offers both physical space and virtual incubation to teams outside the incubator. The incubator is situated in the center of Technologie Park Herzogenrath (TPH). TPH is located at the northern edge of Aachen/Germany. Being a mid-size city in the Euregio triangle of the Netherlands, Belgium and Germany, Aachen is well-known for research and technology with top level universities and institutes. TPH is hosting 70 tech companies with 2500 employees. TPH tenant companies cover all major

⁷ The Four Steps to the Epiphany: Successful Strategies for Products that Win, Steve Blank, Feb. 2005

⁸ The Startup Owner's Manual: The Step-By-Step Guide for Building a Great Company, Steve Blank and Bob Dorf, March 2012

tech industries such as semiconductors, optoelectronics, clean tech, advanced materials, med tech, biotechnology and engineering services. The majority of TPH tenant companies are spin-offs from RWTH Aachen University and operating today on a global scale.

Launched in 2011, CO:FORWARD® Business Incubation has a proven track record: 8 incubated start-up teams raised in total above € 4.5 million private equity via crowdfunding, from business angels or from international venture capital firms.

Moreover, the incubator's entrepreneurial spirit radiates to the rest of the science park TPH and its tenant companies. CO:FORWARD® with its start-up teams and mentors make up for a strong regional entrepreneurial ecosystem.

One of the main value propositions of CO:FORWARD® incubation program is Business Model design in the form of regular BMI workshops with incubatees and mentors. Moreover, CO:FORWARD® initiated and runs very successfully a network and event called the Business Model Arena⁹.

5. The How-to: A Standard Layout of BMI Workshops

BMI workshops are the most efficient learning method to enable leaders, managers, consultants, coaches, and especially teams (innovation teams in large organizations and start-up teams) to craft innovative Business Models on their own (!).

Here is the **What, Why, Who, and How** numerous BMI workshops have been carried out and moderated by the author at TPH, at CO:FORWARD® Business Incubation and with various partners like universities, or companies such as Ericsson.

What is a Business Model Workshop

An action focused event that won't let you sit and listen, you'll learn by doing.

A chance to open up your mind and bring back actionable tools to your team.

And a chance to understand the power of BMI by practicing Business Model design tools on your real cases

Why, what are the Benefits of Business Model Design

Business Model Design is a methodology, developed by the group of authors, visionaries and practitioners who have created the handbook 'Business Model Generation'.

A new business toolbox with the BM Canvas as the core tool radically helps to reduce your risk, increase your teams performance, clarify your strategy, boost your innovation efforts, discover what your customers really want, and more.

Who

Who will benefit

A Business Model Workshop is an event for leaders, executives, business developers, consultants and all entrepreneurial minds.

Who will be your facilitator

Axel Friese - tech entrepreneur, science park manager, entrepreneurship lecturer, co-creator of the handbook 'Business Model Generation', trainer/facilitator/moderator of Business Model Workshops since 2009

⁹ The "Business Model Arena" is an Aachen/Germany-based network and event for BMI. The network bundles all BM design competencies within the region in order to facilitate BMI for enterprises and other organizations. Visit <http://www.businessmodelarena.com/> (in German) and watch the video.

How, the way how numerous BMI workshops have been carried out

A Business Model Workshop shall be a 1-day till 3-day event and will include

- ✓ Presentation with warmups on Business Model Innovation
- ✓ Introduction to the Business Model Canvas and, if possible, to other tools such as the Value Proposition Canvas, the BM environment map
- ✓ Practicing Business Model Design on real cases
- ✓ Pitching new Business Models ideas and sharing feedback

6. The Proposal: A Program to Facilitate Business Model Innovation for STP Managers

STP managers shall practice Business Model Innovation (BMI) on two layers:

- a) BMI on the STP layer - the STP manager as the innovator

How to create value for the STP's tenants, partners and stakeholders in an ever-changing environment is the main issue of this program

- b) BMI on the company/start-up/project layer - the STP manager becomes the facilitator

Business Model design and the BM Canvas tool are a major element of a distinct incubation or business development program. Working with the BM Canvas and other tools for designing new businesses can be a highly respected value proposition, offered to incubatees and tenant companies in their business development process, and facilitated by STP managers.

Now, these two layers expressed in the language of the Business Model Generation: BMI is a value proposition with two customer segments:

- a) The science park or area of innovation and the stakeholders are the #1 customer segment for BMI.
- b) The #2 customer segment are the STP's tenant companies and start-ups, for whom an STP manager who is experienced in the BMI process will easily become a facilitator i.e. by moderating customized BM workshops.

With the following program proposal we focus on the STP layer, i.e. the STP manager as the BM innovator, and as we assume to deal with inexperienced "BMI beginners", a program to facilitate Business Model Innovation in STPs can look as follows. The core program module would be a 3-day BM workshop.

| Program modules | Where, how long | What |
|---|---|--|
| Workshop preparation | remote, >4 weeks before | <ul style="list-style-type: none"> - Planning workshop layout, i.e. objectives, participants, scheduling - Preparation by participants, i.e. STP's strategy and environment |
| Workshop „Business Model Innovation for the STP“ | onsite STP, 3 days | <ul style="list-style-type: none"> - Intro: Why BMI, BM Canvas and patterns - Design exercises in teams - BM environment - Prototyping BM alternatives - Storytelling, pitching BMs - VP Canvas exercises - Wrap-up: STP-internal training program “How-to facilitate BMI for Start-ups and Tech Companies” |
| Follow-ups in a knowledge group of BMI-experienced STP managers | shared online space, skype sessions | <ul style="list-style-type: none"> - exchange learnings - STP-internal training's progress - BM events, such as “Business Model Arena”¹⁰ |

This program proposal is intended to facilitate Business Model Innovation in every STP on the globe. Learning, practicing and exchanging business model design methods and tools in a worldwide knowledge group will strengthen the STP's competitiveness as well as foster entrepreneurship and a new value-based business thinking in the STP's environment. The author recommends the integration of such a BMI program in the "Training for Science and Technology Parks" (3G-STPs) program.

7. Final Remark on Innovation

The term ‘innovation’ is mostly used in the context of technological innovation. This is particularly the case by scientific institutions and R&D-driven companies. We at Aachen/Germany with its strong, well-known technical university witness a technology-focused mindset which might be misleading. It may become even dangerous when you try to judge new technology in the context of old paradigms.

Business Model Innovation means ‘overcoming old paradigms’ and, instead, search for new, ‘game-changing’ value propositions. A simple example: Skype is not a technological innovation as Voice-over-IP existed long before. A skype call is for free, but with a high value to users. Skype is the perfect example for Business Model Innovation - which is all about value creation for people, the economy, and society.

¹⁰ The “Business Model Arena” is an Aachen/Germany-based network and event for BMI. The network bundles all BM design competencies within the region in order to facilitate BMI for enterprises and other organizations. Visit <http://www.businessmodelarena.com/> (in German) and watch the video.