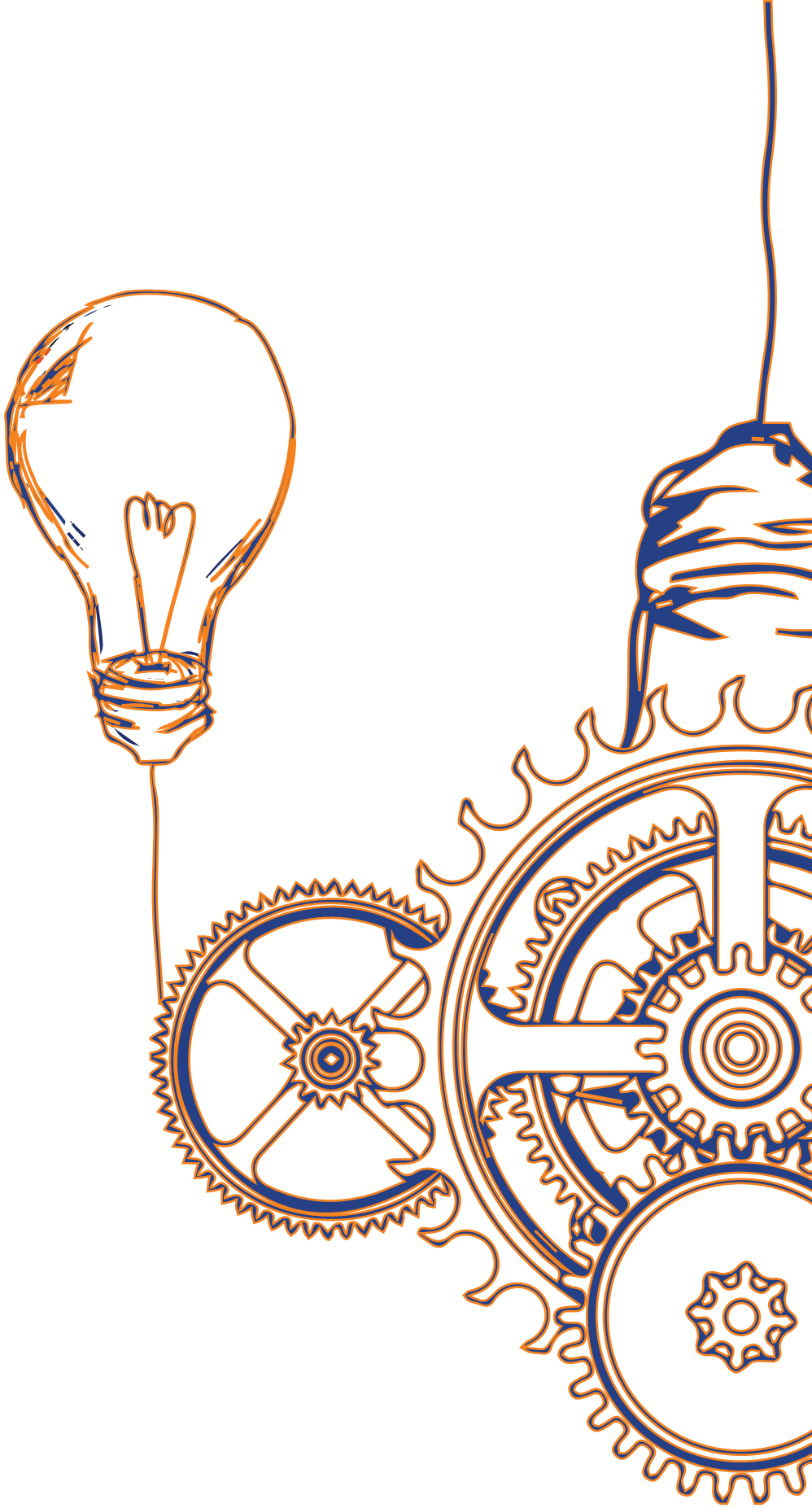


Innovation Awareness
(InnoAware)Toolbox

Innovation Awareness
(InnoAware)Toolbox

Nowadays pursuing typical cost reduction strategies alone is not enough in order to stay competitive and achieve a decent market share. These days, customer needs have become more manifold and complex, so that integrating these needs along each step of the business development process is indispensable. Hence, addressing customer needs and staying competitive require new creative strategies that allow for the inclusion of new factors in the business model development. In recent years businesses have tried to overcome these challenges by employing innovation methods and tools in their companies. Innovation is understood as: the successful commercialization of an idea, research result, or invention. Innovation creates business value through new products, technologies, services, and processes. "New" means to the market or the firm and does not have to be new to the world.

In market-driven innovation processes, the company's attention is focused on the newly discovered unfilled need of the potential customers. Today's possibilities to access information worldwide have changed the role of the customer in the global marketplace. Market-driven innovation management requires a systematic approach that allows for understanding and developing solutions that effectively respond to the fulfilment of the customers' needs.

In order to improve the competitiveness of Egyptian enterprises and foster innovation in the local context, the Industrial Innovation Strategy in Egypt has been developed within the framework of a bilateral technical cooperation project under the guidance of the Egyptian Ministry of Trade and Industry (MTI) with technical assistance provided by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ). The first measure of MTI's innovation strategy – InnoAware – seeks to raise interest in innovation as a potential source of growth for SMEs through implementing workshops, networks, events, etc.

The InnoAware Toolbox is designed in such a way that innovation experts can use the described tools in three different environments: with companies, start-ups, or higher education institutions. For each tool one or more innovation techniques are presented and detailed guidelines for implementing the tools are provided [1].

In order to implement InnoAware, it is necessary to train innovation experts to make them familiar with the InnoAware Toolbox. This will allow them to develop and implement a number of activities to effectively spread knowledge on innovation through intermediary organisations all over Egypt.

Therefore the specific objectives of the InnoAware Toolbox are:

- To equip innovation experts with tools for planning events to create innovation awareness.
- To guide innovation experts in the development of an implementation plan for InnoAware events.
- To promote innovation and its key role in growth and competitiveness of Egyptian enterprises.

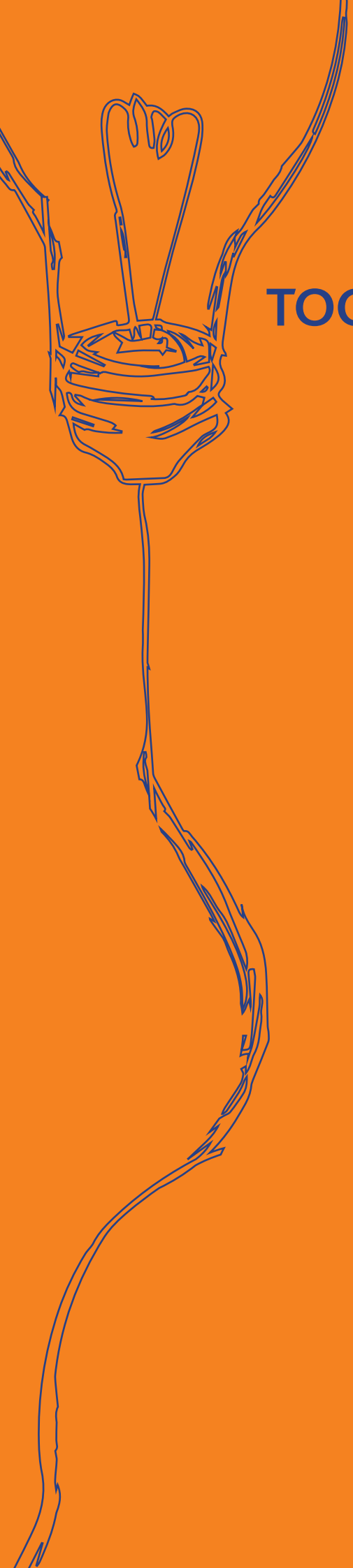
[1] InnoAware Toolbox is published under Creative Commons License "Attribution-ShareAlike 4.0 International (CC BY-SA 4.0)".

The following table provides an overview of the selected InnoAware Tools and the recommended fields of application (companies, start-ups or universities).

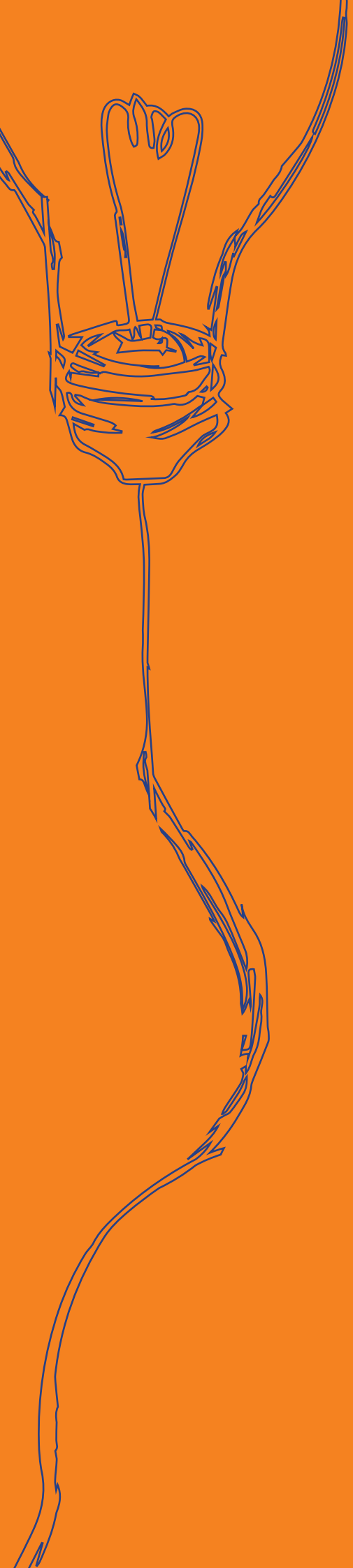
No	Tools	Techniques	Company	Start-up	University
1	Innovation Networks	Innovation Breakfast			
2	Idea Competition	Competition Design			
3	Innovative Business Model Re-design	Business Model Canvas, 10 Types of Innovation			
4	Creative Night	Creativity Techniques			
5	Innovative Business Culture	Innovation Culture Survey			
6	Customer Integration in the Innovation Process	Empathy Map, Customer Journey, QFD			
7	Innovation Readiness Assessment	Self-Assessment, Benchmarking			
8	Product Clinic	Technical Benchmarking			
9	Business Simulation Games	Wallet Project			
10	Business Start-up Clinic	Value Proposition Design, Business Model Canvas, 10 Types of Innovation			
11	Innovation Games	Speed Boat, Give Them a Hot Tub, 20/20 Vision			

The InnoAware Toolbox was developed based on the experience of the iN4iN Network (www.in4in.net). [2]

[2] Intelligence for innovation (iN4iN) is a network of the International SEPT Program of Leipzig University and Conoscope GmbH, a consulting company, both of them based in Germany. It brings together a team of high-level professionals with experience in innovation management, enterprise management, and development. The applied knowledge is a result of rigorous processes of experiences and knowledge systematization, advanced research on the topic, and direct linkage with the private sector.



TOOL1_Innovation Networks



TYPE OF TOOL

The tool is based on a systematic integration of different techniques that support the establishment and maintenance of innovation networks. The different formats and their specifics in terms of background and number of participants depend on the phase of innovation networking. Among the techniques discussed are: matchmaking events with decision makers from up to 20 private sector institutions, and innovation-planning events with two institutions, each represented by the decision maker that initiated the cooperation in the first phase as well as 2-3 staff members in charge of the operationalisation or formats for stabilising established networks.

TOOL IN BRIEF

In order to systemise the process of establishing a collaborative relationship between knowledge holders and seekers and form a collaborative comparative advantage, the innovation networking process is subdivided into initiation, establishment, and stabilisation. Each of these phases is supported by networking techniques, which allow collaborators to benefit from innovation networking by realising a collaborative comparative advantage.

TARGET GROUP

- Innovation intermediaries that have the sole purpose of enabling other organisations to innovate.
- New or already established enterprises that seek to fill knowledge gaps in the innovation process.
- Start-ups and enterprises that are looking for knowledge outside the company that can help it solve problems and find new ideas for creating growth.
- Students and researchers that are looking for the right platform to share their ideas.

TOOL OBJECTIVES

In a world of open innovations, the facilitation and stimulation of innovation partnerships between knowledge holders and knowledge seekers is an important part of realising and maintaining competitive advantages. Systematic innovation networking is a process that organises the integration of diverse knowledge and skills of knowledge holders into the innovation process of knowledge seekers in a way that both parties benefit.

The tool aims to achieve the following objectives:

- Allow a precise definition of rights and duties of cooperating partners.
- Enable innovation partners to find a common language.
- Arrange formalities of joint innovation processes.
- Expose possible clashes of interest, and in cases where they exist, help resolve them.
- Balance openness and closure of a network.

REQUIRED MATERIALS

For this tool we are going to apply several techniques, each one requires different materials.

For the innovation breakfast:

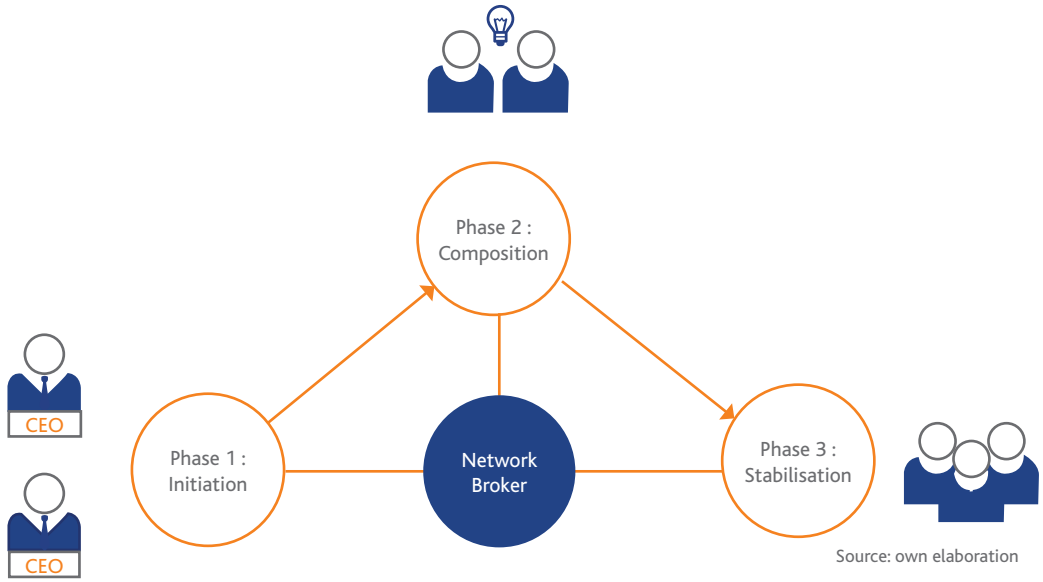
- Summary of the profile of each organisation participating in the breakfast.
- Meeting room with 8 to 10 different tables to allow for conducting speed-dates for 8 to 10 organisations.
- Printed "How might we...?" templates for each organisation featured, to be filled out during each of the speed dates.
- Examples of a completed "How might we...?" template.
- A breakfast venue at the same location as the meeting room.
- "Individual" date templates.

For the network canvas:

- Large printed network canvas for each of the participating organisations. Alternatively, the network canvas structure may be drawn on a flipchart.
- Sticky notes (post-it) with pens to fill in the network canvas.
- An overview of the related questions that guide the filling of the canvas

IMPLEMENTATION GUIDELINES

External brokers facilitate the implementation of the networking tool. Their role is to identify, facilitate, and nurture the company's partnership with external innovators, such as suppliers, entrepreneurs, universities or social / public sector actors. The broker is central to the networking process.

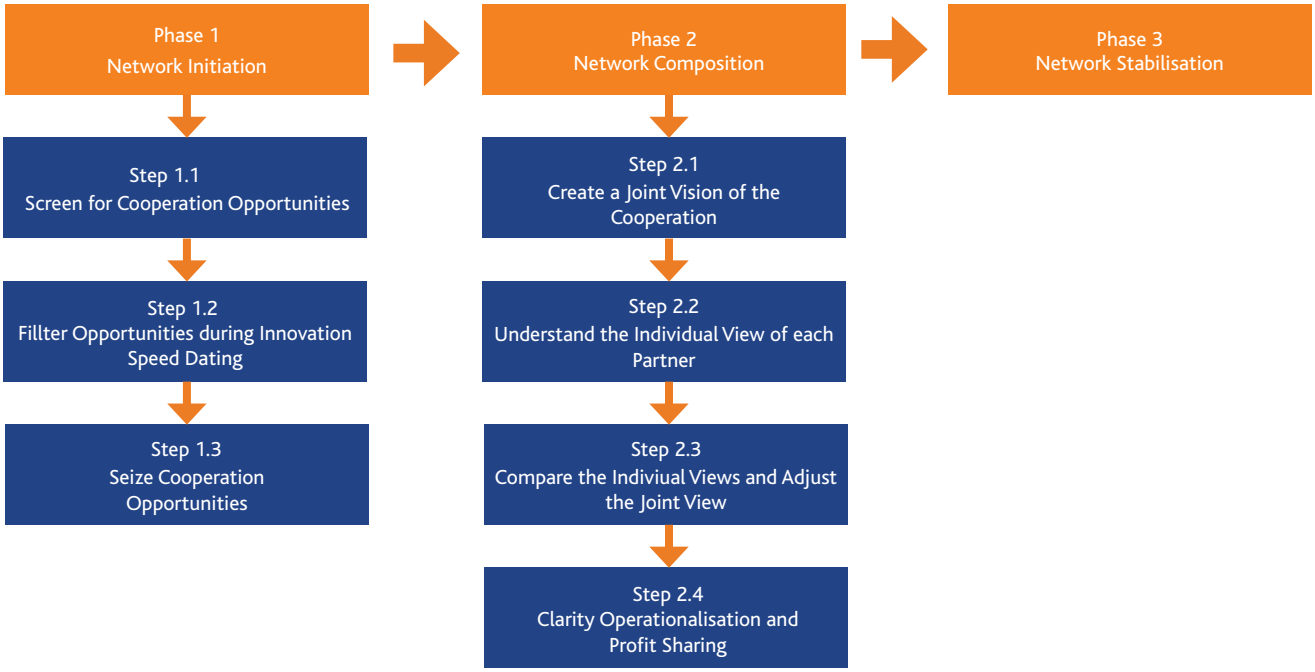


Source: own elaboration

Brokers can be external parties without own financial stakes in the innovation process or can be internal members of an organisation taking part in innovation activities. Their key function (Radjou & Prabhu, 2015) is to:

- Pull innovative ideas from the external ecosystem when they support the company's strategy, and push promising external ideas to their own senior management.
- Be trilingual: understand internal business units, external innovation partners, and customer's needs, thus facilitating the interests of all stakeholders from the three different levels.
- Be able to see the big picture and discern megatrends in technology, business, and society.
- Be doers, able to integrate external ideas into the company and bring them to market quickly.
- Command the respect of CEOs and the board to get top-level buy in.

The implementation of this tool consists of three phases, each comprised of different steps:



PHASE 1: NETWORK INITIATION

This first phase aims to take the initiative and bring the network stakeholders together after identifying their mutual interests. For this phase the innovation breakfast technique can be applied.

PHASE 2: NETWORK COMPOSITION

After the intention to cooperation has been established, the details of the joint understanding of the cooperation need to be streamlined. Furthermore, the procedures and tasks required for operationalising the cooperation need to be clarified. For that, the network canvas technique is going to be applied.

PHASE 3: NETWORK STABILISATION

In order to create sustainable benefits, the network must be properly stabilised.

Phase 1: Network Initiation

Every network needs a prime driver. This driver is the seed that forms the basis for the cooperation. It may be rather unspecific, such as the mere motivation of an entrepreneur to find new opportunities to grow a business, or specific, such as the need for a certain technology or the availability of funds. No matter what it is, the urgency of the driver determines the commitment of the actors involved in a networking process.

In order to support the identification of this network seed, it is recommended to focus on key decision makers in this first step of network formation, as networks can only be designed and stabilised by committing resources. A platform should be provided that allows actors to match their interests and develop a first idea for cooperation. One way of systematising this matching process is to host an innovation breakfast.

TECHNIQUE: INNOVATION BREAKFAST

An innovation breakfast is a technique that combines an innovation speed dating session with an informal breakfast session. The idea is to match a high number of workshop participants on the basis of short, bilateral pitches, identify areas of joint interest, and further narrow down the options in extended, informal discussions during a breakfast session. The participants of an innovation breakfast are typically decision makers from the participating institutions.

The implementation of this technique consists of the following steps:

STEP 1.1: SCREEN FOR COOPERATION OPPORTUNITIES DURING THE SYSTEMATIC INTRODUCTION

The workshop starts with a brief introduction of the participants' backgrounds. This is important to allow the participants to scan for potential matches in interests with other participants. Though this might be a trivial step, it is critical because it shapes the motivation of the workshop participants during the following stage.

STEP 1.2: FILTER OPPORTUNITIES DURING THE INNOVATION SPEED DATING

As the next step, an innovation speed dating event is conducted to allow the participants to further screen for cooperation opportunities as well as to filter those opportunities already identified. Speed dating in the business realm is a technique designed to accelerate business contacts. The event involves multiple people gathering at the same venue to exchange information. Participants greet each other in a series of brief exchanges during a set period of time. During the interaction, attendees share their professional backgrounds and business goals. It is recommended to conduct the speed dating in the following way:

STEP 1.2.1: INTRODUCE THE "HOW MIGHT WE…?" TEMPLATES

For each pair of participants, the template offers three options for questions concerning an identified joint interest. Formulation of questions rather than potential solutions stresses the importance of actions and resources needed to address the questions. Each participant of the speed dating should aim at developing three "How might we…?" questions for each bilateral pair of the speed dating session.

STEP 1.2.2: SHUFFLE THE PARTICIPANTS

It is proposed that 8 to 10 organisations are featured in the speed dating session. In order to match all organisations, two equally-sized groups of participants are formed, with one group playing the active part and the second the passive part of the speed dating session. The members of the passive group are each seated at a different table. The members of the active group move from one table to another.

STEP 1.2.3: LET PARTICIPANTS PITCH INDIVIDUALLY

For each pair of participants, the individual "dates" of the speed dating are to be kept brief, with not more than 3-5 minutes each. The duration of the meetings can be adjusted on the basis of the number of participants. Each date consists of a brief pitch by each participant, the joint screening and filtering of cooperation opportunities, and the summary of the identified opportunities in the "How might we…?" template.

STEP 1.3: SEIZE COOPERATION OPPORTUNITIES

After the speed dating is completed, the joint breakfast is initiated. The idea is that the participants get the opportunity to narrow down the cooperation options by discussing the results of the speed dating process in an informal setting. It is not recommended that an external party interfere in this process. The only "rule" should be that participants structure the discussion on the basis of the completed "How might we…?" template and indicate a specific area of interest that is used as a focus for the following network composition phase.

HMW = How Might We … ?

Partnership 1 : Organisation A and Organisation B

HMW … establish a joint research center ?	HMW … share our infrastructure to reduce costs ?	HMW … jointly access international markets ?	HMW … cooperate to develpo prototypes ?

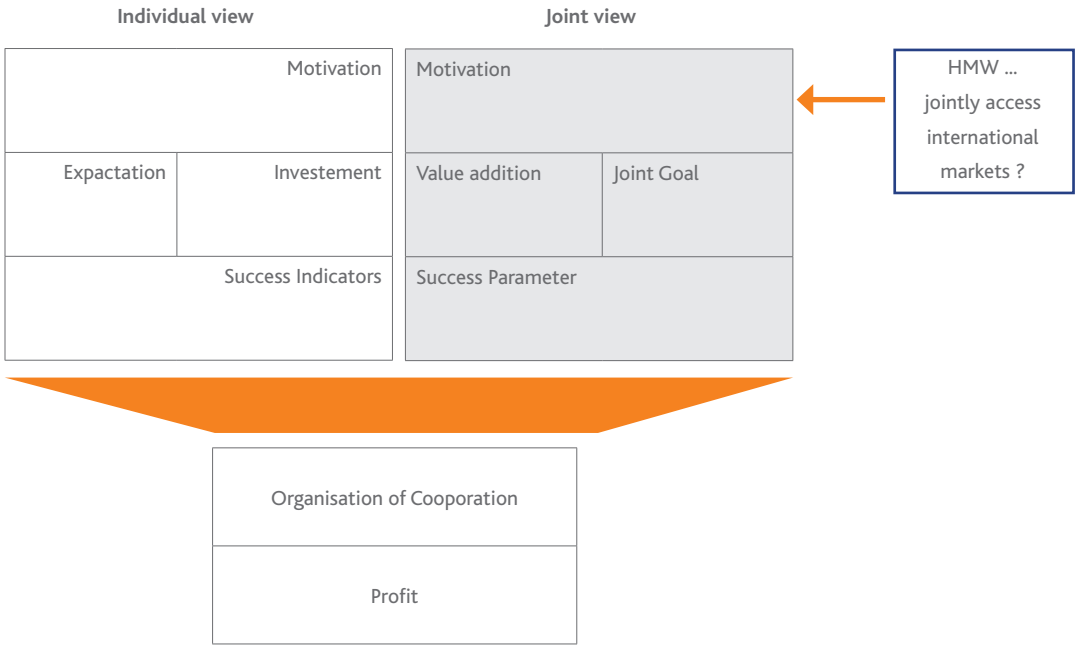
Source: own elaboration

PHASE 2: NETWORK COMPOSITION

After the cooperation seed has been established, the details of the joint understanding of the cooperation are streamlined. Furthermore, the procedures and tasks required for operationalising the cooperation are clarified. It is recommended using the results of the HMW-template to start the process of streamlining the understanding of the stated mission. While the network initiation phase was focused on matching a huge number of decision makers from up to 20 different institutions, only those institutions that stated an interest in cooperating with each other are featured in the network composition phase. It is of high importance to ensure that not only decision makers are participating in this process, but also the actors who are operationalising the cooperation. Overall, it is recommended to work with only 2 institutions, with each of them being represented by a decision maker, as well as 2 to 3 staff members each.

TECHNIQUE: NETWORK CANVAS

A potential way to progress from the network initiation to the network composition phase is to use the "Network Canvas" developed by the German think tank *Zukunftheute* (2017). The canvas offers two distinct features: **First,** it allows streamlining individual and joint understanding of the cooperation in terms of motivation, expectation, investment, and notion of success. **Second**, it supports the progress from this joint understanding to the organisation of a cooperation as the sharing of jointly realised profits.



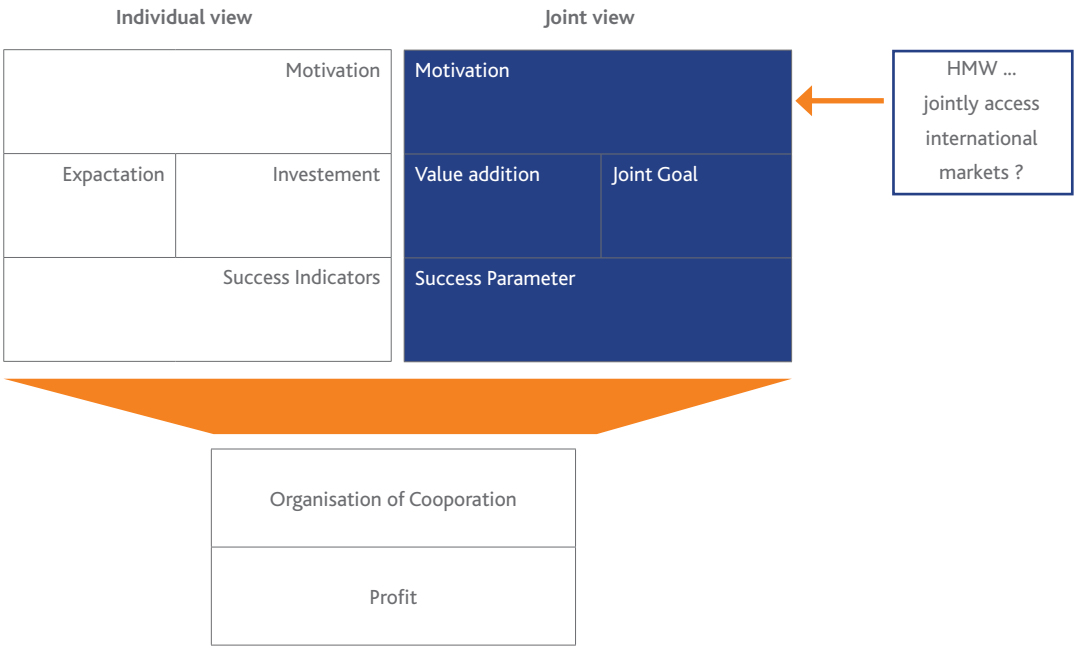
source: modified based on zunkunft heute, 2017

For the implementation of this technique, the following aspects should be considered:

- Topics that are either of high importance or occur several times should be highlighted.
- It is important to provide the opportunity to individually and jointly reflect on the results of the process.
- Therefore, after a short period of time (usually a few days), a feedback loop should be installed that allows the participants of the session to voice the result of their reflection process.
- In terms of timing, the technique is subdivided into two sessions: First, the steps as described below are conducted in a workshop session of about 2-3 hours' time. After 3-4 days, participants of the workshop should get the opportunity to voice the result of their reflection process, usually by sending brief emails to the external workshop facilitator.
- In case disagreements become evident, the workshop should be conducted again to ensure that the expectations of the cooperation are successfully streamlined.

STEP 2.1: CREATE A JOINT VISION OF THE COOPERATION

This first step is to create a joint understanding of the cooperation seed developed during the initiation phase. Starting point of this process is the HMW-statement developed during the network initiation phase. Based on the statement, a joint vision is developed, the value addition of the cooperation clarified, a joint goal developed, as well as success parameters for the cooperation defined. For each of these steps, a set of guiding questions is presented below.



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MOTIVATION

At the very start of the process, the following two questions need to be discussed and answered:

- What is the joint motivation for the partnership?
- Which joint vision interlinks us?

VALUE ADDITION

Afterwards, the value added through the cooperation is identified. Here, the following two questions guide the process:

- Which value addition does the cooperation create in the short, medium, and long term for both partners?
- How do we ensure that we match the competencies needed for the cooperation to strive?

JOINT GOAL

Based on the following three questions, the joint goals of the cooperation are clarified:

- What is the joint vision for the cooperation project?
- How important is this vision for each of the partners?
- How do we know, that we move towards the realisation of this goal?

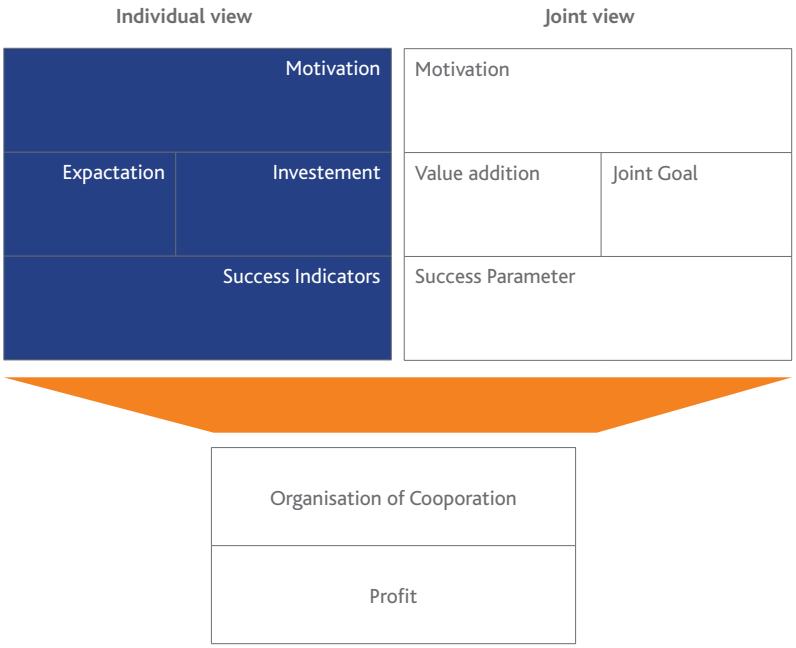
SUCCESS PARAMETERS

The last step is to develop a joint understanding of a successful cooperation. The following questions can guide this process:

- Which indicators can be used to measure the joint success of our cooperation?
- How do we monitor the joint success?
- What are we measuring?

STEP 2.2: UNDERSTAND THE INDIVIDUAL VIEW OF EACH COOPERATION PARTNER

In order to clarify the individual motivation of each organisation to cooperate, the two organisations describe their individual views on the cooperation. The process is comparable to that undertaken in Step 2.1. First, the individual motivation for cooperating is clarified. After that, the expectations, investments into the cooperation, as well as individual success indicators are clarified.



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MOTIVATION

In order to clarify the individual motivation for cooperating, the following questions are to be answered:

- What motivates us to invest in the cooperation?
- What motivates our partner?

EXPECTATIONS

The next step is to clarify the individual expectations of the partnership. Here the following questions can guide the process:

- What do we expect from the cooperation?
- What does our partner expect?
- Which value addition does the cooperation offer to our business?
- Which additional competences do we obtain from the cooperation?
- Which level of transparency and trust do we expect and allow?

INVESTMENT

This is followed by identifying the individual input to the project. This is done by answering the following questions:

- Which competences do we bring into the cooperation?
- Which resources do we invest?

SUCCESS INDICATORS

In the last step the individual success indicators are clarified based on the following questions:

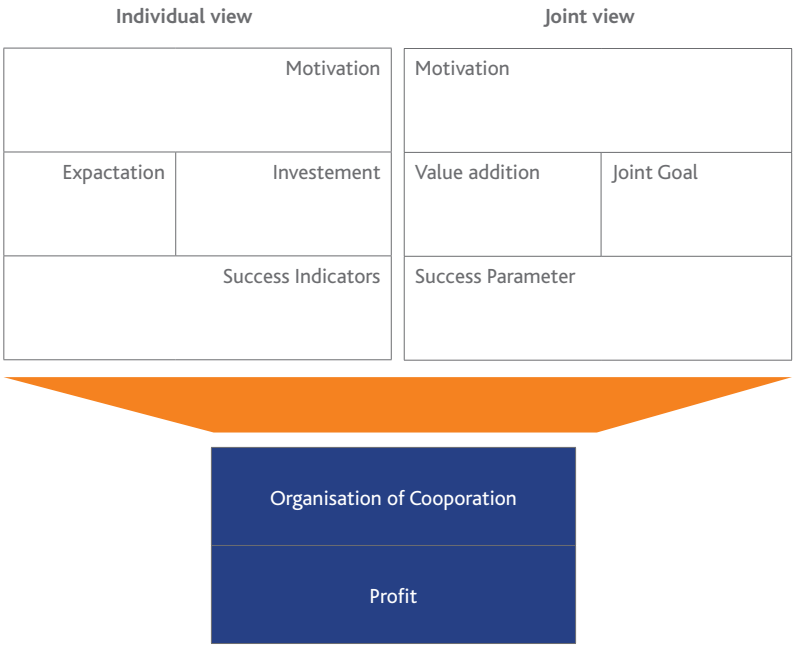
- Which indicators will be used to measure the joint success of our cooperation?
- How do we monitor the joint success?
- What are we measuring?

STEP 2.3: COMPARE THE INDIVIDUAL VIEWS AND ADJUST THE JOINT VIEW

The individual views of the cooperation are compared in this step. It is recommended to be transparent in this process and to implement it in front of the workshop participants step-by-step. In case major differences are detected, the joint view of the cooperation has to be adjusted. Here, it is necessary to discuss the adjustment needs of each of the building blocks in the canvas, identifying areas of disagreement and adjusting the joint view. The duration of this step depends on the disagreements identified. In case there are none, it can be done in 5 minutes. When major differences are identified, the joint view may be adjusted which can add up to 1 hour to the total duration of this technique.

STEP 2.4: CLARIFY OPERATIONALISATION AND PROFIT SHARING

After a detailed joint understanding of the cooperation has been developed, the first steps towards the operationalisation of the cooperation are to be undertaken. Here, the cooperative modus operandi is clarified. The second key aspect is profit sharing. In order to avoid conflicts, it is highly recommended to clarify who is benefiting from the cooperation.



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ORGANISATION OF THE COOPERATION

In order to move towards a joint understanding of the modus operandi of the cooperation, the following questions provide guidance:

- What are we doing together – and how are we doing it?
- How are we taking internal decisions of relevance to our cooperation?
- How are we managing conflicts?
- Which communication channels are we using?
- Who is in charge of organising meetings?

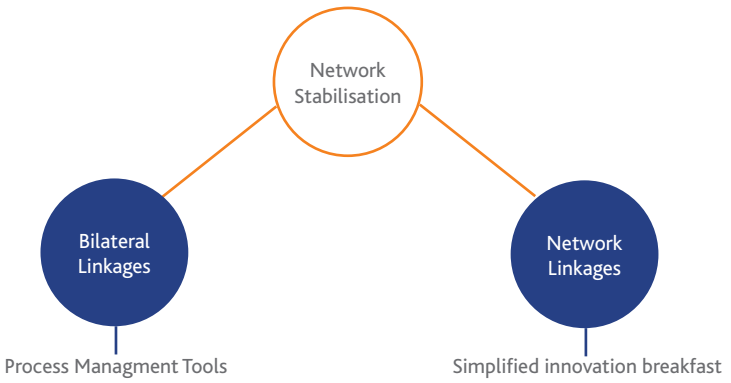
PROFITS

A clear joint understanding of profit sharing matters is essential to avoid conflicts. It is proposed to answer the following questions in order to deal with this matter:

- Who is benefiting from the cooperation, and how?
- How are our stakeholders affected by the cooperation?
- When will the changes and benefits manifest?

PHASE 3: NETWORK STABILISATION

After the network has been initiated and composed, it needs to be stabilised. This stabilisation process should address two aspects:



Source: own elaboration

BILATERAL LINKAGES

The network canvas discussed in the previous phase is a technique for establishing bilateral linkages. Strengthening bilateral linkages refers to the continuous process of putting the agreed modus operandi into practice. The focus at this phase of the networking process is very much on day-to-day process management. As it is often not a good idea to interfere in the internal processes of institutions, the bilateral linkage management is out of the context of external facilitators, i.e., it should be identified by the decision-maker and the staff members of the participating institutions.

NETWORK LINKAGES

The stabilisation of network linkages refers to the process of stabilising the network as a whole, which is understood as the sum of the bilateral linkages between individual partners. External network brokers can play a central role in this process, as the individual partners will focus on managing their individual partnerships without having an incentive to invest resources into the stabilisation of other partnerships. Therefore, an external network broker is important to keep the network as a whole alive.

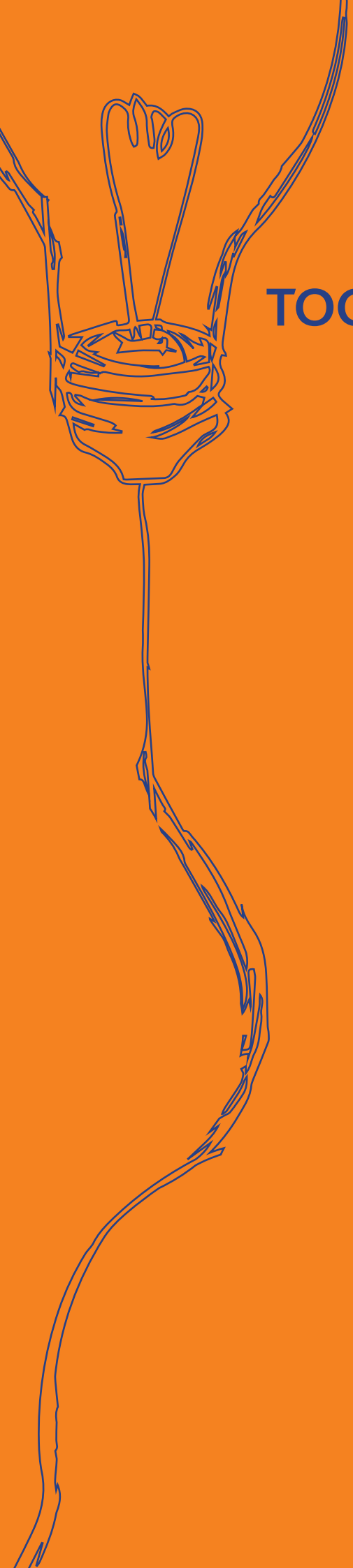
An easy way of doing this is to conduct simplified innovation breakfasts, i.e., without conducting introductions and speed dating. It is a regular meeting in an informal setting with the sole purpose being to exchange experiences, identify new cooperation opportunities, and build trust. In case new opportunities are identified, it is recommended to develop the intention to cooperate on the basis of the network canvas.

REFERENCES

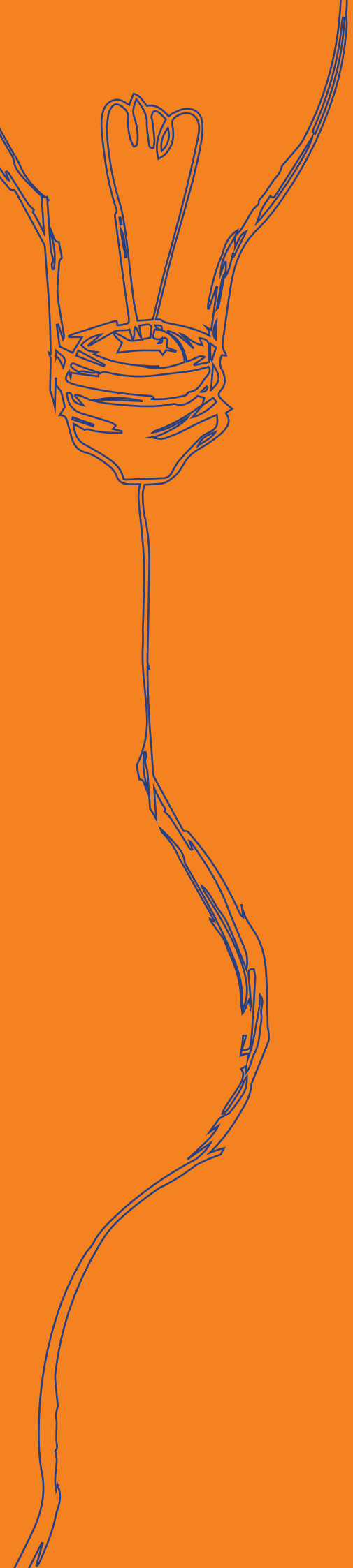
Battering, M. (2009). Profiting from external knowledge. How companies use different knowledge acquisition strategies to improve their performance. Wageningen Academic Publishers, Wageningen.

Global Knowledge Initiative (2015). Collaborative Innovation Tools. Top 10. Accessible via: http://globalknowledgeinitiative.org/wp-content/uploads/2017/05/3-GKI_Top-10-Tools-for-Collaborative-Innovation.pdf

ZUKUNFTheute (2017). Netzwerik Canvas. Accessible via: www.bosbach.mobi/specials/netzwerk-canvas/



TOOL 2_Idea Competition



TYPE OF TOOL

The tool can be implemented as a small intra-institution event or as a big event with open access or an invited audience.

TOOL IN BRIEF

It has been observed that, while students, staff, and graduates of universities and research institutes go through their daily routines, business ideas come to mind. However, these ideas are usually ignored because there is no initiative that promotes the further development of these ideas. In addition, tight studies and work, procrastination, search for paying jobs and perceived non-achievable dreams hinder small and big ideas from becoming a reality. Consequently, an idea competition can bring implementable ideas together and help to make them reality. The idea competition does not aim at competing with other business plan competitions, which are well known. The idea competition focuses on the initial stage of the business, i.e., the idea generation stage.The competition is organised in three phases, "Advertisement for Ideas", "Selection of Ideas", and "Award Ceremony".

TARGET GROUP

Students, graduates, and researchers with a business idea at a very initial stage are the target group for presenting ideas. Furthermore, all employees or students of the same university or research organisation represent the target audience, as they should be encouraged to also present their ideas. The start-up ecosystem should also be invited as audience. Companies and investors are welcome. In addition, the tool can be implemented as an internal method in firms in order to encourage the staff to solve specific challenges or bring new ideas in the company.

TOOL OBJECTIVES

The idea competition aims to encourage and support creative thinking among students and researchers or employees of a company. In comparison to existing business plan competitions it is an instrument with low entry barriers. Students should be motivated to showcase their ideas in order to be trained for further presentations. The employees of a company should be encouraged to participate actively in finding creative solutions to current problems or developing ideas for new projects

The tool aims to achieve the following objectives:

- Encourage and support creative thinking among students, graduates, and researchers providing companies with new ideas from outside in a short event. On the other hand, it can be used to activate inherent ideas and energies amongst the staff of companies.
- Train students and researchers to pitch their ideas.
- Encourage all students and staff of the university or research organisation to present their ideas.
- Bring researchers and business people together.

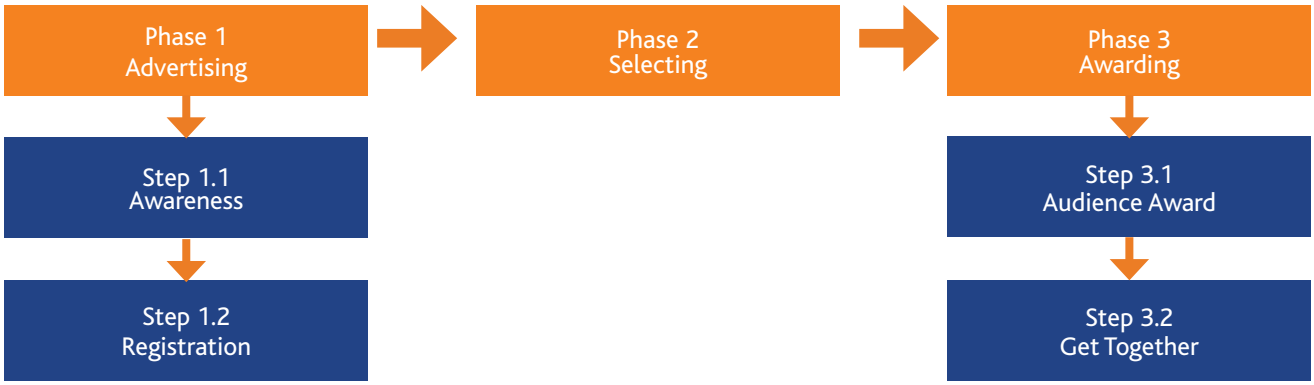
REQUIRED MATERIALS

To conduct the event, the following material is required:

- Event location inside or outside the university with a stage facility.
- Technical conference equipment like projector and microphones.
- Trophies and certificates.
- Catering.

IMPLEMENTATION GUIDELINES

The tool is implemented in three phases; each of them consists of several steps.



PHASE 1: ADVERTISING

You have to reach all students, graduates, and researches in order to convince them to describe their ideas in a form that easily allows them to apply for participation in the competition. In the case of companies, several topics should be given amongst which the company is looking for solutions and ideas.

PHASE 2: SELECTING

The best ideas should be selected and presented to a jury of experts. They will nominate the teams that will present at the award ceremony.

PHASE 3: AWARDING

All university members are invited and, if possible, the local start-up ecosystem takes part. The selected teams make short elevator pitches in order to present their ideas to the audience. The audience then selects the winning team for the audience prize. At the end, a get together gives the opportunity for networking.

PHASE 1: ADVERTISEMENT FOR IDEAS

STEP 1.1: AWARENESS

Students, graduates, and researchers of a university or research organisation are invited to participate in the competition through advertisement on poster, flyers, and online. Companies can advertise for the event internally.

STEP 1.2: REGISTRATION

The ideas have to be described in a simple online form. No business plan is required when submitting the general description of the ideas.

PHASE 2: SELECTION OF IDEAS

When the ideas have been submitted through the online form, a jury with diverse backgrounds and experiences evaluates the business ideas. Each idea should be evaluated by two jury members. The following criteria are used for evaluation: solving customer's problems, unique selling points (USPs) in comparison to competitor products/services, and growth potential. Based on this evaluation a ranking of the ideas is developed and the five best business ideas are selected for the award ceremony.

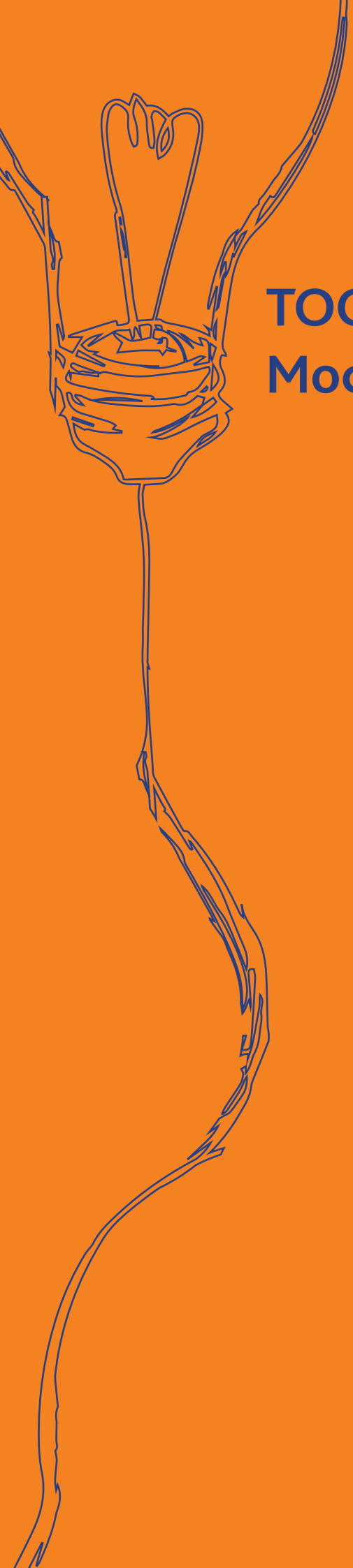
PHASE 3: AWARD CEREMONY

STEP 3.1: AUDIENCE AWARD

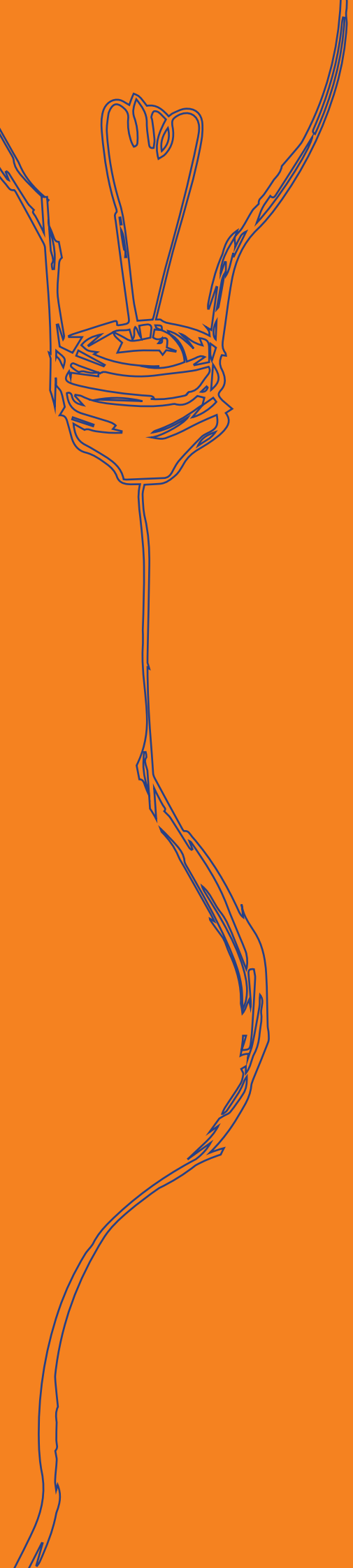
It is important to organise a very lively award ceremony. The main element of the ceremony is the audience award. Here the five selected teams present their business ideas in the form of an elevator pitch to the audience. Every team has 90 seconds to give a captivating presentation. Afterwards the audience votes for the best idea by secret ballot. The ballot is counted afterwards and the winner is announced. The winner of the best idea audience award is given a trophy as well as a cash prize.

STEP 3.2: GET TOGETHER

The award ceremony should be followed by a get together. Here the participants should have the chance to network in a friendly atmosphere. Thus, an attractive location should be chosen and some food should be provided. In the audience, some representatives of the local start-up ecosystem should be present in order to create an attractive networking atmosphere.



TOOL 3_Innovative Business Model Redesign



TYPE OF TOOL

The tool can be implemented in form of a workshop. The workshop can be conducted for one individual company (in-house) or for a group of companies (5 -10). Participants can work individually, but it is highly recommended to form and work in teams. Recommended size of teams is 2 - 4 members. The tool can be conducted in one day.

TOOL IN BRIEF

In order to raise awareness about innovation management tools and methods available to develop reliable business models that identify threats and opportunities, this workshop pushes business owners and managers to follow nontraditional approaches and to appreciate innovation as an essential strategy to stay competitive and raise profitability.

TARGET GROUP

Entrepreneurs and business managers who have a running business can use this tool to validate their business models and discover new chances for developing innovative approaches.

TOOL OBJECTIVES

Business managers have dealt with their own business for a long time, so that they get stuck in the monotone loop of the business and stop being able to think out of the box. The Innovation Business Model Redesign Tool can assist business managers and owners to question their business model and try to discover innovative approaches before the competitors do.

The tool aims to achieve the following objectives:

- Allowing business managers to create a holistic view of their business and produce a realistic model that meets the current situation.
- Widening the horizons of business owners and managers regarding the potential of developing their business models.
- Steering the process of enhancing the business model through the innovation management tools.
- Raising awareness of innovation approaches in business models among SMEs and business owners.

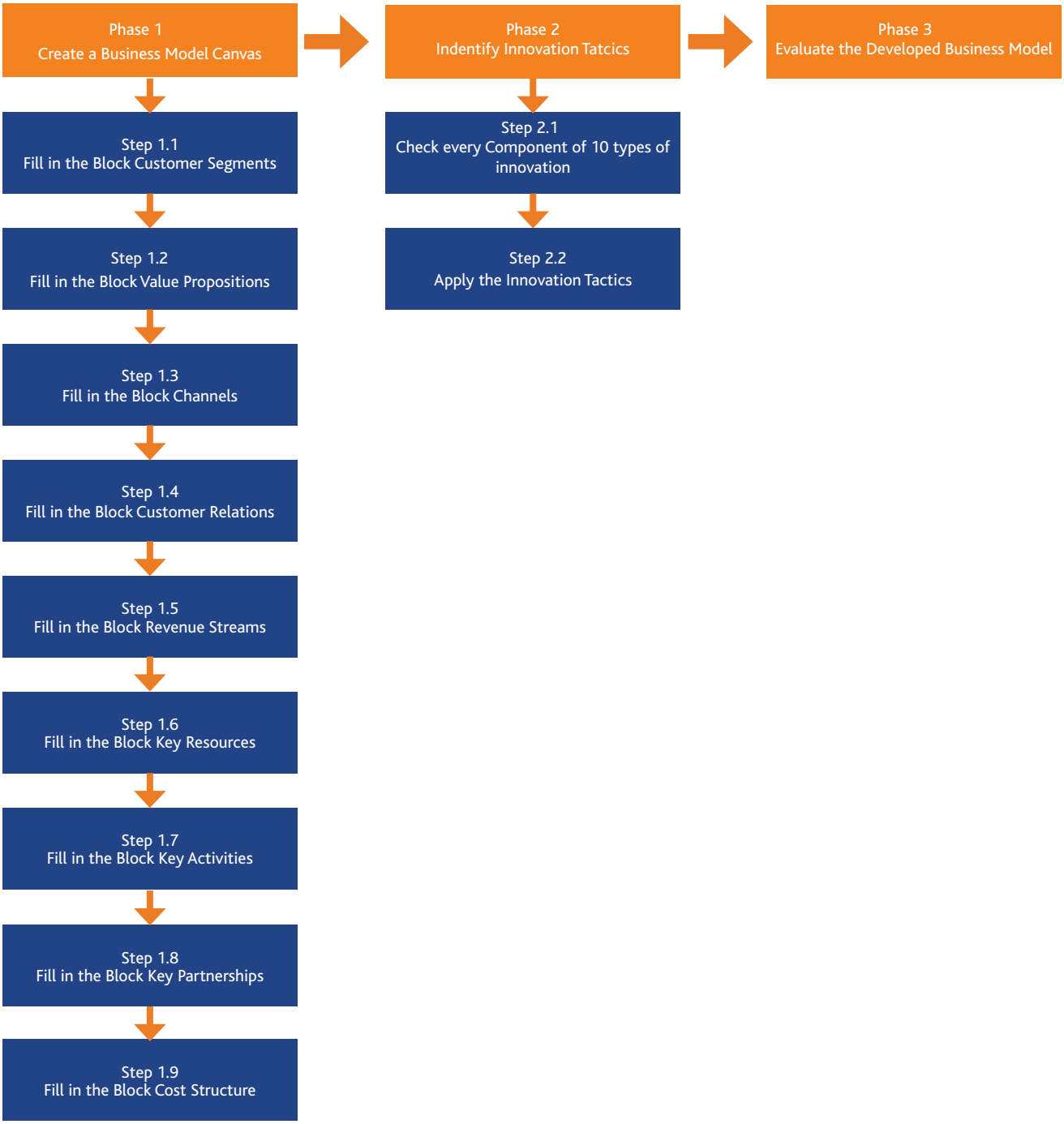
REQUIRED MATERIALS

For conducting the workshop, the following material is required:

- 2 big business model canvas templates for each team.
- Pin board for each team or a wall with tape to hang the templates.
- Sticky notes with pens to fill in the business model canvas.

IMPLEMENTATION GUIDELINES

This tool is implemented in three phases; each of them consists of several steps.



PHASE 1: CREATE A BUSINESS MODEL CANVAS

The first phase is to create an overview of the existing business model. In order to do that the participants should use the business model canvas. They can complete it on their own and get assistance from the workshop instructor in order not to miss any aspects of the business.

PHASE 2: IDENTIFYING INNOVATION TACTICS

The second phase requires the use of the 10 Types of Innovation to identify one or several innovation tactics that the participants could implement in their own business model in order to create a more innovative business model.

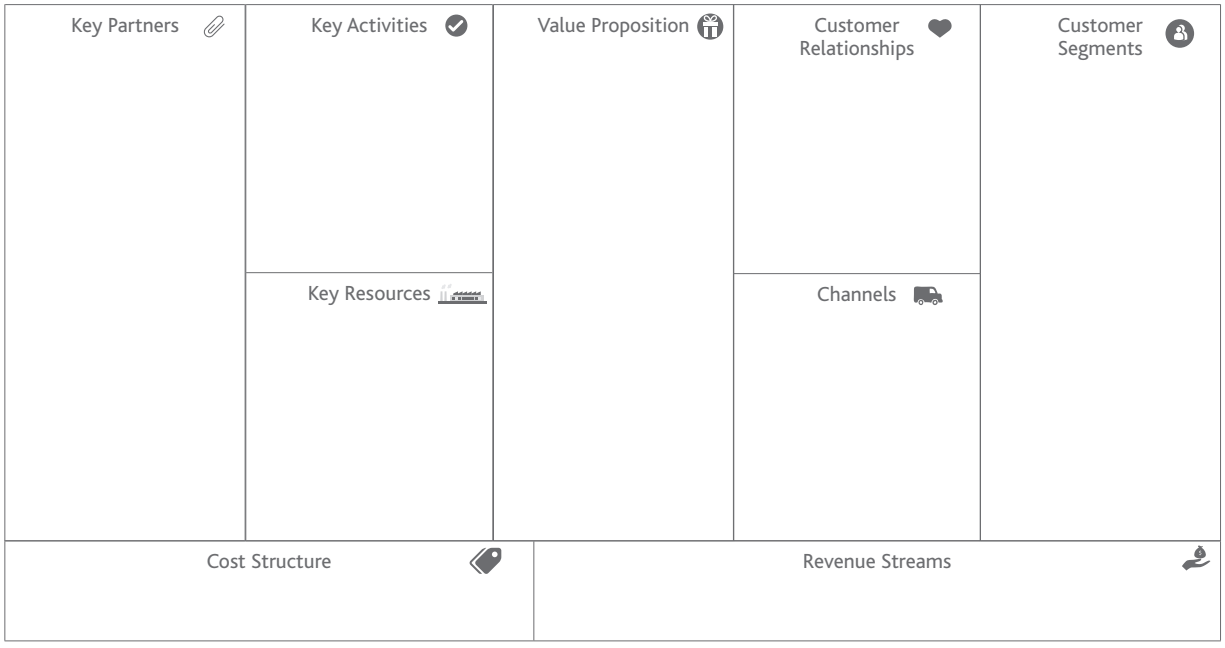
PHASE 3: EVALUATE THE DEVELOPED BUSINESS MODEL

After developing the new business model working with the 10 Types of Innovation, the participant should prepare a new business model canvas for the developed model and scrutinise it.

PHASE 1: CREATE A BUSINESS MODEL CANVAS

According to Osterwalder et al. (2010) a business model can best be described through nine basic building blocks that show the logic of how a company creates and delivers value as well generates revenues and profit. The nine blocks cover all main areas of a business and are structured in a so-called business model canvas. The business model canvas is like an executive summary describing the business strategy that needs to be implemented through organisational structures, processes, and systems.

THE 9 BUILDING BLOCKS

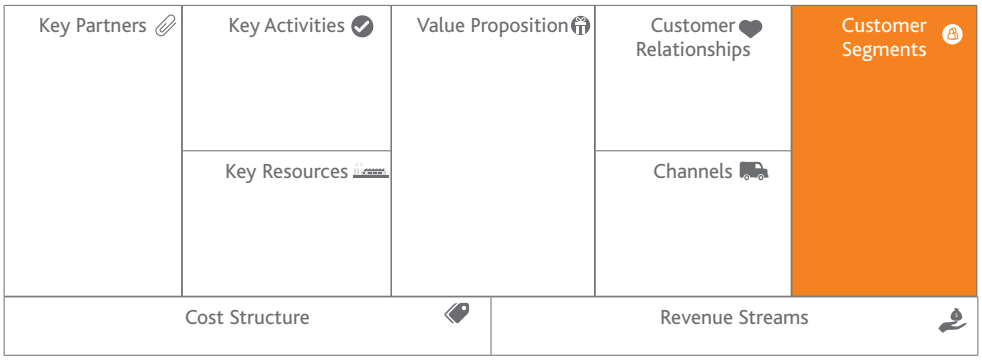


Source: Modified from Osterwalder et al. (2010)

STEP 1.1: FILL IN THE BLOCK CUSTOMER SEGMENTS

Beginning with the business model canvas from right to left, "Customer Segments" represents the first building block of the business model canvas that an entre-preneur has to identify and describe in detail. It defines the different groups of people (B2C) or organisations (B2B) an enterprise aims to reach and serve.

A business model may define one or several large or small customer segments. An organisation must make a conscious decision about which segments to serve and which segments to ignore.



Source: Modified from Osterwalder et al. (2010)

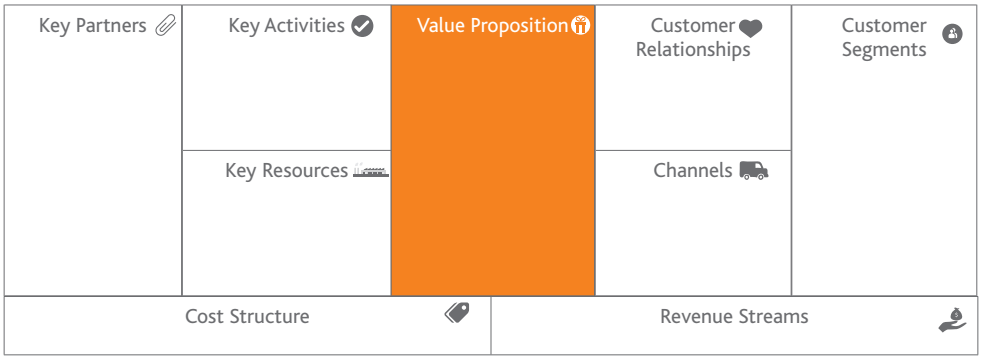
Customer groups represent separate segments if:

- Their needs require and justify a distinct offer.
- They are reached through different distribution channels.
- They require different types of relationships.
- They have substantially different profitability.
- They are willing to pay for different aspects of the offer

A company can focus on larger market segments, niche markets, or several target groups. In all cases, it would be necessary to understand in more detail the demands of the respective customer. That makes it necessary to analyse the customer profile more deeply.

STEP 1.2: FILL IN THE BLOCK VALUE PROPOSITIONS

The building block "Value Propositions" describes the bundle of products and services that create value for a specific customer segment. Each value proposition consists of a selected bundle of products and/or services that caters to the requirements of a specific customer segment. In this sense, the value proposition is an aggregation, or bundle, of benefits that a company offers customers.



Source: Modified from Osterwalder et al. (2010)

Some value propositions may be innovative and represent a new or disruptive offer. Others may be similar to existing market offers, but with added features and attributes (Osterwalder et al., 2010).

Values may be:

- Quantitative (e.g., price, speed of service)
- Qualitative (e.g., design, customer experience)

According to Osterwalder et al. (2010) one can differentiate between several types of a value propositions:

NEWNESS

Some value propositions satisfy an entirely new set of needs that customers previously didn't perceive because there was no similar offering. This is often, but not always, technology related. 3D printers, for instance, will create a whole new set of applications of this technology in a lot of different economic sectors. They allow a decentralisation of production and facilitate customisation. On the other hand, social innovations such as micro-insurances for poor people have little to do with new technology.

PERFORMANCE

Improving product or service performance has traditionally been a common way to create value. Here one could take the automobile sector as an example, creating cars with lower fuel consumption. The logistic sector is a good example for using modern technology in order decrease shipping times.

CUSTOMISATION

Tailoring products and services to the specific needs of individual customers or customer segments creates value. In recent years, the concepts of mass customisation and customer co-creation have gained importance. This approach allows for customised products and services, while still taking advantage of economies of scale.

DESIGN

Design is an important but difficult element to measure. A product may stand out because of superior design. In the fashion and consumer electronics industries, design can be a particularly important part of the value proposition.

BRAND/STATUS

Customers may find value in the simple act of using and displaying a specific brand. Driving a Porsche car signifies wealth, for example. On the other end of the spectrum, skateboarders may wear the latest "underground" brands to show that they are "in".

PRICE

Offering similar value at a lower price is a common way to satisfy the needs of price-sensitive customer segments. Sometimes services can be offered for free to mass customers (e.g. Skype internet communication or Google search engine). But in this case, additional premium services for a particular customer segment are necessary to cover the costs of a free service.

ACCESSIBILITY

Making products and services available to customers who previously lacked access to them is another way to create value. Here one can think of services provided to poor people, e.g., microfinance. But buying a specific product can also provide access to a particular group of people (e.g., buying Nike sport shoes allows teenagers to get accepted by others to join the group).

COST REDUCTION

Helping customers reducing costs is an important way to create value. The IT- outsourcing sector is a good example here. Outsourcing of call centre services allows airlines, for example, to focus on their main activities and at the same time using an external provider reduces costs.

RISK REDUCTION

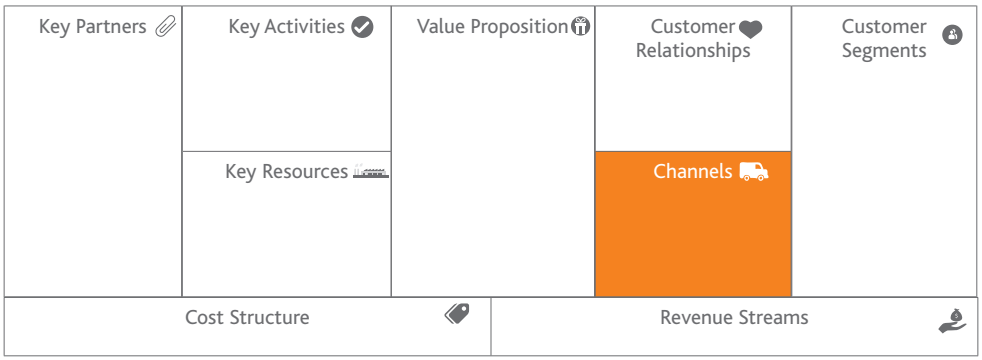
Customers gain value through reduced emerging risks when purchasing products or services. For a used car buyer, a one-year service guarantee reduces the risk of post-purchase breakdowns and repairs. A service-level guarantee partially reduces the risk undertaken by a purchaser of outsourced IT services.

CONVENIENCE/USABILITY

Making things more convenient or easier to use can create substantial value. Here the use of the internet to provide access to services (like shopping, banking, etc.) from the customer's home is a good example.

STEP 1.3: FILL IN THE BLOCK CHANNELS

The building block "Channels" describes how a company communicates with and reaches its customer segments to deliver a value proposition (Osterwalder et al., 2010). Channels are customer touch points that play an important role in the interaction between the customer and the company.



Source: Modified from Osterwalder et al. (2010)

Channels serve several functions, including:

- Raising awareness among customers about a company's products and services.
- Helping customers evaluate a company's value proposition.
- Allowing customers to purchase specific products and services.
- Delivering a value proposition to customers.
- Providing post-purchase customer support.

Every company has to develop and use a mix of channels transferring a value proposition to the market. A company can reach its customers through its own channels, through partner channels, or through a mix of both. Here one can distinguish five types of channels:

- Communication channel
- Evaluation channel
- Purchasing channel
- Delivery channel
- After sales service channel.

COMMUNICATION CHANNELS

Here we talk about the channels companies use in order to create awareness on the customer side. Especially new products and services need to be communicated to the customers. Classical marketing tools to implement advertising activities can play a key role here. Further, new approaches like social media marketing should be taken into consideration. A crucial problem is the cost of advertising that can very often not be afforded by low budget companies.

EVALUATION CHANNELS

A key problem for customers is the assessment of new products and services before buying them. Especially for new services with a high level of intangible elements, the customer does not know how to evaluate the service quality. In the case of very new services, customers cannot obtain opinions from friends and family members, because of the newness of the service and the missing references. Companies providing channels that allow customers to evaluate their value proposition easily will reduce customer pains in the buying decision process.

PURCHASING AND DELIVERY CHANNELS

Very often both these channels go hand in hand. But there are also examples where customers use an online channel provided by a company to purchase a product but the delivery channel is managed by another company, e.g., a logistics service provider.

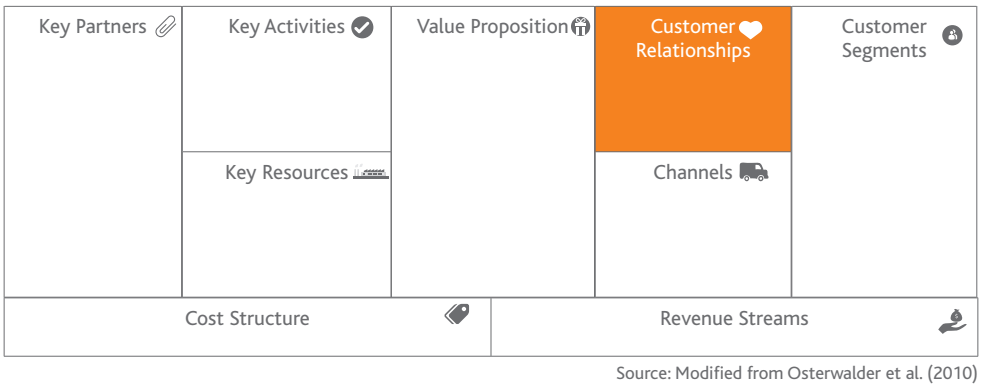
AFTER SALES SERVICE CHANNELS

In many sectors, companies sell a specific product but also provide additional services. A typical example is a warranty service. Furthermore, companies could provide training or maintenance services related to a product. Some professional camera companies offer a free technical online course after purchasing the camera. This could be very tempting for nonprofessional customers, since these cameras are normally complicated and through this offer they can insure being able to use the camera properly.

STEP 1.4: FILL IN THE BLOCK CUSTOMER RELATIONSHIPS

The building block "Customer Relationships" describes the types of relationships a company establishes with specific customer segments (Osterwalder et al., 2010).

There exist a large number of options to create customer relationships, e.g., personal assis-tance, automated services communities, cocreation, love marks, lock-in effect, etc.



Source: Modified from Osterwalder et al. (2010)

Customer relationships may be driven by the following motivations:

- Customer retention
- Boosting sales based on loyal customers
- Motivating customer to recommend company's product/services
- Increasing customer profitability.

Here, some selected options creating Customer Relationships will be presented.

PERSONAL ASSISTANCE

For many services the necessary human interaction between customer and staff of the service provider plays an important role in creating relationships. The customer can communicate with a real company representative to get help during the service provision process. This interaction can be managed via different channels: point of sale, through call centres, by e-mail, by internet, or through other means. Sometimes companies opt for a dedicated personal assistance where key account managers develop and maintain personal relationships with important customers.

AUTOMATED SERVICES

According to Osterwalder et al. (2010) this type of relationship mixes a more sophisticated form of customer self-service with automated processes. For example, personal online profiles give customers access to customised services. Automated services can recognise individual customers and their characteristics and offer information related to orders or transactions. At their best, automated services can simulate a personal relationship (e.g., offering book or movie recommendations).

COMMUNITIES

Companies are increasingly implementing user communities to become more involved with customers and to facilitate connections between community members. As an example, "glaxosmithkline" has established its own community after issuing its product "Alli" for losing weight without the need of a prescription.

Communities can offer several functions to customers as well as companies:

- Customers can exchange knowledge and solve each other's problems.
- Communities can help companies better understand their customers.
- Companies can advertise new products or services via its community.
- Communities can be used to develop ideas for new products and services.

CO-CREATION

More and more customers are seeking to be involved in the creation as well as production process of new services. Customers who are involved in a cocreation process normally develop very strong relationships with the respective service provider (e.g., Spread-Shirt is a start-up, where you can browse through an immense range of t-shirt designs from their own customers. Their design, trend-setting, and standout t-shirts create personalised styles).

LOVE MARKS

Some companies (e.g., Apple) are able to develop very strong brands, where customers really "fall in love" with their products. This is one of the best but also very costly (marketing expenses) ways to create strong relationship with customers.

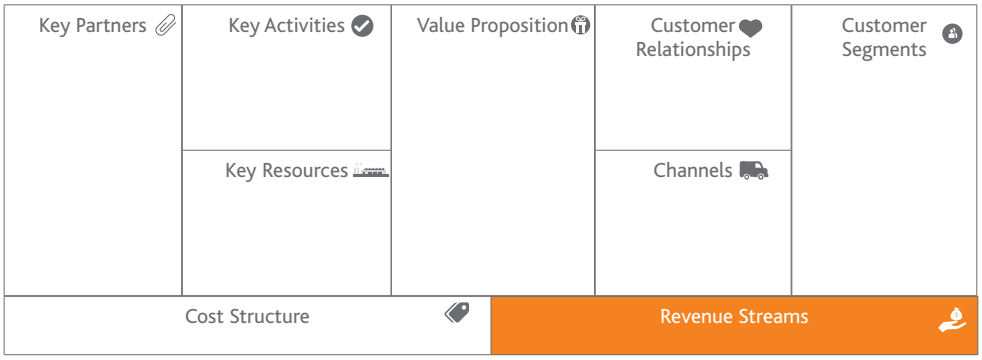
LOCK-IN EFFECT

Companies providing products like printers or wet razors sell the printer or razor handle at a relatively low price. They generate their main profit through selling ink cartridges or razor blades that only fit to their devices. The customer would incur relatively high costs if they want to switch to the use of a competitor product.

STEP 1.5: FILL IN THE BLOCK REVENUE STREAMS

The building block "Revenue Streams" represents the way the company generates cash flow from each customer segment.

The size of the revenue streams depends very much on the pricing model the company is implementing for the new product or service. Each revenue stream may have different pricing mechanisms, such as fixed list prices, bargaining, auctioning, market dependent, volume dependent, or yield management (Osterwalder et al., 2010). This can be considered in more detail in the business plan.



Source: Modified from Osterwalder et al. (2010)

A business model can involve two different types of revenue streams:

- Transaction revenues resulting from one-time customer payments.
- Recurring revenues resulting from ongoing payments to either deliver a value proposition to customers or provide post-purchase customer support

Here some selected options for generating revenue streams will be presented.

ASSET SALE

The most widely understood revenue stream derives from selling ownership rights to a physical product.

USAGE FEE

This revenue stream is generated by the use of a particular service. The more a service is used, the more the customer pays.

SUBSCRIPTION FEES

This revenue stream is generated by selling continuous access to a service.

LENDING/RENTING/LEASING

This revenue stream is created by temporarily granting someone the exclusive right to use a particular asset for a fixed period in return for a fee.

LICENSING

This revenue stream is generated by giving customers permission to use protected intellectual property in exchange for licensing fees. Licensing allows rights holders to generate revenues from their property without having to manufacture a product or commercialise a service.

BROKERAGE FEES

This revenue stream derives from intermediation services performed on behalf of two or more parties.

ADVERTISING

This revenue stream results from fees for advertising a particular product, service, or brand. Transport companies can rent the surfaces of their trucks and place advertisements on them. This provides additional revenue channel, apart from the main activity of the company.

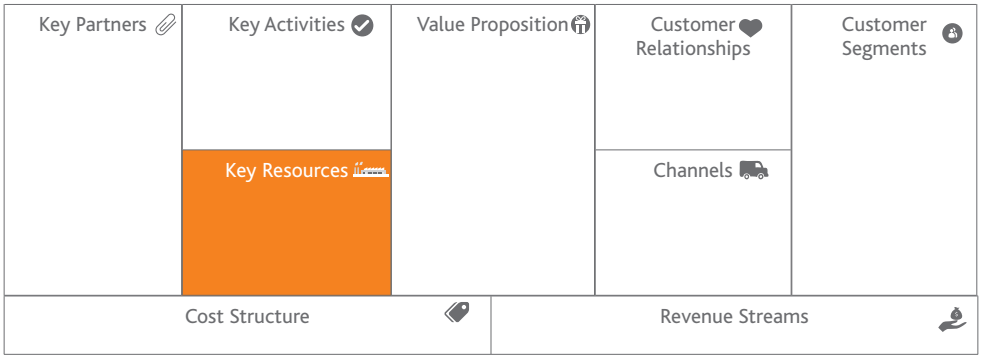
STEP 1.6: FILL IN THE BLOCK KEY RESOURCES

The building block "Key Resources" describes the most important assets required to make a business model work.

Key resources are the basis of every business model and make it possible to design a value proposition, operate on markets, build customer relationships, and achieve profit. Different key resources are needed depending on the type of business model. It is necessary to emphasise that the design of the business model affects the types of key resources.

Key resources can be:

- Physical, financial, intellectual, or human
- Owned or leased by the company or acquired from key partners.



Source: Modified from Osterwalder et al. (2010)

For each business, we can differentiate between four types of key resources:

- Physical resources, for example, productions plants, transportation facilities, machines, or distribution systems.
- Intellectual resources could be brands, patents, or copyrights to create value.
- Human resources in form of well-trained and qualified personnel are normally important for every business.
- Financial resources could be, among others, cash, or lines of credit.

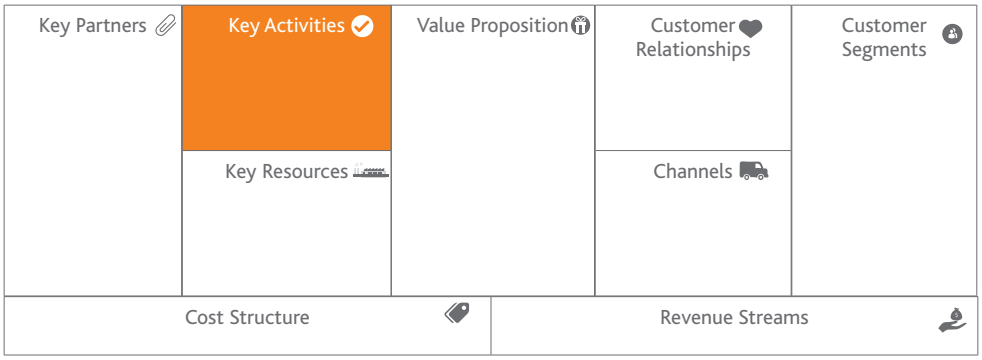
STEP 1.7: FILL IN THE BLOCK KEY ACTIVITIES

The building block "Key Activities" describes the most important activities a company must implement to make its business model work.

Key activities of a company depend upon the type of business model. The aim is to operate successfully on markets, build customer relationships, and achieve profit.

Key activities differ depending on business model type:

- Production
- Problem solving
- Platform/network.



Source: Modified from Osterwalder et al. (2010)

PRODUCTION

Production activities are the core activities of manufacturing companies. This includes, for example, the processes of designing and making a product.

PROBLEM SOLVING

The aim of problem solving activities is to provide solutions to specific problems. The professional service sectors, e.g., business consulting or health care sectors are typical examples.

PLATFORM/NETWORK

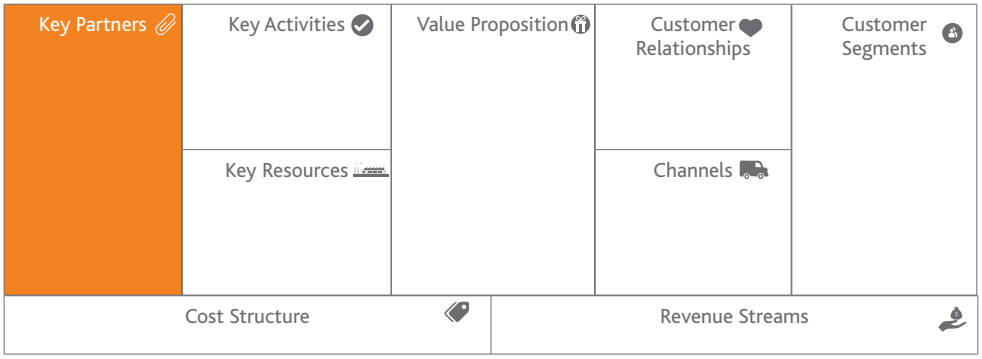
In addition, there are platform or network activities. Here, platform management, service provisioning, or platform promotion are key activities.

STEP 1.8: FILL IN THE BLOCK KEY PARTNERSHIPS

The building block "Key Partnerships" describes the network of suppliers and partners that make the business model work. Business partnerships, e.g., supplier relations and other alliances, aim at supporting companies to reduce risks or to gain access to resources.

Different types of partnerships:

- Strategic alliances between non-competitors.
- Competition: strategic partnerships between competitors.
- Joint ventures to develop new businesses.
- Buyer-supplier relationships to assure reliable supplies.



Source: Modified from Osterwalder et al. (2010)

There are different motivations for forming partnerships:

OPTIMISATION AND ECONOMY OF SCALE

According to Osterwalder et al. (2010), optimising the allocation of resources and activities belongs to the most basic form of partnership (e.g., buyer-supplier relationship). Furthermore, companies cannot do it all themselves. For this purpose, optimisation and economy of scale partnerships aim at reducing costs.

REDUCTION OF RISK AND UNCERTAINTY

Competitive environments are characterised by uncertainty. Sometimes strategic alliances with competitors are limited to one specific area while competing in another.

ACQUISITION OF PARTICULAR RESOURCES AND ACTIVITIES

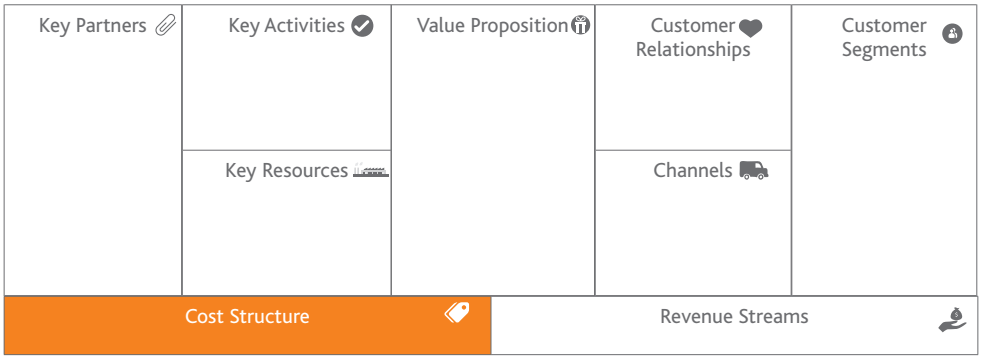
The aim of many companies is to extend their own capabilities by building relationships with other players in order to access specific resources and perform activities. Sometimes the reasons are connected to a lack of knowledge, licenses, or access to prospective clients.

STEP 1.9: FILL IN THE BLOCK COST STRUCTURE

The building block "Cost Structure" describes all costs incurred to operate a business model. Such costs can be calculated relatively easily after defining the key resources, key activities, and key partnerships.

There are two different strategies:

- Cost-driven business models
- Value-driven business models.



Source: Modified from Osterwalder et al. (2010)

Many business models fall in between these two extremes.

COST-DRIVEN

The core focus of cost-driven business models is on minimising costs. According to Osterwalder et al. (2010), this approach aims at creating a lean cost structure. This includes, for example, low price value propositions, a high degree of automation, or extensive outsourcing.

VALUE-DRIVEN

The value-driven business model focuses on value creation. There is less concern for cost implications. The example of first-class hotels shows a high price value propositions and a high degree of personalised services.

PHASE 2: USE THE 10 TYPES OF INNOVATION TO ENHANCE THE BUSINESS MODEL

Larry Keeley et al. published a very insightful book in 2013 about 10 types of innovation. His categorisation of innovation types is based on a deep analysis of a large number of business models of mainly well-known US companies. "10 Types of Innovation" represents a very helpful tool to discuss the ways how one could further innovate in business models

Source: Keeley, L. et al. (2013)

The following pages, based on Perkin (2013), will present a short description of each type of innovation according to Keeley et al. (2013).

STEP 2.1: CHECK EVERY COMPONENT OF 10 TYPES OF INNOVATION TO DEVELOP THE BUSINESS MODEL

There is no general recipe for innovation for all businesses. Different innovation potentials exist in every kind of business. Check each of the next components carefully and try to unlock all the possible potentials.

PRODUCT PERFORMANCE

Focus on the development of distinguishing features and functionality: This involves, for example, new products, or improved features and qualities. This is the most visible and easiest form of innovation for competitors to copy.

PRODUCT SYSTEM

The creation of complementary products and services: This issue is related to how individual products or services might be brought together to create new capabilities or improved scalability. Here many factors come into play (e.g., integration, modularity, interoperability). One example is the development of ecosystems that take value from one place and use it to enhance experience in another place.

PROFIT MODEL

How to gain profit: Innovative profit models could change established pricing or revenue generation structures. They have particular potential as in manufacturing industries the dominant profit model might go unquestioned for decades.

NETWORK

How you connect with partners to create value: The focus of network innovations is on capitalising on one's own strengths whilst harnessing the advantage that might be derived from prospective partners. This might include risk-sharing activities associated with the development of new capabilities.

STRUCTURE

The organisation of talent, resources, or assets: Structure innovations can create unique value or efficiencies. They can enhance productivity and collaboration, help attract qualified employees, and improve performance.

PROCESS

Designing and implementing unique or superior processes: Process innovations involve a significant level of change that can drive greater capability, adaptability, or efficiency. The development of unique processes can prove difficult for competitors to access and can yield advantage for extended periods of time.

SERVICE

Supporting and amplifying the value of your offerings: Improving performance, use and loyalty through improved design or service provision, fixing customer pain points, and helping to ensure seamless customer journeys. This can push the average into the remarkable, and create a particular experience.

CHANNEL

The way in which your offerings is brought to customers: The focus of channel innovations is on finding new or multiple ways to transfer products and services to the consumer, creating a particular experience with minimal friction.

BRAND

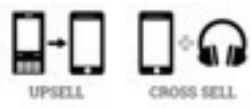
The representation of your offerings and business: Innovations in the way that consumers might recognise and associate your brand, the distinct identity and promise of your offering. That means incorporating multiple customer touch points; these can confer value, meaning, and intent to the offering.

CUSTOMER ENGAGEMENT

Fostering compelling interactions: The development of more meaningful customer relations derived from a deep understanding of customer aspirations and needs. Helping people to find ways to make parts of their lives "more memorable, fulfilling, and delightful – even magical".

STEP 2.2: APPLY THE INNOVATION TACTICS

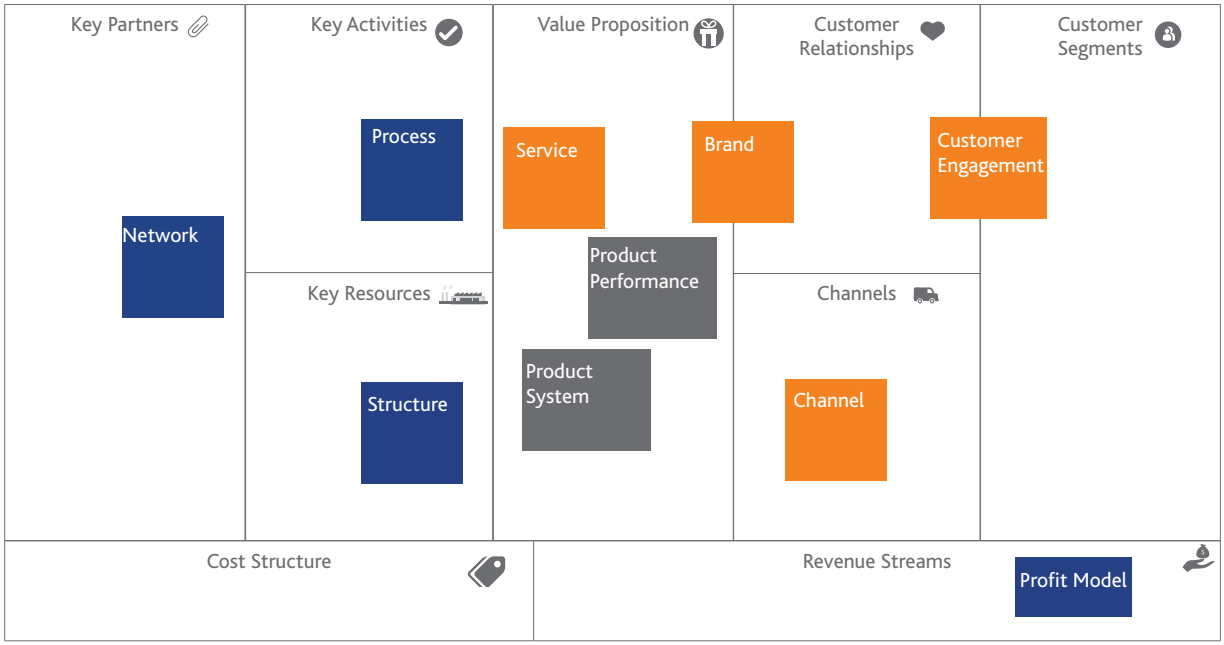
For each of the 10 innovation types, Keeley et al. could identify several innovation tactics which were implemented by companies around the world in order to provide a more innovative business model to their customers. In the following, one can see examples of the innovation tactics and a respective company example which belongs to the innovation type "Channel":

Diversification Add and expand into new or different channels. Porsche Consulting Simple. Fast. Success. amazon web services	**Flagship Store** Create a store to showcase examplary brand and products. 	**Go Direct** Connect directly to the customer skipping traditional retail channels. 	**Non-Traditional Channels** Use novel channels to reach your customers. takas.lk
Pop-up Presence Create a attractive, notable but temporary enviroment to demonstrate and sell your offerings taking advantage of a trend or seasonal product. 	**Indirect Distribution** Use partners as resellers that deliver the offering to the final client. Cargills food City On your way home ODEL	**Cross-selling** Suggest and sell additional / complementary product or service to an existing customer that enhance their experience. 	**On-Demand** React promptly and flexible, and deliver goods and services whenever or wherever they are demanded. myphotobook
Context Specific Offer timely access to goods and services that are appropiate for a specific location, occasion or situation.  DB BAHN 	**Experience Center** Create a space that encourages your clients to experience and test your offerings – but purchase them through a different (and often lower-cost) channel. 	**Multi-Level Marketing** Sell bulk or packaged goods to an affiliated but independetn sales force that turns around and sells for you. 	

Here, one can see the innovation tactics and respective company examples which belong to the innovation type "Profit Model":

Premium Establish a higher price than competitors because of your superior offer (better features, experience, service, brand, design, etc.).	**Cost Leadership** Keep variable costs low and compensate through high-volume sales.	**Scaled Transac-tions** Achieve high volume and large scale sales to maximize margins, when unit costs are relatively fixed.	**Micro-transactions** Sell items for one dollar or cents in order to provoke impulse purchases at high volume.	**Forced Scarity** Offer a limited quantity or establish a limited time to access an offer, in order to increase demand and/or prices.	**Subscription** Predict cash flows by receiving customers' one-time or recurring fee in advance in order to have access to your offer during certain time.	**Membership** Charge a payment to provide different benefits that non-members do not have.
Installed Base Develop a "core" offer for small margins, or even loosing money, in order to create demand and loyalty; then make profit on additional products and services.	**Switchboard** Connect buyers and sellers; the more actors on each side, the more valuable the switchboard.	**Auction** Enable the potential buyers to set the price of a good or service.	**User-defined** Ask customers to establish the price they want to pay.	**Freemium** Provide free basic services and at the same time offer premium services (advanced or special features) with a cost.	**Flexible Pricing** Vary the price for a good or service according to its demand.	**Float** Receive up-front payment for an offer that is not build yet; earn interest on that money before delivering the good/service.
Financing Collect revenue not directly from the sale of a good, but from structured payment plans and after-sale interest.	**Ad-Supported** Offer a service or information for free to a crowd and at the same time selling this crowd as potential customers to others.	**Licensing** Permit the use of your offering in an specific way for a certain amount of money.	**Metered Use** Customers pay only for what they use.	**Bundled Pricing** Sell in one transaction two or more items that could be sold alone.	**Disaggregated Pricing** Give customers the opportunity to buy just and only what they want, no more	**Risk Sharing** Do not claim standard fees/ costs if certain measures/goals are not reached; yet gain huge profit when they are accomplished.

We use these innovation tactics in order to discuss their potential application in business models of entrepreneurs. Here, the idea is to copy successful tactics and implement them in a new business model. The innovation types and the respective tactics are targeting different building blocks in the business model canvas, as one can see in the following figure.



Source: Modified from Osterwalder et al. (2010)

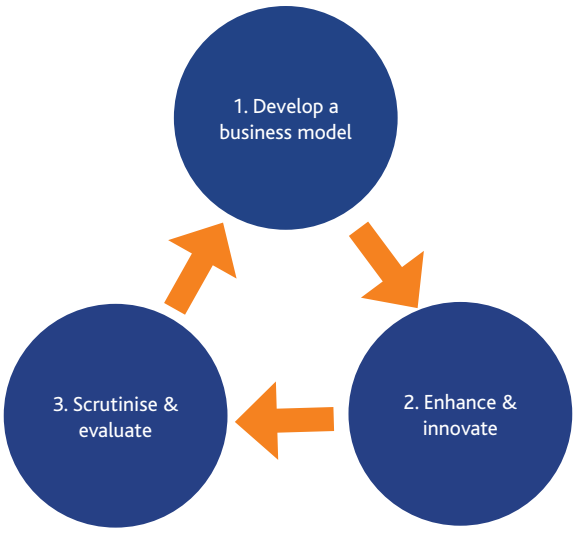
In this regard, the 10 Types of Innovation concept provides a very helpful tool to further innovate a business model:

- Product Performance and Product System as well as Service Innovation Tactics are strongly related with the Value Proposition in the canvas.
- Branding and Channel Innovation Tactics could be used to innovate in Customer Relationship as well as Channel building block.
- Profit Model Innovation Tactics could be applied to design ways of Revenue Streams.
- Process and Structure Innovation Tactics are related with Key Activities and Resources building blocks.
- Network Innovation Tactics can be used to develop innovative Key Partnerships.

By conducting a simple online research, you can find several innovation tactics that were applied by other companies. By making a comparison you can learn from the other companies and see if there were similar tactics to apply in the companies you are coaching.

PHASE 3: EVALUATE THE DEVELOPED BUSINESS MODEL

After developing the new business model based on the 10 Types of Innovation, the participant should prepare a new business model canvas for the developed model and scrutinise it. The feasibility of the new model should be assessed. The participants should make sure that they have not missed any chances to further innovate in the business model.



As presented in the figure above, the whole process is a cycle that can be repeated over and over again in order to respond always to the dynamics in the market.

REFERENCES

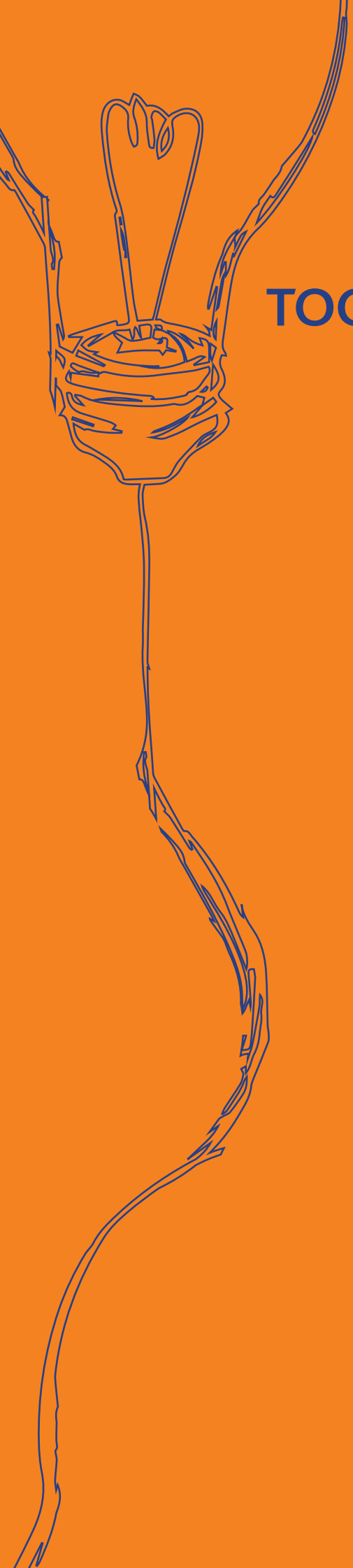
Dornberger. U., et al. [Ed.] (2012). Managing the Fuzzy Front-End of Innovation, Leipzig.

Keeley, L. et al. (2013). Ten Types of Innovation: The Discipline of Building Breakthroughs, New York.

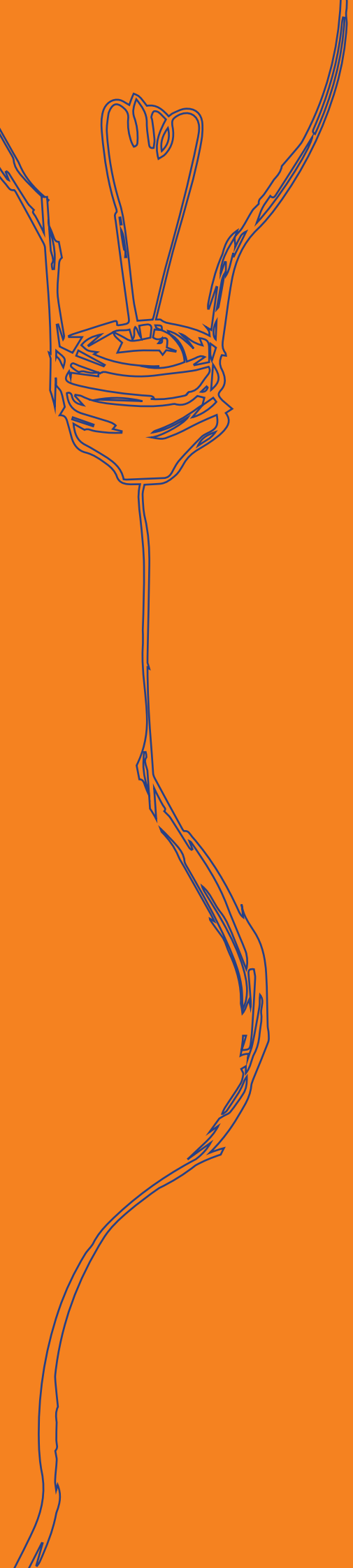
Osterwalder, A., et al. (2010). Business Model Generation: A Handbook for Visionaries, Game Changers, and Challengers., New York.

Osterwalder, A., et al. (2014). Value Proposition Design: How to Create Products and Services Customers Want, New York.

Perkin, L. (2013). The Ten Types of Innovation. Perkin Digital and Media Consultancy.



TOOL 4_Creative Night



TYPE OF TOOL

The tool can be implemented in form of a one-day event. The event can be conducted for one individual company (in-house) or for a group of companies. 10-12 people can take part in it. Participants form teams of 3-4 members to work together.

TOOL IN BRIEF

The event is a moderated creativity session that will let students work on the challenges of companies. Based on prepared questions from the companies, the students will be trained to apply creativity techniques. The companies will receive ideas from students in a structured and documented way.

TARGET GROUP

The target group are entrepreneurs and business managers who are searching for new ideas for some challenges as well as universities and their students who are interested in thinking out of the box.

TOOL OBJECTIVES

The creative night is a tool to link universities with companies. Students will be sensitised to innovation challenges of companies and will learn creativity techniques. Companies will benefit from the creativity of a group from outside their company to find solutions for their challenges.

The tool aims to achieve the following objectives:

- Link companies and universities, especially faculties of management or commerce, but multidisciplinary teams from all faculties are also potential candidates.
- Provide companies with new ideas from outside in a short event.
- Train students to structure creativity.

REQUIRED MATERIALS

For a smooth conduction of the workshop, the following material is required:

- Large sheets of paper or roll of paper to document the process.
- Pin board for each team or a wall with tape to hang the papers.
- Moderation cards with pens.
- Sheet of paper that explains the different creativity methods.

IMPLEMENTATION GUIDELINES

This tool can be implemented in five phases; each of them consists of several steps.

PHASE 1: PREPARATION WITH COMPANIES

In preparation meetings before the event with the selected companies, their challenges have to be defined and clear questions to guide the students have to be articulated.

PHASE 2: INTRODUCTION

The event begins with an introduction about creativity and an introduction of the participating companies.

PHASE 3: FIRST ROUND – LATERAL THINKING

After the companies present their questions/problems, the moderator introduces techniques of lateral thinking. Students are grouped in working teams. Each team exercises one method on one of the presented challenges.

The representative of the company explains the challenge again in more detail for the individual groups. Students ask questions until everybody understands the questions/problems presented by the company.

The students apply the selected creativity technique for lateral thinking. Each group presents their results to the plenum. The representative of the company comments on the results.

PHASE 4: SECOND ROUND – VERTICAL THINKING

Here the moderator presents techniques of vertical thinking. Students are grouped once again in working teams. Each team exercises one method on one presented challenge.

The representative of the company explains the challenge again in more detail for the groups. Students ask questions until everybody understands the questions/problems presented by the company.

The students apply the creativity technique for vertical thinking. Each group presents their results to the plenum. The representative of the company comments on the results.

PHASE 5: THIRD ROUND – PARALLEL THINKING

Finally, the moderator presents techniques of parallel thinking. Students are grouped once again in working teams. Each team exercises one method on one of the presented challenge.

The representative of the company explains the challenge again in more detail for the groups. Students ask questions until everybody understands the questions/problems presented by the company.

The students apply the creativity technique for parallel thinking. Each group presents their results to the plenum. The representative of the company comments on the results.

PHASE 1: PREPARATION WITH THE COMPANIES

STEP 1.1: QUESTION PREPARATION

In the first phase companies willing to participate in the creative night have to be identified. These should be companies that are looking for new ideas or to overcome some challenges in existing products. In meetings with these companies some challenges have to be selected and clear questions have to be formulated. Each company should formulate three questions. A question for each round of the workshop: one for lateral thinking, one for vertical thinking, and one for parallel thinking. The trainer should support the companies in defining the right questions for these three categories.

STEP 1.2: STUDENT SELECTION

The university has to select some students for participation. It is of advantage for the event if one can find students with different backgrounds.
A venue has to be found where separated group work in a pleasant atmosphere is possible.
Tip: Let the students sign an agreement of confidentiality. These may be important for the companies to talk more about their challenges.

PHASE 2: INTRODUCTION

After an introduction into creative thinking by the trainer the companies have to be presented briefly.

STEP 2.1: INTRODUCTION TO CREATIVE THINKING

Creativity is one of the most valuable resources to explore new areas of knowledge. Creativity, in its simplest definition, can be understood as ability to create, that is, to produce something out of nothing. Creativity comes from the Latin word creare, which means to generate something new, invent something, produce something, but is also associated with the concept of choice.

In order to develop ways of thinking that stimulate idea generation (this is creativity itself) Edward De Bono developed the concept of lateral thinking (De Bono, 1970). This way of thinking seeks to generate alternative thinking directions, in opposition to vertical thinking, which seeks to develop ideas in a thinking direction that is already defined. While vertical thinking is analytical, lateral thinking is provocative in suggesting these new thinking directions. Nevertheless, according to De Bono (1970), these two forms of thought are not antagonistic. In this sense, lateral thinking may be useful to find ideas or directions for problem solving and vertical thinking may be useful to develop them.

For stimulating creativity we need:

A QUESTION OR PROBLEM TO SOLVE

The starting point for being creative is necessarily a question or a problem to solve. This is the beginning of the process of creative thinking and thinking outside the box, for which it is essential to first define what the box is. Therefore, at the start of every creative problem-solving process stands the definition of the problem to solve. Here it is important to concentrate on the task to get the right focus on the problem or question or to divide them into suitable partitions. A creative process based on general or meta questions is difficult to handle and in the end the results are often not satisfactory as they are too general.

A TEAM

Experiences and research show that a group is much more effective and productive in creativity than a single individual. The myth of the lonesome inventor who independently finds the solution in their enclosed room is widely disproven in reality as well as by literature. Furthermore, the team should be as diverse as possible in terms of age, culture, discipline, background, department etc. The goal should be to involve different perspectives, backgrounds, and experiences into the creative process.

A SUITABLE ENVIRONMENT

Based on the fact that thinking and creativity are highly related to emotions and feelings as well as chemical and hormone functions within our brain and body, a positive and motivating environment influences our way of thinking. As the Walt Disney Method demonstrates, putting oneself in a different perspective can be supported by changing the room or place.

TIME

The majority of the methods for creative thinking are time consuming, which can be costly for the companies. However, creative problem-solving processes are strategically addressing the future and thus are substantially important. Therefore they need adequate time resources.

FREEDOM OF THINKING

To enable the creativity process it is necessary to think absolutely freely. Every idea is welcome. It might be that one idea is better for the explicit problem than another one, but in the end for lots of creative processes the ideas which were produced below the line led to successful innovations.

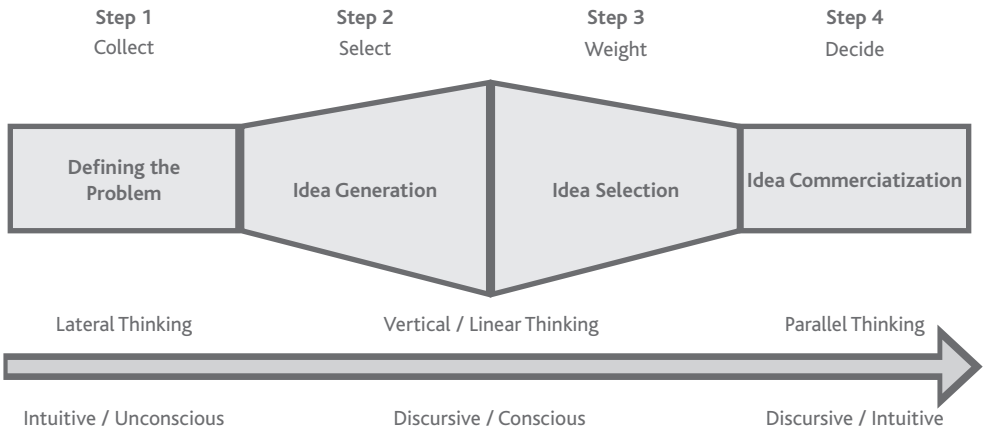
Therefore: no hierarchies, no prejudice, no taboos…. Craziness is allowed!

For freedom of thinking it sometimes might be a good idea if the management is not involved in the idea development process due to possible ambiguous hierarchy behaviour of the team, which could hinder the process or make it uncomfortable.

STRUCTURING THE PROCESS

To make the idea creation process manageable, it is helpful to structure the process into four steps and to allocate the different resources and methods to each single step.

Creative Problem Solving Process



STEP A: DEFINING THE PROBLEM

As mentioned above, it is first necessary to define the problem to be solved and the questions to be asked

STEP B: IDEA GENERATION

This step is related to the task of generating as many quality ideas as possible in a compact time frame. This step mainly uses methods and techniques that are addressing intuitive and unconscious ways of thinking. Following Edward de Bono this way of thinking could be defined as "lateral thinking".

STEP C: IDEA SELECTION

Following the step of idea generation, we now have to select those ideas that seem to be most suitable for solving the problem. The ideas should be selected and weighted; we have to prioritise them to build the base for the strategic decision at the end which one of them should be implemented or commercialised.

Here more discursive and conscious methods and techniques are helpful to structure the group discussions. Those are more related to linear and structural thinking.

STEP D: IDEA COMMERCIALISATION

In the last step one has to decide which ideas are to be implemented. Here it is necessary to change the perspective and to involve different people. Idea generation and idea commercialisation are two different tasks and few people have equal capabilities in both. After the idea generation and selection process most of the participants love their ideas and stick to them. Hence they are not able to change into a market perspective and to adjust or transform the idea into a product or a solution which the company can implement or commercialise. Because of that reason most companies separate these sections. Let the people do the things they are able to do well.

STEP 2.2: INTRODUCTION OF THE COMPANIES

The company representatives give a very short introduction to their company and field of business. These presentations should include an outline on the challenges they face at the time.

PHASE 3: FIRST ROUND: LATERAL THINKING

STEP 3.1: INTRODUCTION TO INTUITIVE METHODS

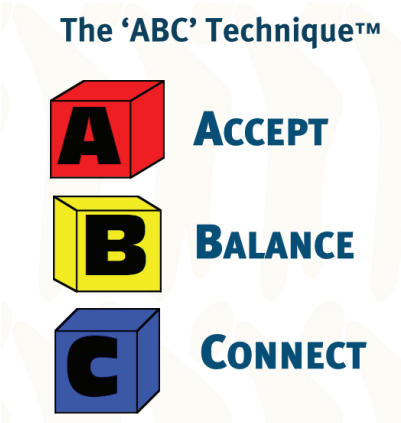
The trainer introduces four intuitive methods to the plenum of the students and company representatives.

ABC TECHNIQUE

This is a quick and very easy creative technique that is also very suitable for individual idea development.

How it works:

1. Develop the question, problem, or topic for the session and write it in the middle of the board.
2. Make sure that everybody understands the question for the session.
3. Write the letters A, B, C, etc. to Z down the side of the paper or the board.
4. Try now to find answers to the question starting with each letter of the alphabet.
5. In the end you should quickly have 26 possible answers (one answer for each letter of the Latin alphabet).



ANALOGIES (SYNECTICS)

The use of analogies consists of taking the problem that needs to be solved to other knowledge areas or simply to other scenarios. This stimulates the flexibility of the already established thinking structures, facilitating linkages to generate new ideas. The essential part of this method is the selection of the analogy. It is possible that a group cannot find a suitable analogy or that the found analogy does not lead to the generation of good ideas. One should also take into account the knowledge of the selected area.

Although the overall exercise simply attempts to make the mind more flexible, a greater knowledge can lead to new associations and understandings. A good analogy may be made with nature, therefore it is recommended to have at least one participant who is an expert on the selected area, in this case, a biologist.

An example could be network intelligence: one of the problems with the proliferation of communication networks is to find the best way to communicate. In order to develop ideas for a more efficient communication, we used the analogy with intelligent swarms within nature. Analysing the topic, it is found that ants leave a pheromone at the places where they walk along so that other ants can find a more efficient path to go somewhere, for example, where their food is. From this, one can also think about leaving a mark on information packages for instance, in emails that could be read by other users and thus, make its transmission and storage more efficient.

How it works:

1. Define the problem.
2. Search for an analogy.
3. Analyse the selcted analogy.
4. Search for analogy elements that are linked to the problem
5. Generate ideas based on the analogies
6. Evaluate and develop ideas.

HEADSTAND

This method is based on the principle that sometimes it is better to answer the question one doesn't want to be answered than that the question what one wants answered. Therefore, reversing the questions and putting them upside down gives one the possibility to change the perspective.

How it works:

1. Develop the question, problem, or topic for the session and write it in the middle of the board.
2. Make sure that everybody understands the question for the session.
3. Turn the question upside down. Don't ask what the company can do for the customers; ask what thecustomer can do for the company.
4. After answering the reversed questions put them on the ground again and one will have possibilities to solve the problem.

MIND MAPPING

The method was developed by Tony Buyan, a British mental trainer and author of well-known books about creativity. The mind maps are also called spider diagram or conceptual maps and they are built through tree diagrams.

How it works:

1. A large sheet of paper, a wide pin board, or a computer with mind-mapping software is needed.
2. Develop the question, problem, or topic for the session and write it in the middle of the board.
3. Make sure that everybody understands the question for the session.
4. For each major subtopic a new branch of the tree has to be started and labelled.
5. For each sub-subtopic a subordinated branch has to be started and labelled.
6. Continue in this way.
7. At the end, a structured picture about the question and the possible answers related directly to the question in the centre is presented.

STEP 3.2: GROUP WORK

Students are grouped into four working teams. Each team will work with one method on one question of a company. The company representative explains the question the company has on one challenge where they need more new ideas. For example: currently, for product x only a prototype exist. What extra features could be interesting?

Before starting:

- Make sure that everybody understands the question.
- Make sure that everybody understands the method.

STEP 3.3: EVALUATION

Each group presents their results to the plenum. The representative of the company comments on their results. Factors for evaluation are newness to the company and usefulness. Don't forget to document the results with photos and send it to the company.

PHASE 4: SECOND ROUND: VERTICAL THINKING

STEP 4.1: INTRODUCTION TO DISCURSIVE METHODS

Three discursive methods are introduced to the plenum.

MORPHOLOGICAL ANALYSIS

The method was first developed by Fritz Zwickly, a Swiss astrophysicist and aerospace scientist at the California Institute of Technology in the 1940s and 50s. The method is built for the systematic structuring of multidimensional problems and the investigation of complex relationship constructs. The method is based on an attribute list and uses a matrix for visualisation.

The morphological analysis consists of the collection and systematic analysis of parameters and their possible values or characteristics, from which possible solutions or ideas are developed. The selection of the parameters and the definition of the possible values or characteristics of each parameter can be made in groups.

Parameter	Possible values or characteristics of the parameter			
Light source	Candle	Bulb	Halogen lighting	Fluorescent tube
Diffusion of light	Opaque glass	Paper	Natural fibres	Indirect lighting
Energy source	Electricity	Batteries	Solar energy	
Material	Cedar wood	Aluminium	Polyethylene	Glass
Style	Medieval	Retro	Pop	

Source: own elaboration

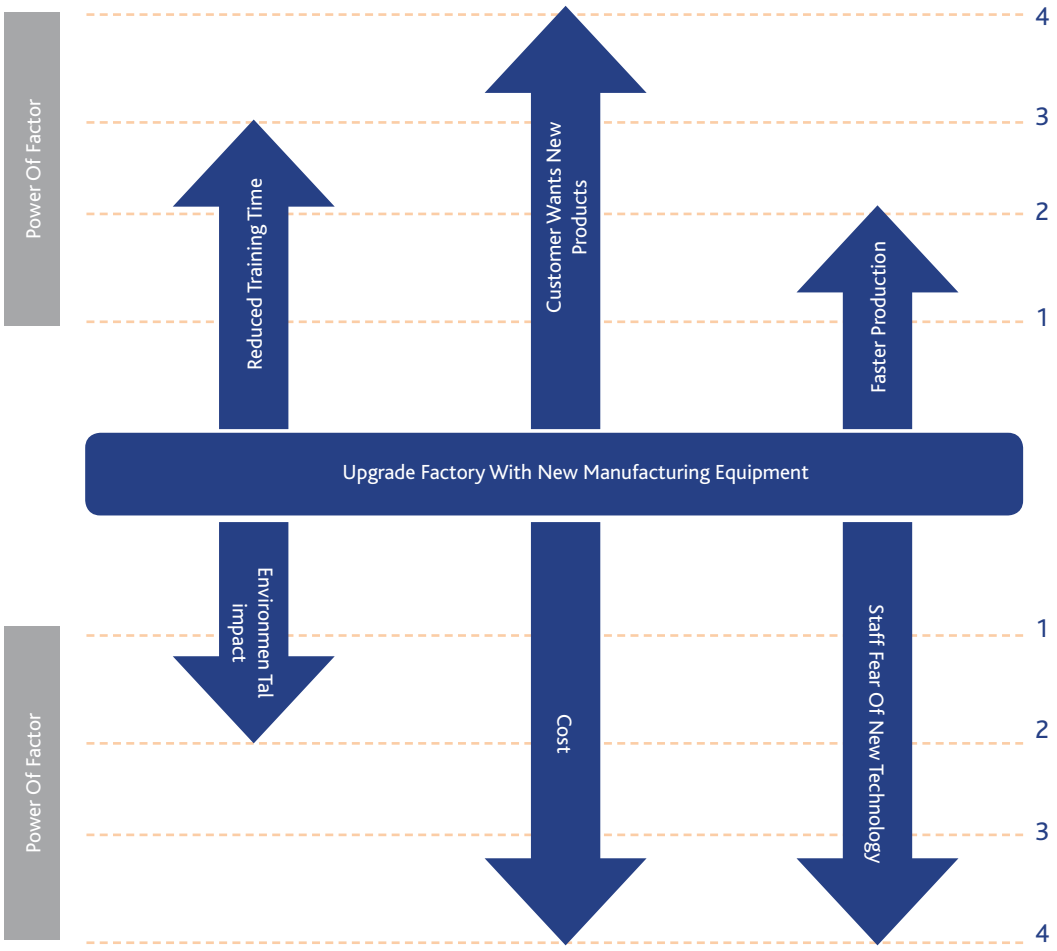
In the example of the table above there is a description of parameters of a lamp and possible characteristics that each of these parameters could have. For example, as light source, it is possible the use of a candle, a bulb, halogen lighting or a fluorescent tube. The points connected with lines identify one selection within the possible characteristics of each parameter.

How it works:

1. Definition of the problem.
2. Definition of the parameters of the object or problem to be solved.
3. Definition of possible values or characteristics of each parameter.
4. Preparation of the parameter matrix and its values or characteristics.
5. Selection of the characteristics of each parameter and development of the concept or solution to the problem.
6. Evaluation of the idea or solution.

FORCE FIELD ANALYSIS

This method was first developed by Kurt Lewin (1890-1947), a German-born pioneer of social psychology and founder of the theory of group dynamics. The method visualises the different factors and topics involved in the problem and structures them into hindering or helping factors.



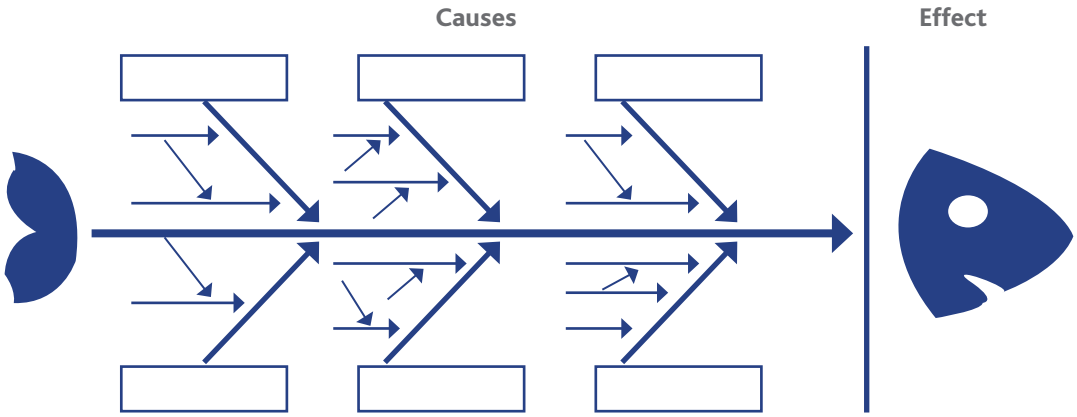
Source: own elaboration

How it works:

1. First a pin board or a large paper with moderation material is needed.
2. Develop the question, problem, or topic for the session and write it in the middle of the board.
3. Make sure that everybody understands the question for the session.
4. The group now has to identify factors that help or hinder in solving the problem.
5. Draw a line in the middle of the paper or board.
6. Draw the helping forces as upward arrows over the line and the hindering factors as downward arrows under the line.
7. The size and thickness of the arrow should symbolise the power of the factor.
8. Then the group develops ways to strengthen or add positive forces, to weaken or remove negative forces, or recognises the negative forces that are too strong to solve the problem.

FISHBONE DIAGRAM

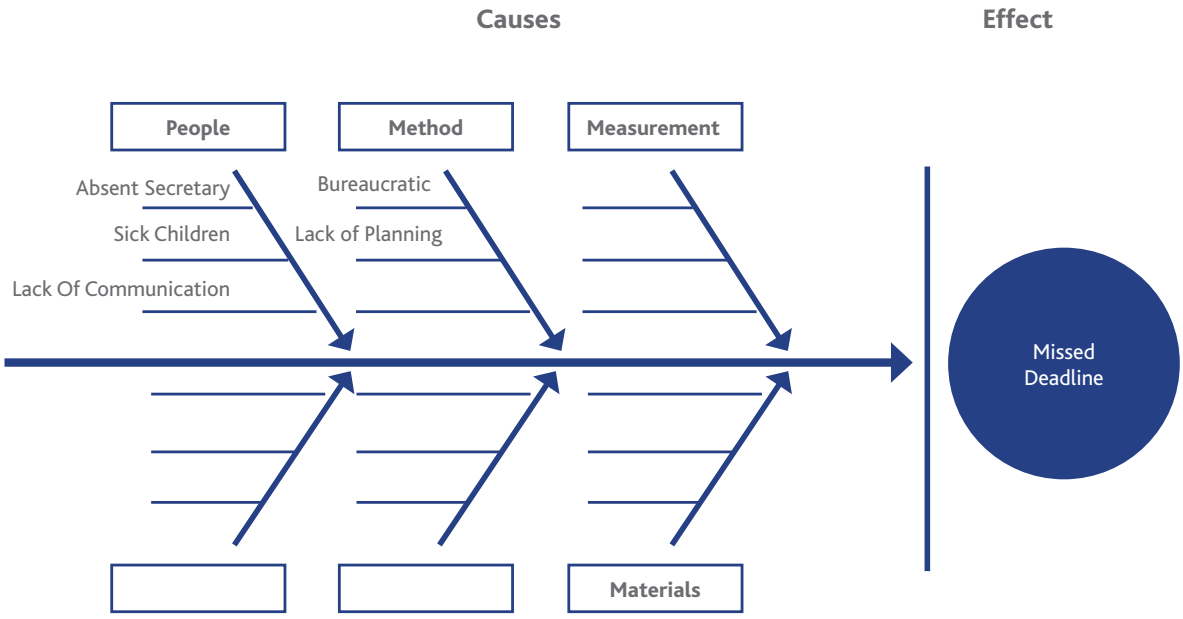
This method was originally developed during the 1940s by Kaoru Ishikawa, a Japanese scientist who developed a couple of tools for quality management. The diagram shows the causes and effects of a certain event or problem.



How it works:

1. First a pin board or a large paper with moderation material is needed.
2. Develop the question, problem, or topic for the session and write it in the middle of the board.
3. Make sure that everybody understands the question for the session.
4. Draw a long arrow in the middle and label with topic or question. This is the backbone of the fish.
5. For every major cause the group can think of, draw a line (one bone) at 45 degrees to the backbone and label it.
6. For every subcause there will be a small arrow or bone in direction of the major cause the subcause is related to.
7. Through group discussion one can identify the key cause as starting point for developing a solution.

Below you can find an example of a fish diagram for missed deadlines.



Source: own elaboration

STEP 4.2: GROUP WORK

Students are grouped into three working teams. Each team will work with one method on one question of a company. The company representative explains the question the company has about a challenge, where they have to decide about an innovation. For example: Product x is targeting a female market segment. Which arguments could be used, that males support them buying it?

Before starting:

- Make sure that everybody understands the question.
- Make sure that everybody understands the method.

STEP 4.3: EVALUATION

Each group presents their results to the plenum. The representative of the company comments on the results. Factors for evaluation are newness to the company and usefulness. Don't forget to document the results with photos and send it to the company.

PHASE 5: THIRD ROUND - PARALLEL THINKING

STEP 5.1: INTRODUCTION TO COMBINATION METHODS

Two combination methods are introduced in the plenum.

WALT DISNEY METHOD

The method was developed by Robert Dilts, a pioneer of Neuro-Linguistic Programming (NLP), and goes back to Walt Disney and his process of "Imagineering" within the Walt Disney Company. The method separates participants into three different roles: the "dreamer", the "realist", and the "critic".

The Dreamer

This role is producing the visionary big picture. Everything is allowed even thinking the unthinkable. There are no boundaries and limits.

The Realist

In this role everything is organised and structured. Think constructively and devise plans and ways to reach the vision. Cut the vision down to suitable and realistic aims and terms.

The Critic

This is the role that critically discusses the plan and the solutions of the realist. Here the role should look behind the scenes. What could go wrong, what is missing? What are the consequences, the cost of the solution? What kind of resources are needed and could they be provided and so on.

The method can be used with each individual playing one role. Alternatively the whole group can jump from one role to another. It is even possible to change the room and seats. In the Walt Disney Company there were huge studios for the visionary people with room and space to be creative. For the realistic people there were well-structured and organised offices, and for the critical ones there were tiny and small offices.

SIX THINKING HATS OF EDWARD DE BONO

The method was developed in the early 1980s by Edward the Bono, a British medical scientist and author of well-known books about creativity. He is the inventor of the theories and methods for lateral thinking. This method involves the systematic analysis of a problem or situation from different points of view. Each view is represented by a "hat", which is characterised in a specific way.

White hat: Focused on data, facts, and information about the problem.

- What information is available?
- What data, facts, or information are missing?
- What data must be obtained and by who?

Red hat: with this hat, one can express any feeling or intuition about the problem. The perception and the feelings should be expressed without being criticised by other members of the team.

- How do you feel?
- How do you feel about the problem?
- What sensation comes to your mind?

Black hat: This role indicates the errors and gives a critical look at the solution of a problem or the implementation of an idea. One must be careful with it.

- Is the possible solution profitable?
- Is there any law or regulation violated?
- What are the risks?

Yellow hat: It is optimistic. When wearing the yellow hat, it is necessary to focus on consciously identifying the benefits of a project or an idea.

- What are the advantages?
- What does everyone get?
- What advantages can it bring to other people?

Green hat: It concentrates on creative thinking. In this space, new ideas can be generated by complementing the already existing ones.

- What are the alternatives?
- Where do you think you can have fallen into paradigms?
- How can the process be accelerated?

Blue hat: This hat emphasises the control of methods and processes. The issues that must be reflected on and the steps to be followed are determined here.

- What aspects still need to be considered?
- What is not clear yet?
- What should be discussed?

STEP 5.2: GROUP WORK

Students are grouped into two working teams. Each team will work with one method on one question of a company. The company representative explains the question the company has about a challenge, where they have to decide about an innovation.
For example: Should this product x be introduced into the market soon?

Before starting:

- Make sure that everybody understands the question.
- Make sure that everybody understands the method.

STEP 5.3: EVALUATION

Each group presents their results to the plenum. The representative of the company comments on the results. Factors for the evaluation are the newness to the company and usefulness. Don't forget to document the results with photos and send it to the company.

REFERENCES

LITERATURE

Amabile, T. (1998). How to Kill Creativity. Harvard Business Review, Vol. 76, Issue 5, p. 76-87.

Amabile, T. et al. (2005). Affect and Creativity at Work. Administrative Science Quarterly, Vol. 50(3), p. 367-403.

Amabile, T. et al. (2008). Creativity and the Role of the Leader. Harvard Business Review, Vol. 86, Issue 10, p. 100-109.

Chesbrough, H. (2006). Open Innovation. The New Imperative for Creating and Profiting from Technology, Boston.

De Bono, E. (1990). The Use of Lateral Thinking, London.

De Bono, E. (1993). Serious Creativity: Using the Power of Lateral Thinking to Create New Ideas, New York.

Dornberger. U. et al. [Ed.]. (2012). Managing the Fuzzy Front-End of Innovation, Leipzig.

Guilford, J. (1950). Creativity. Psychologis, Vol. 5, p. 444-454.

Herb, R. et al. (2000),.TRIZ. Der systematische Weg zur Innovation, Landsberg.

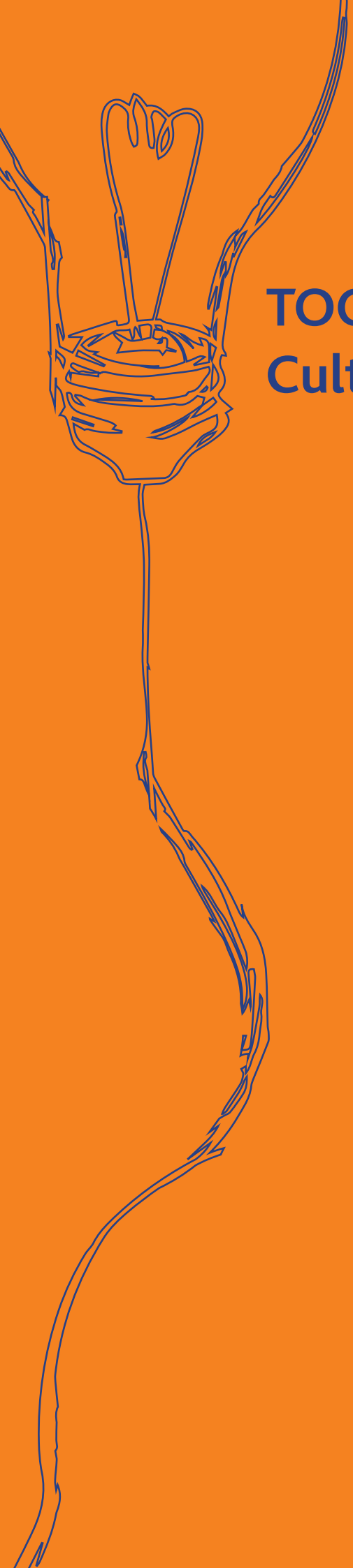
Majaro, S. (1994). Marketing Y Creatividad. Un Enfoque Instrumental, Madrid.

Muñoz A. (1994). Métodos Creativos para Organizaciones, Madrid.

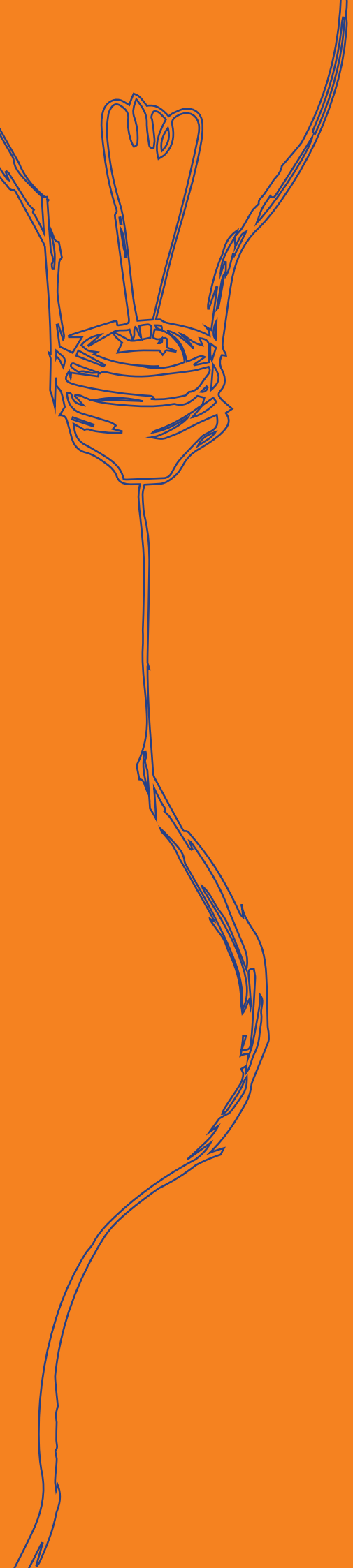
Runco, M. (2004). Creativity. Annual Review of Psychology, Vol. 55, p. 657-687.

LINKS

http://www.fepic.eu/UK/index.php
http://www.mycoted.com/Category:Creativity_Techniques
http://1000ventures.com/



TOOL 5_Innovative Business Culture Assessment



TYPE OF TOOL

The tool can be implemented in form of a questionnaire followed by a workshop to discuss the results. The workshop can be conducted for one individual company (in-house) or for a group of companies (5-10). Working with a group of companies provides the participants with the ability to compare results. Participants can work individually, yet it is highly recommended to form and work in teams. Recommended size of teams is 2-4 members. Managerial positions are highly recommended to be present, as well as representatives of the staff. The workshop requires a full day for implementation.

TOOL IN BRIEF

Behavioural barriers can and must be overcome in order to pave the way for innovation. This can be accomplished only when these barriers have been clearly identified. These barriers are usually found at all the levels of an organisation and especially, between levels, departments, and teams. This tool explains the required steps in order to identify and eliminate these barriers.

TARGET GROUP

Business managers can use this tool in order to eliminate the cultural barriers within the company and create an innovation-friendly environment among the employees.

TOOL OBJECTIVES

Barriers to innovation are obstacles that inhibit the establishment of a suitable environment for the promotion of innovation. Behavioural barriers are the most important of them. Most of these barriers have effects on the resistance to change and on the perceptions of individuals and groups, and ultimately influence the behaviour of groups and individuals. The tool helps to identify these barriers in an organisation and to develop ways to remove them.

The tool aims to achieve the following objectives:

- Make it possible for business managers to identify the culture barriers within the company.
- Guide managers on important steps to eliminate the cultural barriers.
- Enhance the atmosphere in the company and create an innovation-friendly one.
- Raise awareness on innovation approaches in a company's culture (especially among SMEs).

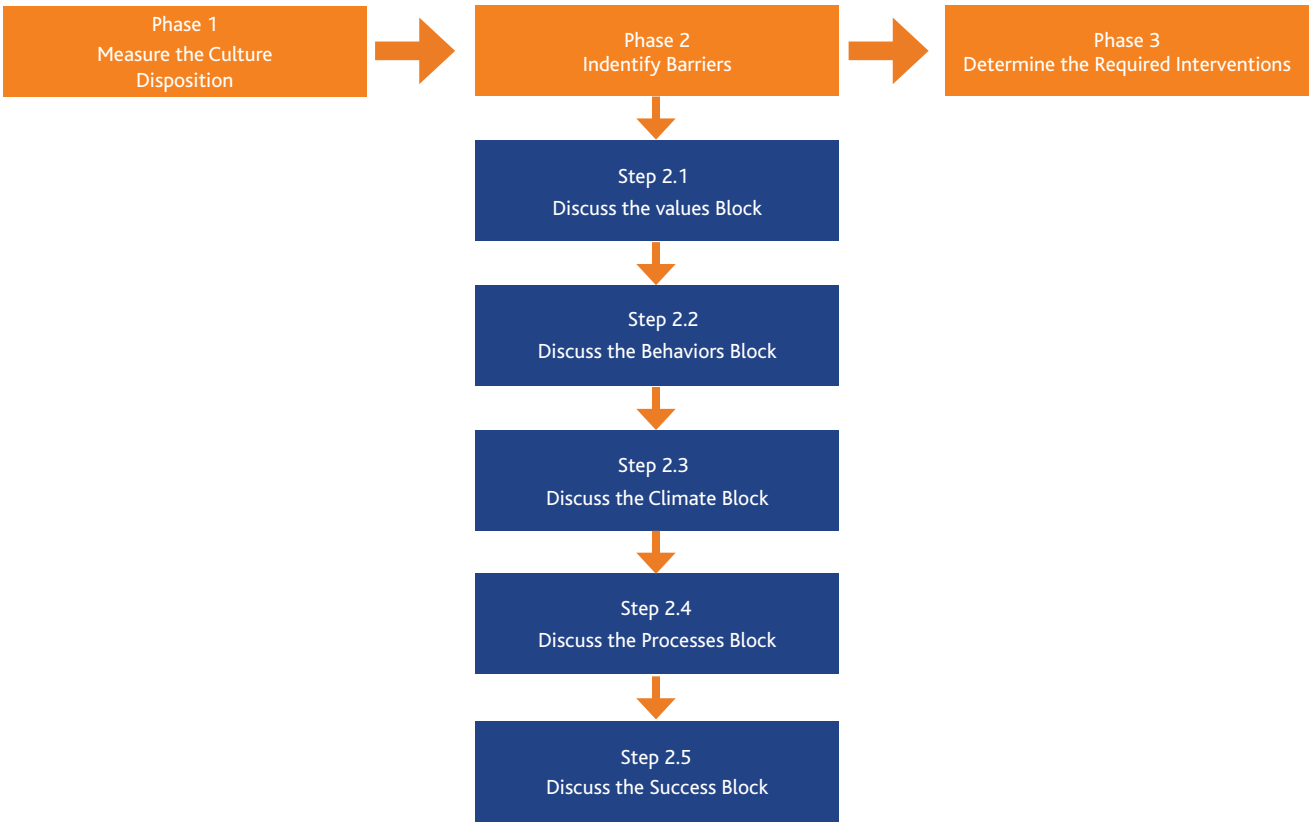
REQUIRED MATERIALS

For a smooth conducting of the workshop, the following material is required:

- Pin board for each team or a wall with tape to hang the templates.
- Sticky notes with pens.
- A copy of the questionnaire on culture disposition for each participant.

IMPLEMENTATION GUIDELINES

The tool can be implemented in three phases.



PHASE 1 (PREPERATION PHASE): MEASURE THE CULTURAL DISPOSITION TOWARDS INNOVATION

The first phase aims to measure the innovation culture of the enterprise based on an employee survey. This must be done before the workshop. The questionnaire has to be sent to the companies, who should forward it to their employees. The companies should send back the results at least two days before the workshop.

PHASE 2: IDENTIFY BARRIERS

In the second phase, the results of the questionnaire are going to be presented, discussed, and elaborated.

PHASE 3: DETERMINE THE REQUIRED INTERVENTIONS

The third phase aims to come to a conclusion about the barriers and determine the appropriate solutions to overcome the most important ones.

PHASE 1 (PREPARATION PHASE): MEASURE THE CULTURAL DISPOSITION TOWARDS INNOVATION

Preconditions for a successful change are the willingness of the managers to change and the real disposition to support initiatives to systematically remove barriers, taking into account the social characteristics of the organisation, because the company, as any other organisation, is composed of people. That is why it is very important to conduct the survey anonymously in order to assure the employees feel comfortable answering it honestly and thus get valuable and substantive results.

The following table presents a questionnaire according to Rao and Weintraub (2013) that displays the evaluation of a company's cultural disposition to innovation within the company. The questionnaire should be completed by the staff of the company several days before the workshop. The companies or the workshop organisers (as agreed beforehand), should prepare a frequency analysis [3] of the survey results before the workshop as well. The results will be shown and discussed during the workshop. In case the companies aren't able to develop the frequency analysis, they must send the results a bit earlier to the facilitator who should take care of it. The questionnaire must be answered from the perspective of the employees or the respondent regarding their opinion about the company's behaviour.

[3] Frequency analysis (in direct numbers or percentage) is a descriptive statistical method that shows the number of occurrences of each response chosen by the respondents. This can be done using, e.g., Microsoft Excel.

CULTIVATING INNOVATION: CORPORATE CULTURE				
Please rate the organisation for each element, on a scale of 1 to 5, using the following scale: 1 = Not at all; 2 = To a small extent; 3 = To a moderate extent; 4 = To a great extent; 5 = To a very great extent.				
BB	**FACTORS**	**ELEMENTS**	**SURVEY QUESTIONS**	**SCORE**
VALUES	Entrepreneurial	Hunger	We have a burning desire to explore opportunities and to create new things.	
		Ambiguity	We have a healthy appetite and tolerance for ambiguity when pursuing new opportunities.	
		Action–oriented	We avoid complicated situations when we identify new opportunities by exhibiting a bias towards action.	
	Creativity	Imagination	We encourage new ways of thinking and solutions from diverse perspectives.	
		Autonomy	Our workplace provides us the freedom to pursue new opportunities.	
		Playfulness	We take delight in being spontaneous and are not afraid to laugh at ourselves.	
	Learning	Curiosity	We are good at asking questions in the pursuit of the unknown.	
		Experiment	We are constantly experimenting in our innovation efforts.	
		Failure OK	We are not afraid to fail, and we treat failure as a learning opportunity.	
BEHAVIOURS	Energise	Inspire	Our leaders inspire us with a vision for the future and articulation of opportunities for the organisation.	
		Challenge	Our leaders frequently challenge us to think and act entrepreneurially.	
		Model	Our leaders model the right innovation behaviours for others to follow.	
	Engage	Coach	Our leaders devote time to coach and provide feedback on our innovation efforts.	
		Initiative	In our organisation, people at all levels proactively take initiative to innovate.	
		Support	Our leaders provide support to project team members during both successes and failures.	
	Enable	Influence	Our leaders use appropriate influence strategies to help us navigate around organisational obstacles.	
		Adaptation	Our leaders are able to modify and change course of action when needed.	
		Grit	Our leaders persist in following opportunities even in the face of adversity.	

CLIMATE	Collaboration	Community	We have a community that speaks a common language about innovation.	
		Diversity	We appreciate, respect, and leverage the differences that exist within our community.	
		Teamwork	We work well together in teams to capture opportunities.	
	Safety	Trust	We are consistent in actually doing the things that we say we value.	
		Integrity	We question decisions and actions that are inconsistent with our values.	
		Openness	We are able to freely voice our opinions, even about unconventional or controversial ideas.	
	Simplicity	No bureaucracy	We minimise rules, policies, bureaucracy and rigidity to simplify our workplace.	
		Accountability	People take responsibility for their own actions and avoid blaming others.	
		Decision making	Our people know exactly how to get started and move initiatives through the organisation.	
PROCESSES	Ideate	Generate	We systematically generate ideas from a vast and diverse set of sources.	
		Filter	We methodically filter and refine ideas to identify the most promising opportunities.	
		Prioritise	We select opportunities based on a clearly articulated risk portfolio.	
	Shape	Prototype	We move promising opportunities quickly into prototyping.	
		Iterate	We have effective feedback loops between our organisation and the voice of the customer.	
		Fail smart	We quickly stop projects based on predefined failure criteria.	
	Capture	Flexibility	Our processes are tailored to be flexible and context-based rather than control- and bureaucracy-based.	
		Launch	We quickly go to market with the most promising opportunities.	
		Scale	We rapidly allocate resources to scale initiatives that show market promise.	

SUCCESS	External	Customers	Our customers think of us as an innovative organisation.	
		Competitors	Our innovation performance is much better than other firms in our industry.	
		Financial	Our innovation efforts have led us to better financial performance than others in our industry.	
	Enterprise	Purpose	We treat innovation as a long-term strategy rather than a short-term fix.	
		Discipline	We have a deliberate, comprehensive and disciplined approach to innovation.	
		Capabilities	Our innovation projects have helped our organisation develop new capabilities that we did not have 3 years ago	
	Individual	Satisfaction	I am satisfied with my level of participation in our innovation initiatives.	
		Growth	Our company deliberately stretches and builds its people's competencies by their participation in new initiatives.	
		Reward	Our company rewards people for participating in potentially risky opportunities, irrespective of the outcome.	

After conducting the survey in the company, the results must be concluded and a frequency analysis must be depicted in charts or other type of graphics in order to discuss the results in the workshop. All the results must be sent to the workshop organiser beforehand.

PHASE 2: IDENTIFY BARRIERS

This phase aims to show and discuss the results of the survey in an open-minded atmosphere. Participants should act self-critically and productively. The workshop organiser has the responsibility to moderate the discussions and keep it on the right course towards understanding the problem, collecting insights, and elaborating actions. It would be useful to talk about real examples and measurements in the company regarding each block of the questionnaire.

The moderator should do the following for each step to ensure a smooth flow of the discussion:

1. Show the results of the survey concerning every factor of the respective block of the questionnaire.
2. Explain briefly the meaning of the respective block for innovation culture (as explained in every step below) in order not to go off topic.
3. Start the discussion by asking the managers about their opinion on the results and with the aid of the guiding questions (as listed in every step below).

The moderator should also create a timetable before the workshop. It would be good to estimate the time needed for the discussion in order to manage discussing all the points. Time would probably vary from one company to another regarding each block, since companies have different structures and processes and accordingly the barriers cluster in different blocks. Anyhow, the moderator should divide the workshop time between the 5 blocks and be flexible to allocate more time to some blocks than to others without missing to talk about any block. Furthermore, the moderator should calculate certain times for breaks and for the conclusion in the last phase as well.

STEP 2.1: DISCUSS THE VALUES BLOCK

The actual priorities and decisions in the company are driven by values. Values aren't reflected by what the managers of the company say but rather by what they do and how they really act.

Assessing the values of the innovation culture of the company depends on three factors:

ENTREPRENEURIAL

Take a look on the responses of the employees and ask the managers or team present:

- How does the company try to foster the entrepreneurial spirit of the employees?
- How does the company deal with new ideas coming from an employee?
- How does the company deal with barriers that occur while planning a new project or discussing new ideas?

CREATIVITY

- What kind of measurements does the company have in order to promote creativity?
- Which performance does the company expect from the employees as individuals and as teams? What is the difference?

LEARNING

- How does the company seek new knowledge? How do employees do that?
- Does the company allocate capacities to get new knowledge?
- How practical does the company deal with knowledge?
- How does the company deal with failure?

STEP 2.2: DISCUSS THE BEHAVIOURS BLOCK

Behavioural barriers are the most critical issue, as they often directly influence the occurrence, elimination, and impact of other barriers such as the climate or the process flow. Leaders who can deal with behavioural barriers are those that are thirsty to develop new ideas through their lively energy which they need to share with others.

ENERGISE

- How does managers' behaviour influence the motivation of the employees?
- Where do ideas and decisions mostly come from (managers or employees)?
- To which extent are employees integrated in the innovation process? How?

ENGAGE

- How important is the further education and training of the employees for the company?
- How much time do leaders of the company invest in order to develop the competencies of the company's staff?
- Do company managers rely on employees or team leaders to innovate? Are they (employees) allowed to make mistakes, since innovation requires the acceptance of making certain mistakes?

ENABLE

- Innovation needs flexibility in the organisational structure: To which extent are the employees of the company flexible to make, create, and test new ideas?
- Which behaviour changes have you undergone lately in order to facilitate innovation in your company?

STEP 2.3: DISCUSS THE CLIMATE BLOCK

People spend long periods of time at work every day. Thus, they get greatly influenced by the work atmosphere, which has results on their performance both at work and beyond it. An innovative climate can foster enthusiasm and initiative behaviour in the company, leading to more passion, productivity, and self-motivation.

COLLABORATION

- Is there a general atmosphere of innovation fostering in your company? Which signs refer to that?
- Are successes awarded? When they are, does your company reward teams or only individuals?

SAFETY

- How do you communicate your values regarding innovation to your employees?
- Do you discuss these values with your employees?
- How do you assure that your employees can offer criticism and raise questions without being worried about consequences?

SIMPLICITY

- How would you describe the hierarchy in your company?
- Do you think that your organisational structure is innovation friendly?

STEP 2.4: DISCUSS THE PROCESSES BLOCK

Processes are the root to innovation. They are the frames that include all the steps that the company's operation, its projects, or even its ideas go through while they are being developed. Barriers could hinder generating new ideas, filtering, elaborating, designing, or marketing them.

IDEATE

- Which techniques does your company utilise to generate new ideas?
- Which techniques does your company utilise to filter new ideas?
- Which techniques does your company utilise to select which ideas will be further developed?

SHAPE

- At which stage do you take the decision of prototyping?
- How well are your customers integrated in the product/service development?
- How do you assess your progress during the development process?

CAPTURE

- How do you assure a smooth flow of your processes?
- How flexible is your company in allocating resources for scaling promising ideas?

STEP 2.5: DISCUSS THE SUCCESS BLOCK

According to Rao and Weintraub (2013) success is to be seen on three levels: externally by the customers, investors, and partners of the company, on the enterprise level since success raises the value of the company in general, and on the third level by the employees and managers who have led to the success and worked hard for it.

EXTERNAL

- What kind of company image do you want your customers to perceive?
- Which methods does your company use in order to estimate your performance in the market in comparison to the competitors?
- Do you consider your company innovative? If yes, how would you estimate the financial value of the innovation in the last years?

ENTERPRISE

- Do you create an innovation plan in you company? If yes, how?
- Do you consider you company innovative? If yes, which capabilities did you develop or acquire through innovation in the last years?

INDIVIDUAL

- How does your company make sure to activate the inherent potential of your employees to be innovative?
- Which measurements does your company have to keep the employees enthusiastic about innovation?

PHASE 3: DETERMINE THE REQUIRED INTERVENTIONS

Once the consequences of a certain barrier have been discussed, the workshop participants should identify which attitudes should be encouraged and which ones should be stopped. The participants should formulate concrete actions or measures to address the prioritised changes.

At the end, the workshop must be concluded and the current condition of the company should be explained to all participants. The same should be done for the actions that need to be taken and the desired results. The conclusions can be summarised in the following table:

Identified Barrier	Action to be taken	Target state

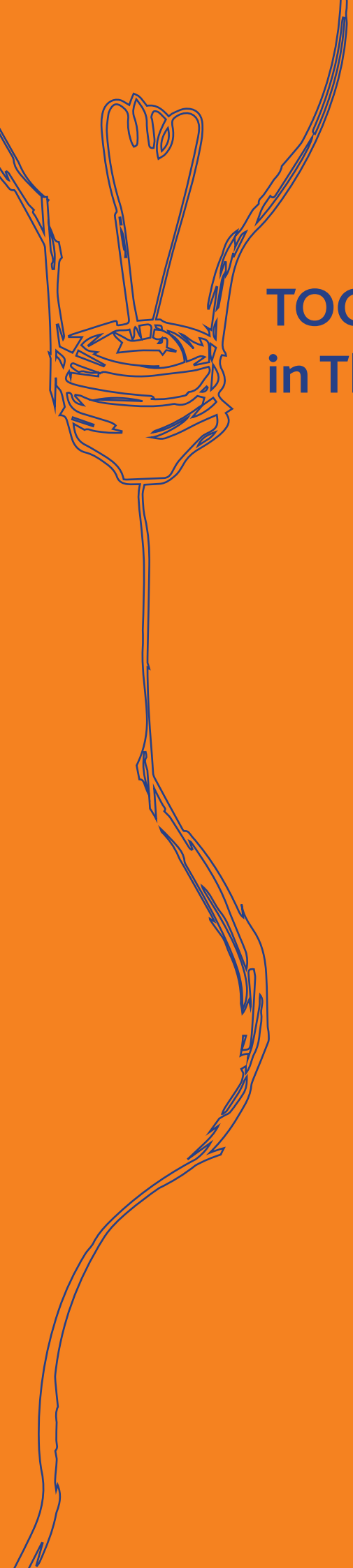
Remark:

Implementing Phase 2 and 3 can be done simultaneously. The moderator can draw the conclusion table at the beginning and fill it in step by step during the discussion.

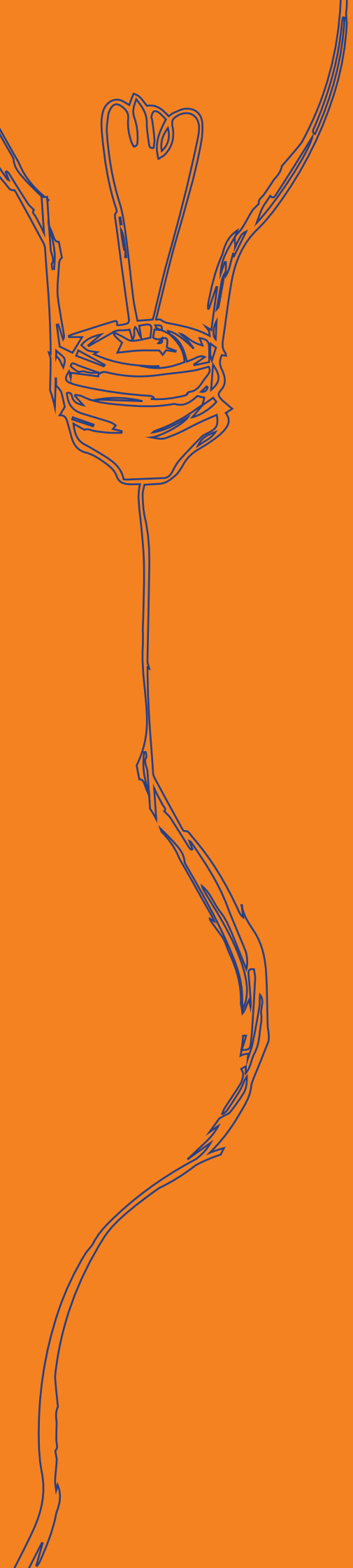
REFERENCES

Dornberger. U. et al. [Ed.] (2012). Managing the Fuzzy Front-End of Innovation, Leipzig.

Rao, J., and Weintraub, J. (2013). How Innovative is Your Company's Culture? MitSloan, Management Review. Vol. 54., No.3.



TOOL 6_Customer Integration in The Innovation Process



TYPE OF TOOL

The tool can be implemented in form of workshop. The workshop can be conducted for one individual company (in-house) or for a group of companies (5 -10). Participants can work individually, yet it is highly recommended to form and work in teams. Recommended size of teams is 2 - 4 members. It is highly recommended that the marketing department is represented. The tool includes two different options, each of them requires approximately four hours to implement.

TOOL IN BRIEF

In order to make the right investments and meaningful adjustments to the product or service, it is vital to invest enough time and resources to understand the target customer properly. This tool offers two implementation options; the first one utilises two techniques called the "Empathy Map" and the "Customer Journey". The second one presents the "Quality Function Deployment". These techniques help to understand, visualise, and analyse the target customer demand.

TARGET GROUP

Business managers and start-ups can use this tool to understand their customers in order to steer the innovation towards their needs and wishes.

TOOL OBJECTIVES

Although managers and start-ups spend a lot of time trying to develop their product or service, they often forget about getting to know their customers, who should be the central point of each step of the innovation process. This tool can assist business managers and start-ups to understand their customers and their needs.

The tool aims to achieve the following objectives:

- Allow business managers and start-ups to understand and analyse their customers.
- Steer innovation towards a meaningful and effective investment that matches the customer demand.
- Emphasise the importance of customer integration in the innovation process, especially for services.
- Raise awareness about innovation approaches among start-ups and businesses by promoting customer friendly business models.

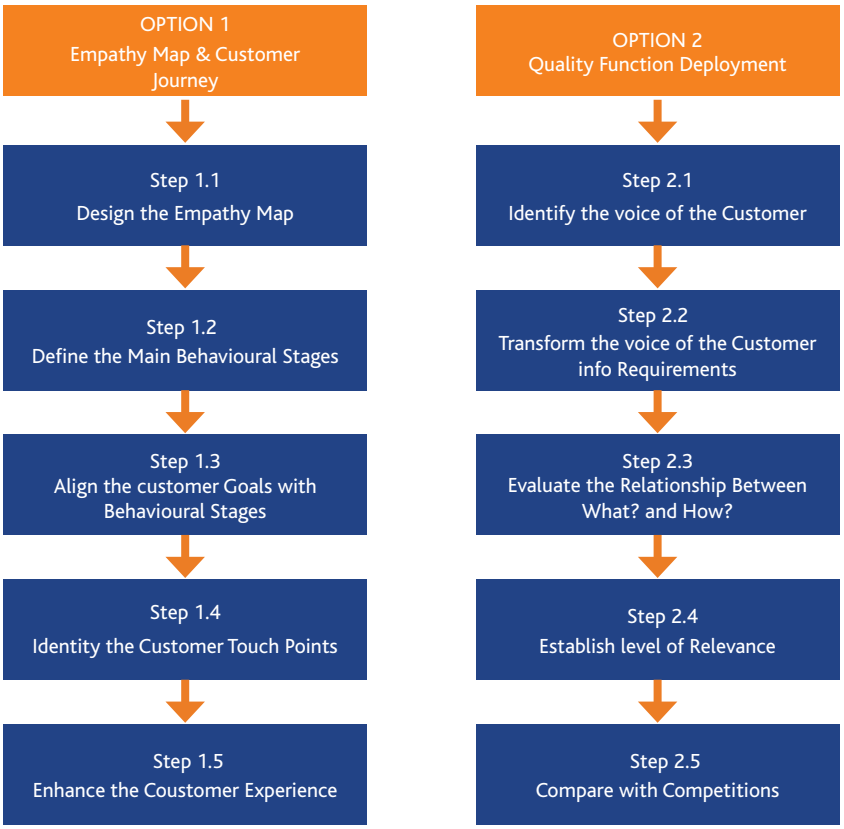
REQUIRED MATERIALS

For a smooth conduction of the workshop, the following material is required:

- Pin board for each team or a wall with tape to hang the templates.
- Empathy canvas.
- Sticky notes with pens.

IMPLEMENTATION GUIDELINES

When applying this tool one can choose one or more of the provided techniques, depending on the company and the offered product. It could be necessary to gather data or do interviews with customers in order to apply these techniques properly.



OPTION 1: EMPATHY MAP & CUSTOMER JOURNEY

The Empathy Map allows one to personify the customer and to understand their feels and wants. By designing the customer journey, one can identify where companies can intervene and influence the customer impression of the product or service, before, during, or after the purchase.

OPTION 2: QUALITY FUNCTION DEPLOYMENT (QFD)

By using the Quality Function Deployment technique the workshop participants can use the customer requirements in order to prioritise the most important product/service characteristics for innovation activities.

But which option should one choose for customer integration in innovation activities?

This question has no direct answer, since it is subject to several factors in order to know which technique is more appropriate to apply. It depends on the product or service being discussed, on its complexity, and on the background of the person conducting the analysis. In general, QFD requires more technical knowledge and is easier to apply to products than to services. Yet, that doesn't mean it is not applicable to services.

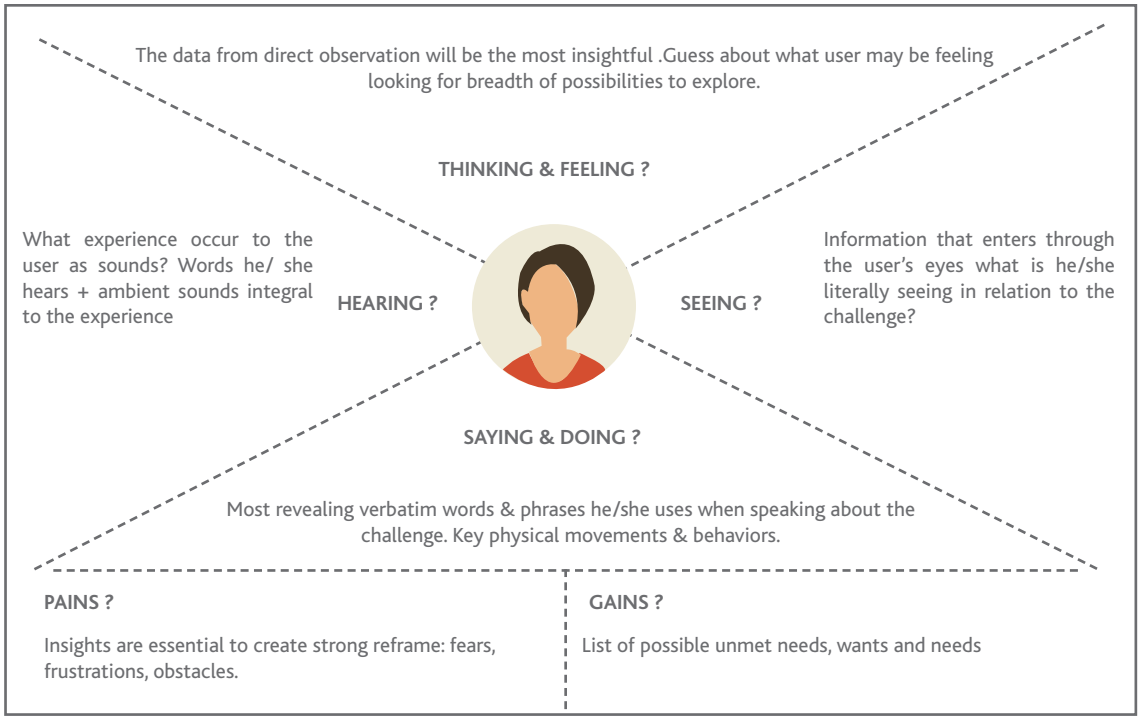
On the other hand, the Empathy Map and Customer Journey require deeper market research and data collection about the customer. However, these are data that the company must have in order to design an offering that matches customer mindset.

OPTION 1: EMPATHY MAP & CUSTOMER JOURNEY

The Empathy Map and the Customer Journey complement each other. The Empathy Map helps to personalise the customer and develop an understanding about their interest and feelings. Afterwards, using the Customer Journey, it can be identified where the customer interacts with the product or service and where the company could intervene in this interaction.

STEP 1.1: DESIGN THE EMPATHY MAP

The Empathy Map is a visual technique to describe customers in detail and very precisely, which helps create sound customer profiles.



The technique should not be used alone. It is a collaborative technique and it is important to meet customers and ask them about their feeling, needs, and preoccupations. Sales and marketing people of the company should be part of the work group completing the Empathy Map. It is important to get as much information as possible from different areas. When the company caters to different types of customers, it is necessary to create one profile for each customer segment. It is not possible to map out ONE profile for ALL customer segments.

In order to make the profile more personalised and lively you can give the customer a name and some demographic characteristics (age, gender, income, marital status, etc.).

The following table provides some guiding questions for each part of the map.

See	Hear	Think & Feel	Say & Do	Pain	Gain
What does the customer see in their environment?	How does the environment influence the customer?	What happens in your customer's mind?	What might the customer say? How do they behave in public?	What is the customer's pain?	What does the customer gain?
Who surrounds them? What types of offers are they exposed to daily? Who are their friends?	What do their friends say? What really influences them and how? Which media channels are relevant and influential?	What is really important to them? Imagine their emotions? What are their dreams and aspirations?	What is their attitude? What could they tell others? Is there a conflict between what they are saying and what they are truly feeling?	What are their biggest frustrations? What are the obstacles to satisfy their needs? Which risks do they encounter?	What do they truly want or need to achieve?

Source: own elaboration

After gaining a good understanding of the customer, it's time to use the Customer Journey to understand all the phases that the customer goes through until they reach the target product or service.

STEP 1.2: DEFINE THE MAIN BEHAVIOURAL STAGES

The stages that the customer goes through until reaching the company's product are different from business to business. Think about the first landing to the eventual purchase. The customer has interests and needs that somehow lead to the first impression or even considering getting a product or a service. Try to take a step back to the incident that stimulates the interests of customer. Take another look at the Empathy Map and keep in mind who the customer is and how they feel.

Let's say that the customer is a young person who wants to enjoy a group activity with friends. This could go as follows:

Nr.	Behaviour
1	Seeing an advertisement about paintball shooting.
2	Discussing the idea with friends and deciding to give it a try.
3	Going online to gain information about possible places and prices.
4	Comparing prices and offers online, checking ratings and comments of others.
5	Going back to friends, discuss the offers, and take a decision.
6	Purchase the service.
7	After the service: Telling friends about the experience.

STEP 1.3: ALIGN THE CUSTOMER GOALS WITH THE BEHAVIOURAL STAGES

In this step one needs to identify the goals of the customer by using the product or service. Then one can put these goals in alignment with each stage of the customer interaction with the product or service. Continuing on from the previous example, this could be as follows:

Nr.	Behaviour	Customer Goals
1	Seeing an advertisement about paintball shooting.	(No intention) but interested in getting attractive ideas.
2	Discussing the idea with friends and deciding to give it a try.	Make sure that everybody shares the interest.
3	Going online to gain information about possible places and prices.	Get enough and clear information in a short time about the offers, the prices, the game, and the venue.
4	Comparing prices and offers online, checking ratings and comments of others.	Validating the offers and finding the most appropriate one.
5	Going back to friends, discuss the offers, and take a decision.	Making sure the offers correspond to everybody's expectations.
6	Purchase the service.	Having a special experience.
7	After the service: Telling friends about the experience.	Maintaining good memories, gaining social recognition.

Source: own elaboration

STEP 1.4: IDENTIFY THE CUSTOMER TOUCH POINTS

A touch point is every time the customer comes in contact with the company's brand – before, during, or after the purchase. Try to map all possible touch points of the customer in details. Make a list of time and place where the contact happens and with whom it happens.

Arrange the touch points into three categories: Before, during, and after the purchase, as in the following table.

Before Purchase	During Purchase	After Purchase
Social media	Store or office	Billing
Ratings and reviews	Website	Transactional emails
Testimonials	Flyer	Marketing emails
Word of mouth	Promotions	Service and support team
Community involvement	Staff or sales team	Online help centre
Advertising	Phone system	Follow-ups
Marketing/PR	Point of sale	Thanks you cards

Source: own elaboration

STEP 1.5: ENHANCE YOUR CUSTOMER EXPERIENCE

Now one should find out at which touch points the interaction is taking place with the customers. Think about the pains of your customers or their dissatisfaction and what can you do to reduce the pain points. Identify optimisation chances. Uncover the hidden needs or increase the points of satisfaction.

OPTION 2: QUALITY FUNCTION DEPLOYMENT

Quality Function Deployment (QFD) is not only a quality technique; it also is an important planning tool that allows taking the "voice of the costumer" (VOC) through product development until market entry. Quality Function Deployment allows us to understand the clients' requirements. This technique transforms the qualitative terminology in which product and service characteristics are described into measurable terms, which the firm can use for designing and redesigning its products and services.

STEP 2.1: IDENTIFY THE VOICE OF THE CUSTOMER (VOC) – WHAT?

QFD starts by establishing objectives (called "What?"), referring to the product development aims. The objectives normally derive from client requests and are called the "voice of the customer". The relative importance of the "What?" is defined by market evaluation using a scoring range from 1 to 5. According to the consumer's criteria, the highest level of significance is marked with a "5" and the lowest value with a "1".

The following table summarises the information about desired characteristics and obtained scores:

Client's requirements (What?)	Importance
....	5
....	3
....	2
.....	4
.....	3

STEP 2.2: TRANSFORM THE VOICE OF THE CUSTOMER INTO DESIGN REQUIREMENTS – HOW?

The next step, after carrying out the "What" list, is the definition of design requirements ("How") for each "What". Here, we are talking about measurable features that will be evaluated in the finished product. An example might be the quantity of sugar ("How?") in a food product, according to a customer's demand for a variety of flavours ("What?").

Design requirements (HOW?)							

STEP 2.3: EVALUATE RELATIONSHIPS BETWEEN "WHAT? AND "HOW?"

However, relations between "What" and "How" are not always 1:1, there are more complex relationships and with varying strength levels. We can use a matrix to show the relations between "What" and "How".

In this matrix, the determinations of the relations will be carried out taking into account 3 strength levels: weak relation, medium relation, and strong relation

1	Weak relation
3	Medium relation
9	Strong relation

		Design requirements (HOW?)			
		...	...	...	
Client's requirements (What?)	Importance				
....	5	3	9	1	
....	3	9	3		
....	2	1	3	1	9
.....	4		3		
.....	3			9	
...	5				1

At this stage in the QFD analysis a first evaluation can be made. An empty column indicates no relationship between the client and design requirements.

STEP 2.4: ESTABLISH THE LEVEL OF RELEVANCE FOR DESIGN REQUIREMENTS

For every column ("How?"), we can multiply the value of importance of "What?" with the weight of the relation. The sum of these values defines the value of relevance of the "How?".

		Design requirements (HOW?)			
		...	...	...	
Client's requirements (What?)	Importance				
....	5	3	9		
....	3	9	3		
....	2	1	3	1	9
.....	1		3		
Relevance		44	63	2	18

The level of relevance of the "How?" provides us with an approximation of the most important design requirements to ensure consumer satisfaction. Here, the table above shows that the design feature with the score of 63 will evidently be of great relevance.

STEP 2.5: COMPARE THE PRODUCT OR SERVICE CHARACTERISTICS WITH COMPETITORS

The methodology of QFD allows us to evaluate the competition through a benchmarking process. This process to identify the design requirements is also known as technical benchmarking. The benchmarking should be carried out by persons responsible for the product design (engineers, consultants, etc.). Here a comparison of technical features with competitors' products is to be done.

In this context, we compare the levels of indicators of design features between the own and competitor's products.

		Design requirements (HOW?)			
		...	...	...	...
Client's requirements (What?)	Importance				
		3	9		
		9	3		
		1	3		
			3		
Relevance		44	63	2	18
Our company now Competitor 1					
Competitor 2					
Competitor 3					
Our company in the future					
Our company in the future					

Here, we can use a scale from 1 to 5 to compare the levels of indicators of design features between the own product and competitor's products.

The aim of benchmarking is to innovate in the area with the highest level of relevance and taking into account the competitive situation of the company.

Considering the background of this design feature, the results of benchmarking could show that the company already has the best product in the market place. In this case, the next step would be the analysis of other highly rated design features within the ranking of relevance.

Practical Example

At present, customers of natural products pay more and more attention to product presentation, taste, negative side effects, or the nutritional content of foods. That is why the company Naturalsalud S.A. must continuously innovate incorporating all these aspects. The aim is to extend markets and to always be one step ahead of the competition. Promoting innovation allows the company to maintain and to improve the own competitive advantages.

Currently, there is a specific natural product on the market to support the human digestive system. This is called Avenavin. The product is based on a combination of different seeds. The seeds have been carefully analysed and the effects were tested in a number of studies. Among the components of Avenavin there is one that belongs to laxative medicines. Furthermore, we can find flax as a mild laxative or wheat germ which is rich in zinc, minerals, vitamins, and protein etc.

With the aim to innovate specific product features, the general manager of the company has taken the decision to implement the Quality Function Deployment (QFD) tool in a workshop. The company's experts in marketing and technology have been invited to take part in this activity.

The first objective of the workshop is to understand client requirements related to the product. Here, the marketing department can contribute with its professional expertise. The first step should be the development of a comprehensive listing of client requirements (voice of the customer – "What?"). To evaluate the level of importance, scores between 1 (not important) and 5 (very important) can be used.

Client requirements (WHAT?)	Importance
Therapeutic value	5
Flexibility of presentation	5
Taste variety	4
Price	4
Fine texture	4
Additional value	3

During the following step we can define the "How?" for every "What?" Here, the focus is on measurable features of the product design. In this context, the production department can contribute with its professional expertise.

Design requirements (HOW?)								
Nr of therapeutic ingredients	Doses	Particle size	Calories	Other therapeutic characteristics	Concentration of sugar	Variety of flavours	Diversity of presentations	Variation formulations

Then, we can evaluate the relations between client requirements and design requirements. However, relations between the "What" and "How" are not always 1:1, there are more complex relations and with varying strength levels.

We can use the following matrix to show the relations. In this matrix, the determinations of the relations will be carried out taking into account 3 strength levels: weak relation (1), medium relation (3) and strong relation (9).

		Design requirements (HOW?)								
Client requirements (WHAT?)	Importance	No of therapeutic ingredients	Doses	Particle size	Calories	Other therapeutic characteristics	Concentration of sugar	Variety of flavours	Diversity of presentations	Variation formulations
Therapeutic value	5	9	9		3	9	9			9
Flexibility of presentation	5		9	3		1		1	9	3
Taste variety	4				3	9		9	3	3
Price	4	9	9	3		9	1	9	9	3
Fine texture	4	9		9		1		3	3	1
Additional value	3					9	3	1	9	

Now for every column ("How?"), we can multiply the value of importance of "What?" with the weight of the relation. The sum of these values defines the value of relevance of the "How?"

		Design requirements (HOW?)								
Client requirements (WHAT?)	Importance	No of therapeutic ingredients	Doses	Particle size	Calories	Other therapeutic characteristics	Concentration of sugar	Variety of flavours	Diversity of presentations	Variation formulations
Therapeutic value	5	9	9		3	9	9			9
Flexibility of presentation	5		9	3		1		1	9	3
Taste variety	4				3	9		9	3	3
Price	4	9	9	3		9	1	9	9	3
Fine texture	4	9		9		1		3	3	1
Additional value	3					9	3	1	9	
	Relevance	117	126	63	27	117	94	92	105	115

The last step is to compare the technical features of the own product with products of competitors (technical benchmarking). Here we can use a scale from 1 to 5 to compare the levels of indicators of design features between the own product and competitors' products.

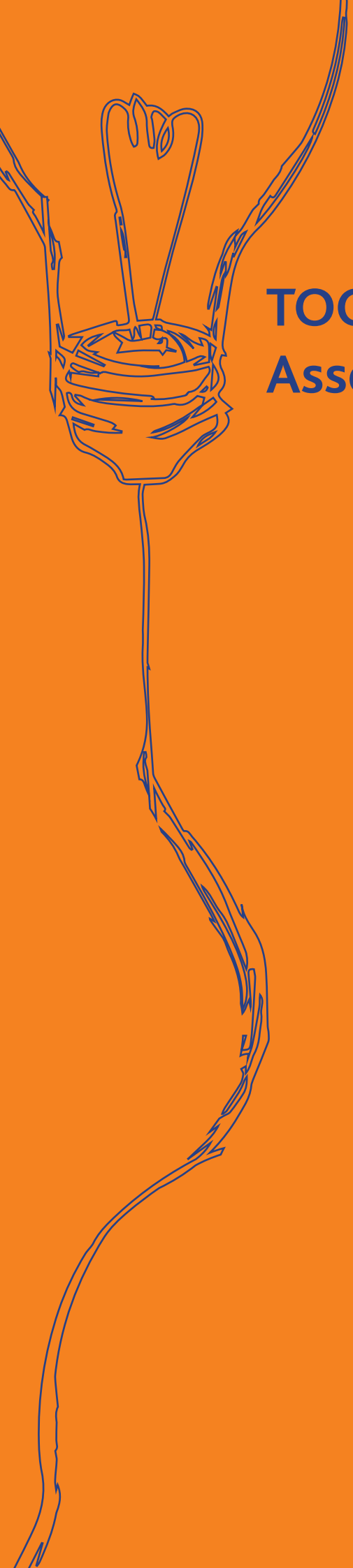
		Design requirements (HOW?)								
Client requirements (WHAT?)	Importance	No of therapeutic ingredients	Doses	Particle size	Calories	Other therapeutic characteristics	Concentration of sugar	Variety of flavours	Diversity of presentations	Variation formulations
Therapeutic value	5	9	9		3	9	9			9
Flexibility of presentation	5		9	3		1		1	9	3
Taste variety	4				3	9		9	3	3
Price	4	9	9	3		9	1	9	9	3
Fine texture	4	9		9		1		3	3	1
Additional value	3					9	3	1	9	
Relevance		117	126	63	27	117	94	92	105	115
Our company now		4	4	3	3	2	5	1	1	2
Competitor 1		4	4	1	3	4	4	1	1	1
Competitor 2		2	2	4	3	3	1	1	1	1
Competitor 3		2	2	3	2	4	2	1	1	3
Our company in the future		4	4	4	3	4	5	1	1	2

The technical benchmarking facilitates innovation processes within highly relevant features.
In conclusion, according to company's house of quality (= QFD), the firm has to focus on the development of a product with optimised doses. The score of 126 clearly shows a high level of relevance.

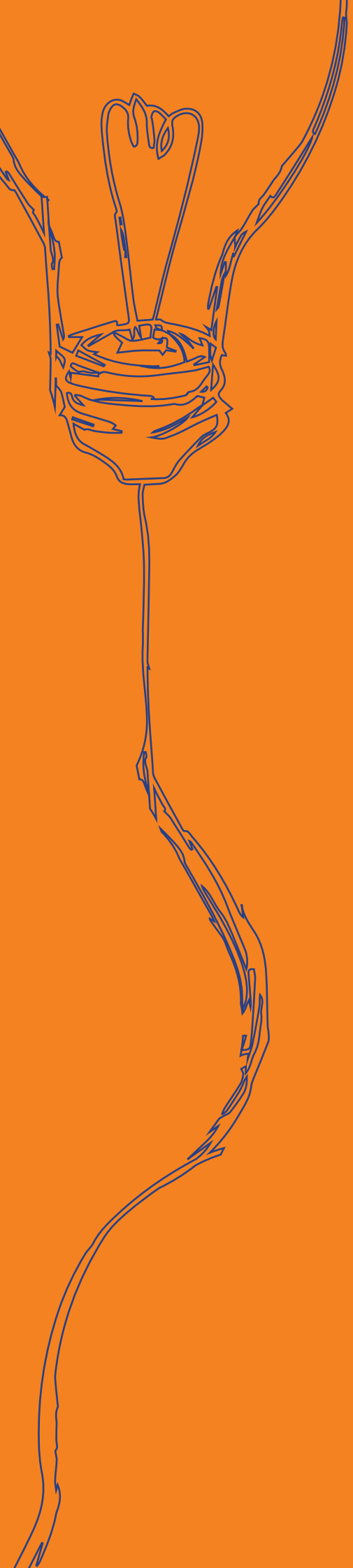
REFERENCES

Dornberger. U. et al. [Ed.] (2012). Managing the Fuzzy Front-End of Innovation. Leipzig.

Dornberger, U. (2017). Manual – Certified Innovation Manager, Market-oriented Product and Service Development. Leipzig.



TOOL 7_Innovation Readiness Assessment



TYPE OF TOOL

This tool provides an integrated framework for assessing the innovation management capabilities of companies based on two main phases: First, a qualitative questionnaire-based self-assessment is undertaken by the company's management to facilitate a critical reflection process on the companies' internal innovation management capabilities. The trainer can help the management through the self-reflection process. Afterwards, a numerical benchmarking is conducted to compare the innovation management capabilities with international leaders in innovation management and allow the identification of focal areas for improvement. Here the role of the trainers is to assist the company by interpreting the results of the assessment.

TOOL IN BRIEF

The innovation readiness self-assessment tool integrates a qualitative self-assessment (Phase 1) as well as a benchmarking process (Phase 2). Phase 1 uses a questionnaire focusing on the company's internal innovation management capabilities and assesses the following dimensions: innovation strategy, innovation organisation and culture, and innovation life cycle management. In Phase 2, companies could use the online platform **IMP³rove** [4] to compare their results with international leaders in innovation management to identify areas to strengthen their own capabilities.

TARGET GROUP

The tool is for internal self-diagnosis purposes of a company and start-ups.

TOOL OBJECTIVES

Companies are often hesitant to address their innovation needs proactively, as they might not be certain about the dimensions of innovation management, the link between innovation management and SMEs performance, as well as potential options to address the firm's needs. Furthermore, a comprehensive assessment of a firm's innovation needs is based on sensitive, company-internal information such as attitude towards innovation, willingness to invest into innovation processes, or attitude and capacity to cooperate. This usually prevents external actors, such as external consulatnts or economic institutes, from undertaking this assessment. The purpose of this tool is to address these two challenges. By introducing simple, questionnaire-based self-assessment techniques, the tool allows the diagnosis of the individual innovation needs of a company.

[4] www.improve-innovation.eu/our-services/assessments/improve-assessment/

The tool aims to achieve the following objectives:

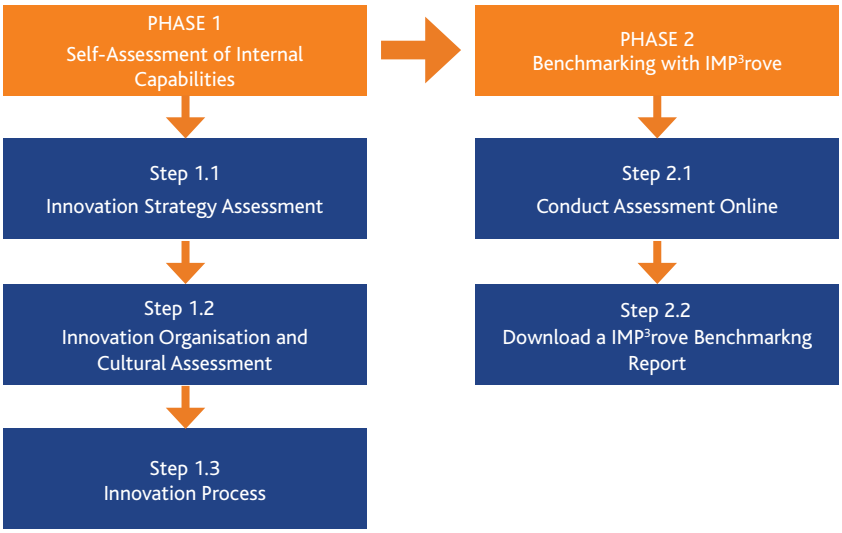
- Stimulate learning and generate a profile of a company's strengths and weaknesses in terms of innovation management.
- Create awareness for the importance of innovation management skills as a driver for growth.
- Provide strategic guidance and support organisational change.
- Provide a basis to compare company's performance with innovation leaders to allow benchmarking

REQUIRED MATERIALS

For implementing the tool a questionnaire guideline for self-assessment (online- or paper-based) and the online-based questionnaire provided by the IMP³rove platform are required.

IMPLEMENTATION GUIDELINES

The tool can be implemented in two phases; each of them consists of several steps. Phase 1 depicts questions that can help the company's management to reflect itself and get prepared for Phase 2, in which the company should conduct the online assessment.



PHASE 1: SELF-ASSESSMENT OF INTERNAL INNOVATION CAPABILITIES:

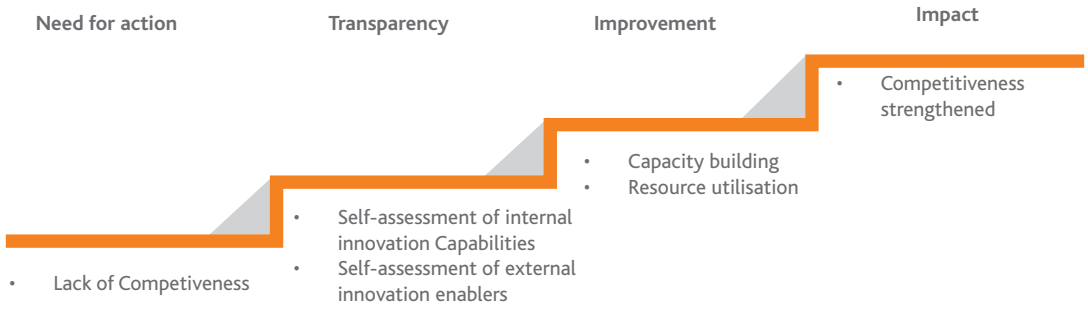
The first phase focuses on the internal innovation management capabilities of an enterprise. It covers the following dimensions:

- **Innovation strategy:** What are the most promising areas for strategic improvement of a company's innovation strategy?
- **Innovation organisation and culture:** How to align innovation organisation and culture with the business strategy?
- **Innovation processes:** Which innovation processes along the entire innovation life cycle are causing inefficiencies?

PHASE 2: BENCHMARKING WITH IMP³rove

In the second phase, companies use the online platform IMP³rove to get a sober and clearly-structured picture of the own innovation management performance in comparison to the competitors' performance. The process is based on an online questionnaire comprising 47 questions. Once this questionnaire is completed, the company can request a customised, automatically-generated IMP³rove Benchmarking Report.

The following figure depicts a roadmap of applying innovation assessment using IMP³rove.



Based on IMP³rove, 2017

PHASE 1: SELF-ASSESSMENT OF INTERNAL INNVATION CAPABILITIES

The first phase is assessing the internal innovation capabilities of a company. In a simple, questionnaire-based process, companies can conduct a self-assessment and obtain insights into their strengths and weaknesses.

The trainer should assist the management of the company by answering the questions in this phase as an outsider that can provide a relatively more objective perspective for the innovation status of the company. The questions and the discussion emerging out of them should facilitate the self-reflection process regarding the disposition towards innovation in the company. This would facilitate the second phase on the other hand and allow for a proper benchmarking.

The trainer can summarise the discussion of each question. The company can use the answers as a self-assessment and for conducting the online-assessment in the second phase as well.

STEP 1.1: INNOVATION STRATEGY ASSESSMENT

The company's vision describes the overall aim that is guiding the company. It is a picture from the future that describes the direction of a company. In SMEs, the vision is often not formulated but rather in the mind of the entrepreneur. As a result, the dissemination of the vision, and therefore its transformative power, are often limited (EU, 2012). Good vision statements share common features. They should be positive and motivating, written in present tense, short, challenging, and allow people to relate to it.

Examples of vision statements are the following

- Nike: Bring inspiration and innovation to every athlete.
- Volkswagen: Become a world-leading provider of sustainable mobility.
- Nestle: Make our products tastier and healthier choices that help consumers care for themselves and their families.
- Google: Organise the world's information and make it universally accessible and useful.

The company's strategy is based on its vision. Its development process can be supported in a three-step process (EU, 2017).

1. Clarify the benefits of a strategy for the company's ambition to develop a vision statement and strategy. Relate the answer to the company's current competitive position and stress the need to think ahead.
2. Develop a positive view of the future and imagine a plan of getting there.
3. Describe the strategy and document it.

QUESTIONS

Conducting the self-assessment, one should use the following questions to reflect on the innovation strategy prevailing in the respective organisations.

INNOVATION VISION

- Does your company have a clear vision of the future concerning innovation?
- If yes, could you name attributes that describe that vision best?

INNOVATION STRATEGY AND ATTRIBUTES

- Does your company have an innovation strategy?
- If yes, could you name attributes that describe that strategy best?

DISSEMINATION OF THE STRATEGY

- Is the strategy communication in your company bottom-up or top-down?
- Do the employees in the hierarchical levels of your company understand and implement the strategy?

STEP 1.2: INNOVATION ORGANISATION AND CULTURE ASSESSMENT

A good vision and strategy result in a conducive internal innovation environment. Consequently, this phase of the company's self-assessment focuses on

- Roles and responsibilities
- Organisational structure
- Organisational culture and climate.

Each of the company's staff needs to have a clear idea of how to contribute to the internal innovation culture. Trust is needed and new ideas need to be welcome. Internal innovation leaders must be identified and encouraged to take risk. The strategies to create an innovation culture are multifaceted and a prerequisite for a functioning innovation process management.

QUESTIONS

The following questions can be used to reflect the internal innovation organisation and culture.

WILLINGNESS TO INNOVATE

- Does your staff have a positive attitude towards innovations and are open for new, unexpected ideas?
- Does your staff have the ability to break through conventional thought patterns?
- Is your staff open to learning new methods?

CAPACITY TO COOPERATE

- How do your customers assess your ability to innovate successfully?
- How do your suppliers assess your ability to innovate successfully?

INTENSITY OF INNOVATION PARTNERSHIPS

- With how many external partners do you discuss innovation-related issues?
- With how many of these partners did you cooperate in projects?
- How many of your staff is involved in cooperation projects with external actors?

INFORMAL COOPERATION WITH EXTERNAL PARTNERS

- How are informal partnerships supporting your idea management?
- How are informal partnerships supporting the introduction and improvement of your product, process, organisation, or business model development?

STEP 1.3: INNOVATION PROCESSES

In order to assess a firm's ability to conduct this process, the next step of the self-assessment focuses on the following aspects:

- Idea management
- Product / service / business model / organisational or process development
- Launch and continuous improvement.

QUESTIONS

The following questions can be used to reflect on the internal innovation processes:

TIME TO MARKET

- How long does it typically take to bring an idea for a new product or service to the market?

SUCCESSFUL CHANGES

- How many innovation projects did you initiate that focused on establishing small changes in products, services, processes, or business models?
- How many of these projects have been finalised successfully?
- How many innovation projects did you initiate that focused on establishing radical changes in products, services, processes, or business models?
- How many of these projects have been finalised successfully?

FEEDBACK LOOPS

- Which of the following groups are consulted to generate new ideas for innovation or to receive proposals for improvement?
    - Supplier
    - Purchasing department
    - Customers
    - Marketing department
    - Product development department
    - Universities and R&D institutions
    - Patent experts
    - Network partners

INNOVATION DEVELOPMENT PROCESS

- Is the product innovation process of your company formalised on the basis of clear phases or steps?
- Is the process innovation process of your company formalised on the basis of clear phases or steps?
- Is the business model innovation process of your company formalised on the basis of clear phases or steps?

CUSTOMER INFORMATION

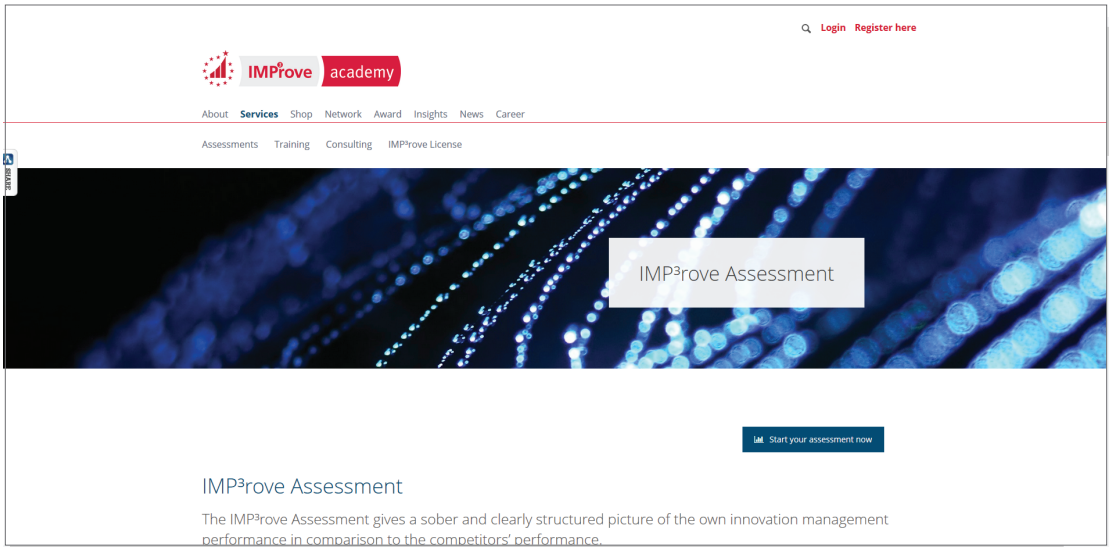
- How often per year do you receive and systematically analyse customer data and customer feedback?

CONTINUOUS IMPROVEMENT

- Did you define indicators to measure innovation success?
- How do see your performance in regards to the following innovation success parameters:
    - Time to market
    - Time to break even
    - Development costs
    - Time from the presentation of a new idea by one staff member to the selection and investment of resources into that idea
    - Time from receiving feedback from customers to implementing that feedback

PHASE 2: BENCHMARKING WITH IMP³ROVE

In the second phase, companies use the online platform IMP³rove to receive a comprehensive, external assessment of a company's innovation management performance. Based on the results of an online questionnaire with 47 questions, companies get a clearly structured picture of their own innovation management capabilities in comparison with their competitor's performance.



Source: https://www.improve-innovation.eu/

STEP 2.1: CONDUCT AN ASSESSMENT ONLINE

The assessment is structured to analyse the following levels of an effective innovation management system:

- Innovation strategy
- Innovation organisation and culture
- Innovation life cycle management
- Innovation enabling factors
- Innovation results.

Using the online assessment questionnaire is free of charge. Please go to the following webpage and register first to start the assessment:

- www.improve-innovation.eu/our-services/assessments

STEP 2.2: DOWNLOAD AN IMP³ROVE BENCHMARKING REPORT

Once this questionnaire is completed, the company can request a customised, automatically generated IMP³rove Benchmarking Report. Companies can use it to compare their own innovation management capabilities and performance against the average results of a self-selected set of direct or indirect competitors. The IMP³rove Database encompasses more than 5000 datasets and is unparalleled in covering industries, size classes, and geographies. The selection criteria are:

- Industry sectors
- Countries
- Size and age of the companies to compare with.

The report provides information on the following aspects:

- A comparison of own performance with the average and that of the growth champions (the 10% fastest growing companies in the sample) based on the world's largest in-depth innovation management benchmarking database.
- Customisation of the benchmarking sample based on company size, age class, geographic footprint, and NACE industry [5] classification.

This benchmarking has the advantage that the IMP³rove database includes a lot of Arabic companies in general and Egyptian enterprises in particular, since the platform is active in the Arab world. This assures that the resulting comparison is reliable and reasonable. Moreover, the questionnaire and the results are available in 10 different languages, including Arabic.

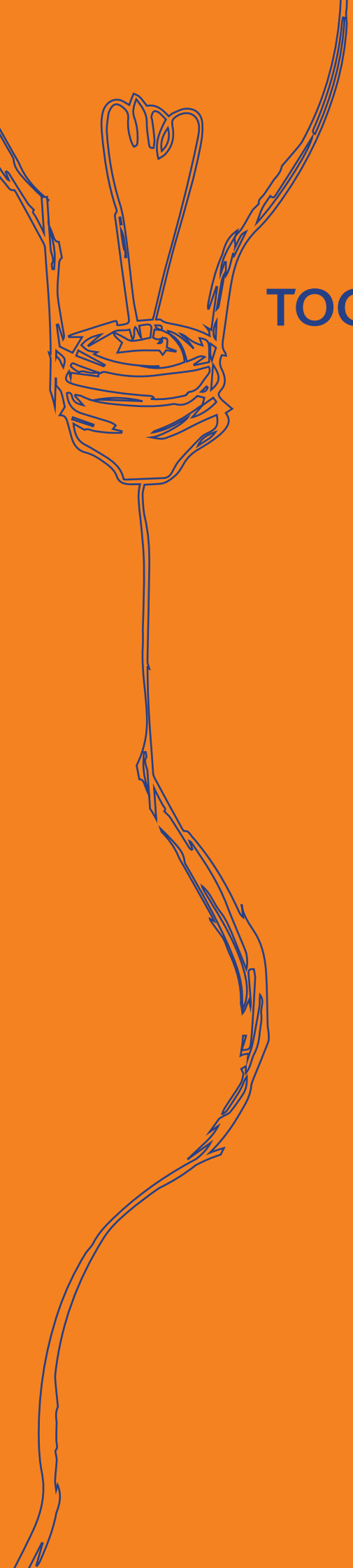
REFERENCES

Dietrichs, E., Engel, K. and Wagner, K. (2006). Assessment of Current Practices in innovation Management Consulting Approaches and Self-Assessment Tools in Europe to Define Requirements for Future "Best Practices". Europe INNOVA Paper 2, Luxembourg.

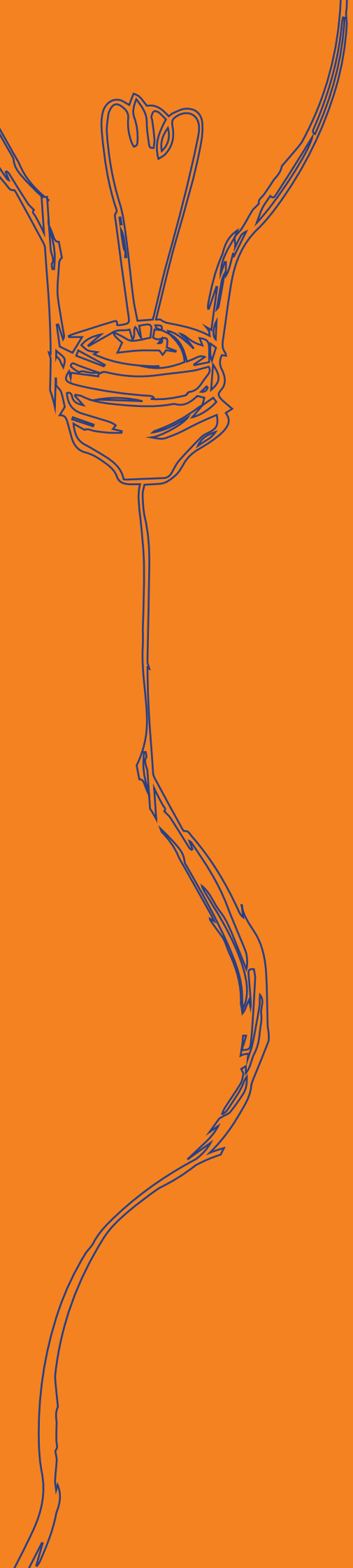
European Union (EU). (2012). IMP³rove: HIGH-IMPACT INNOVATION MANAGEMENT Enterprise and Industry Consulting services for SMEs. Europe INNOVA Paper 18, Luxembourg.

IMP³rove Academy (2015). IMP³rove Innovation Management Support Services in Hungary. Accessible via: https://www.improve-innovation.eu/wp-content/uploads/2015/03/IMP³rove-Services-in-Operation-Program-Hungary.pdf

[5] The Statistical classification of economic activities in the European Community, the term NACE is derived from the French Nomenclature statistique des activités économiques dans la Communauté européenne.



TOOL 8_Product Clinic



TYPE OF TOOL

The tool can be implemented in the form of a workshop. The workshop should be conducted for one individual company (in-house). Participants can work individually, yet it is highly recommended to form and work in teams. Recommended size of teams is 2-4 members. It is highly recommended that departments of production and marketing are represented. The tool might be time-consuming, depending on the sector and the company. Implementation could vary from a day to several weeks. Yet, the tool principles could be applied and comprehended in one day. Companies can later on reapply the tool extensively.

TOOL IN BRIEF

The product clinic provides a systematic approach to analyse products of competitors. Innovation does not require developing a product by following the same steps that someone else has already taken. Yet companies can learn from their competitors by examining their products carefully and use the gained results for own innovations.

TARGET GROUP

Business start-ups and companies that want to ensure the competitiveness of their products on the market.

TOOL OBJECTIVES

Innovation can be driven by the demand for new products or services by customers or by the competition on the market. Therefore, companies can learn much more from their competitors than they think. Learning from competitors is a further source of innovation that one should consider in a more globalised world.

The tool aims to achieve the following objectives:

- Guiding business start-ups and companies to develop competitive products and services.
- Showing business start-ups and business managers new methods for innovation with focus on the product's components.
- Development of a new product design on the basis of the identified best solutions on component/ function level from competitors.
- Raising awareness of innovation approaches among business start-ups and companies.

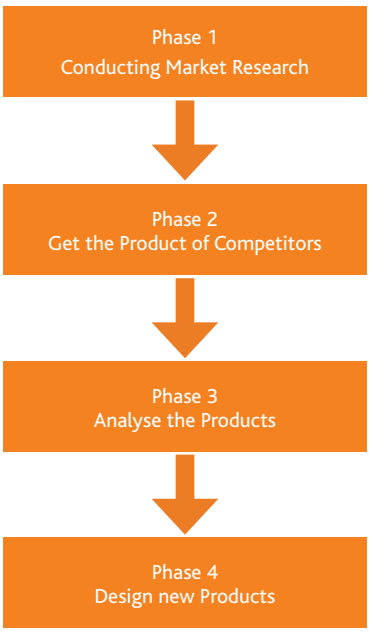
REQUIRED MATERIALS

For a smooth conduction of the workshop, the following material is required:

- Pin board for each team or a wall with tape to hang the templates
- Template: Benchmarking table
- Sticky notes with pens.

IMPLEMENTATION GUIDELINES

The tool can be implemented in four phases:



PHASE 1: CONDUCTING MARKET RESEARCH

The first phase aims to identify competitor products.

PHASE 2: GET THE PRODUCTS OF COMPETITORS

In the second phase, the most important competitor products have to be selected and purchased.

PHASE 3: ANALYSE THE PRODUCTS

The third phase aims to identify the best solutions on the component/function level.

PHASE 4: DESIGN NEW PRODUCTS

Finally a new product is designed based on the best solution identified in Phase 3 above.

PHASE 1: CONDUCTING MARKET RESEARCH

At the beginning, the goal is to analyse the available products on the market in order to spot a gap or potential to innovate. Thus, the company must conduct a market research and identify all the available products from the competitors.

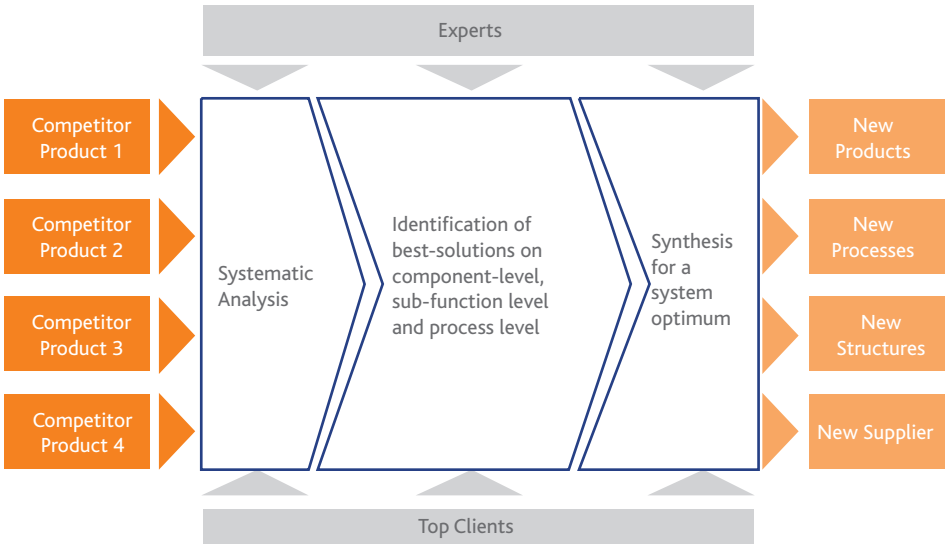
Depending on the market segments the company is working in, a niche market or a market for consuming products, it might not be easy to spot all the available products. Yet it is important to keep in mind that the goal from this market research is mainly to identify the products and their features in order to use as benchmarking later on. Looking at other international markets that the companies aren't targeting at the moment is highly recommended. Companies can use old market research that they conducted, or they need to conduct a fast one during this workshop.

PHASE 2: GET THE PRODUCTS OF COMPETITORS

After listing all the products from competitors, companies must filter them by excluding highly similar ones, since they don't need to purchase or analyse the same features twice. In order to systematically analyse functions and components of a product they have to buy the respective products of the competitors.

PHASE 3: ANALYSE THE PRODUCTS

The products should be unpackaged and separated into parts. After a deep analysis of the strengths and weaknesses of each component or function the best solution will be identified. In other words, a technical benchmarking on the component/function level has to be implemented. In this phase experts and/or top customers can be incorporated in the analysis.



Source: own elaboration

PHASE 4: DESIGN NEW PRODUCTS

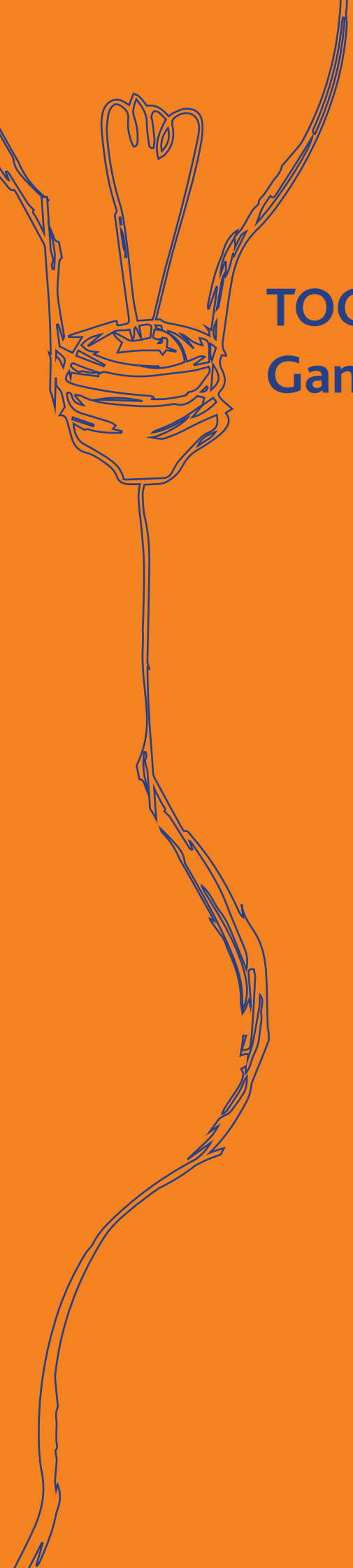
Based on the best solution identified in Phase 3, the workshop participants can design a new product combining top components/functions from the own product with those from competitors. The result of the product clinic process can be summarised in table as presented below:

Component/Sub-function/Process	Own Product	Product of Competitor 1	Product of Competitor 2	Product of Competitor 3
Component A	X			
Component B		X		
Component C		X		
Component D			X	
Component E				X
Component F			X	
Component G	X			

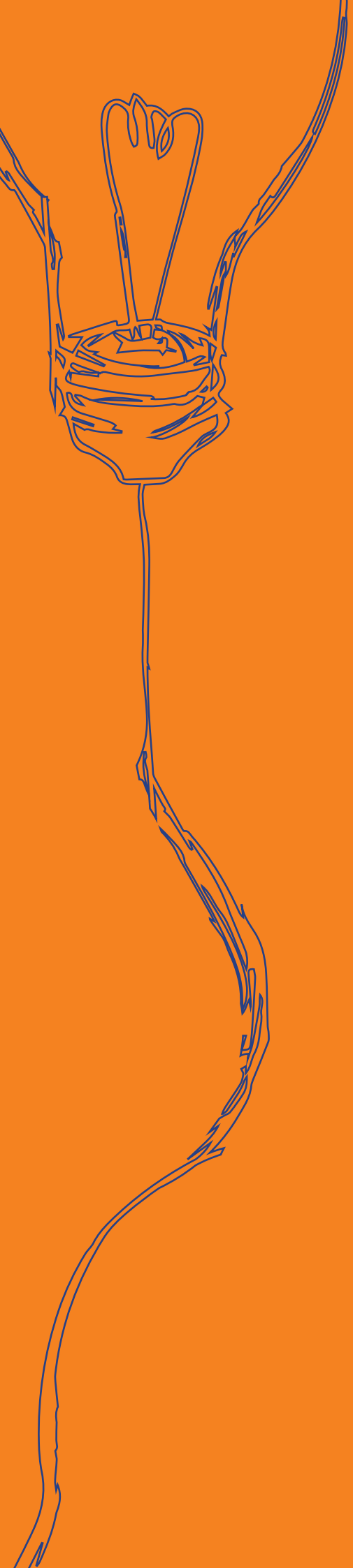
The table above represents a design guide that the company can use for starting a product development process.

REFERENCES

Dornberger, U. (2017). Manual – Certified Innovation Manager, Market-oriented Product and Service Development, Leipzig.



TOOL 9_Business Simulation Game: The Wallet Project



TYPE OF TOOL

The tool can be implemented as an activity. It will help participants to think customer-oriented through iterative discussions and product designing. Participants must work in 2-persons teams. The expected time of implementation is about 2 hours.

TOOL IN BRIEF

Design thinking is a process that should be completely customer-oriented. For that purpose one can use the Wallet Game to teach participants how to understand customer needs and react to them. With this aim in mind, teams of two people must be formed, in which the first one plays the role of the customer and the second tries to design the product that satisfies them perfectly.

TARGET GROUP

This tool addresses students, university researchers, start-ups, and small companies. It supports them in thinking about and designing customer-oriented products and services.

TOOL OBJECTIVES

The Wallet Game gives people an overview of the design thinking process in a relatively short time. It teaches them how to react to human needs and develop empathy for them.

The tool aims to achieve the following objectives:

- Allowing participants to experience the process of design thinking at every stage.
- Teaching students how to be expedient about approaching customer needs.
- Pushing creativity of participants by learning different types of thinking patterns.
- Raising awareness about innovation approaches and creative thinking methods among students and researchers.

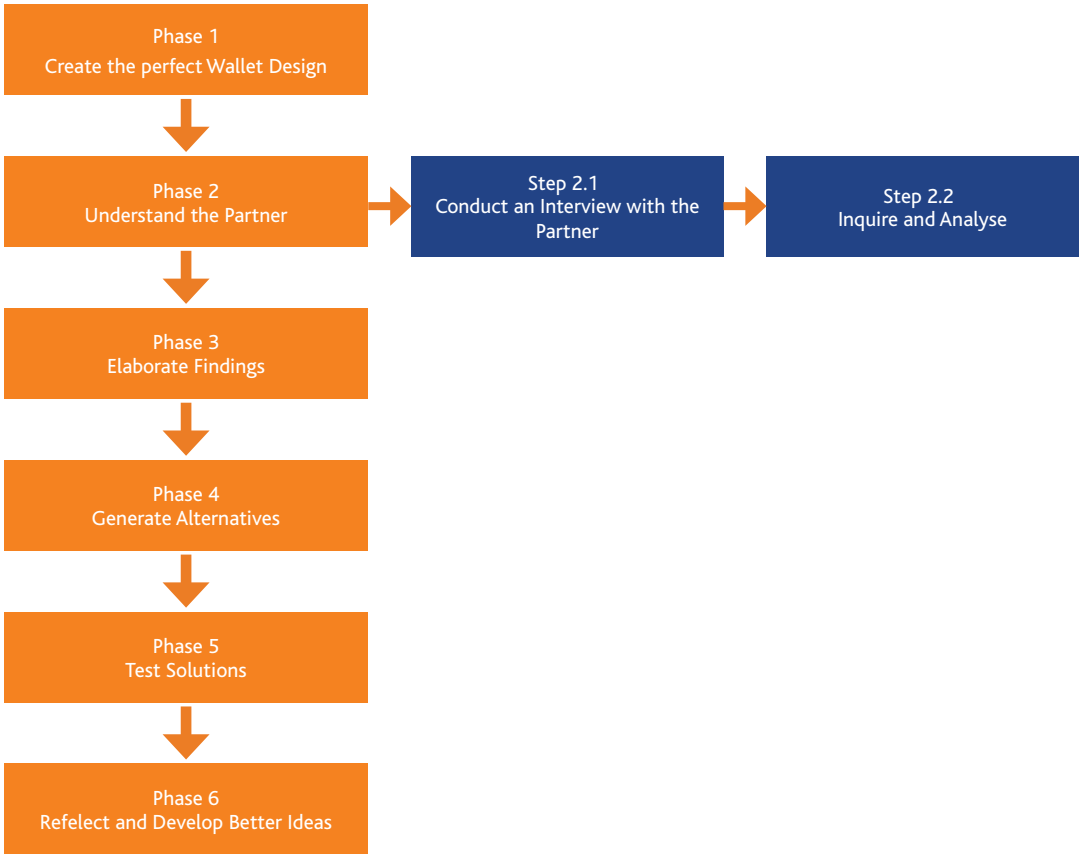
REQUIRED MATERIALS

For a smooth conduction of the workshop, the following material is required:

- Printouts of the Wallet Game with pens in different colours.
- Stopwatch.
- A sound system for playing music is an advantage.

IMPLEMENTATION GUIDELINES

The tool was adapted from the description in the Meles Project Partnership (2016). This tool is implemented in six different phases; each of them consists of several steps, as outlined below



PHASE 1: CREATE THE PERFECT WALLET DESIGN

The first phase aims at pushing the participants to start intuitively. Most of them will start working according to their own point of view and understanding.

PHASE 2: UNDERSTAND THE PARTNER

In this phase, participants should start communicating with their partner (customer) trying to understand what their needs are, what they would prefer, and how they would be content.

PHASE 3: ELABORATE FINDINGS

After getting in contact with the customer, participants should try to comprehend the complaints and wishes of the customer and grasp his perception.

PHASE 4: GENERATE ALTERNATIVES

It is time to activate the creative thinking process and develop tailored solutions for customers, taking into account their needs and the aspects that would increase their satisfaction.

PHASE 5: TEST SOLUTIONS AND ASSESS RESULTS

Participants should present their solutions and get feedback from customers. Critics and comments from the partner will help to find the optimal solutions.

PHASE 6: REFLECT AND DEVELOP BETTER IDEAS

Participants should consider the feedback they got from the partner and should modify the design accordingly.

Important before starting:

- In this tool a wallet will be designed. However, it is also possible to consider designing other products.
- Use the stopwatch for each phase and make sure that it is visible for all participants. Be strict with the time.
- Participants are going to work in pairs. Some phases will be divided into two sessions, since the participants are going to switch the roles.
- Use the printouts that are provided

PHASE 1: CREATE THE PERFECT WALLET DESIGN

Organise the participants in pairs. It does not matter if they are acquaintances or not. The results will be interesting either way. In each team one of the participants has to design a wallet according to the wishes of the other. However, don't tell the participants that in the first phase. Share it with them in the second one.

Tell the participants to design the ideal wallet at the beginning according to their wishes, without interacting with their partners. The goal of this step is to highlight the difference between a self-focused approach and a customer-focused one. Do not play music during this phase, so that the participants notice the difference later on and the seriousness of the atmosphere.

Be a bit impulsive. Use phrases like: "Okay, let's get started. Go ahead and design the perfect wallet".

Recommended time is 3 minutes.

PHASE 2: UNDERSTAND THE PARTNER

Now tell the participants to start working in their teams. The designer of the wallet should start talking with their partner and "interviewing" them.

Communicate clearly with the participants that they have to create the perfect design for the partner. Therefore, they need to start collecting information about the wishes of the partner. This phase consists of two steps. Make sure to switch the roles after each step.

STEP 2.1: CONDUCT AN INTERVIEW WITH THE PARTNER

Participants can ask their partners to go through their wallets, check their contents and think about the most important functions of the wallet for them. What bothers them about it and what makes them happier? In this step participants should try to know what their partner has in their wallet and how. After the first interview reverse the roles.

Recommended time is 8 minutes (2 sessions of 4 minutes).

STEP 2.2: INQUIRE AND ANALYSE

In order to grasp the perception of the partner ideally we should try to develop empathy for the partner. Tell the participants that, when they ask questions, to try to understand the reasons behind the partner's statements. They should not be shy to ask WHY. It's not the wallet that really matters. Discover the things that your partner cares about. This step does not aim to know how the partner uses that wallet but why. Then reverse roles-

Recommended time is 6 minutes (2 sessions of 3 minutes).

PHASE 3: ELABORATE FINDINGS

Now tell the participants to try to reframe the problem. They should summarise the results and scrutinise the statement of the partners. Participants should conclude the wishes of the partner as well as the insights they could capture. Wishes represent the direct and indirect expressions the participants made about the goals of using the wallet.

Insights are additional attributes to the wallet that could leverage the satisfaction of the customer. The interviewer should try to derive them from the interview with the partner. Participants can use quotes to back up their ideas.

Recommended time is 3 minutes.

PHASE 4: GENERATE ALTERNATIVES

At the beginning of this phase, the participants have to rephrase the problem, since they now understand it better than at the beginning. Now participants should draw several possible solutions for the problem. Ask them to be creative and think out of the box. It is not the right time to be judging. They should let their imagination take them to any place where they can solve the problem of the participant.

Motivate the participant to come up with as many ideas as possible. The purpose of this phase is to find solutions and not necessarily to design the wallet. Thus, participant may use verbs and statements to describe the solutions as well.

Recommended time is 5 minutes.

PHASE 5: TEST SOLUTIONS AND ASSESS RESULTS

Now it is time to share the solutions with the partner and to assess their impressions concerning them. Tell the participants to listen carefully to the partner and make notes about their feedback. They should not try to defend their ideas, but to understand why the partner interpreted them in that way. For the last time, they should try to capture the wishes and feelings of the partner. Don't forget to ask the participants to switch!

Recommended time is 10 minutes (2 sessions of 5 minutes).

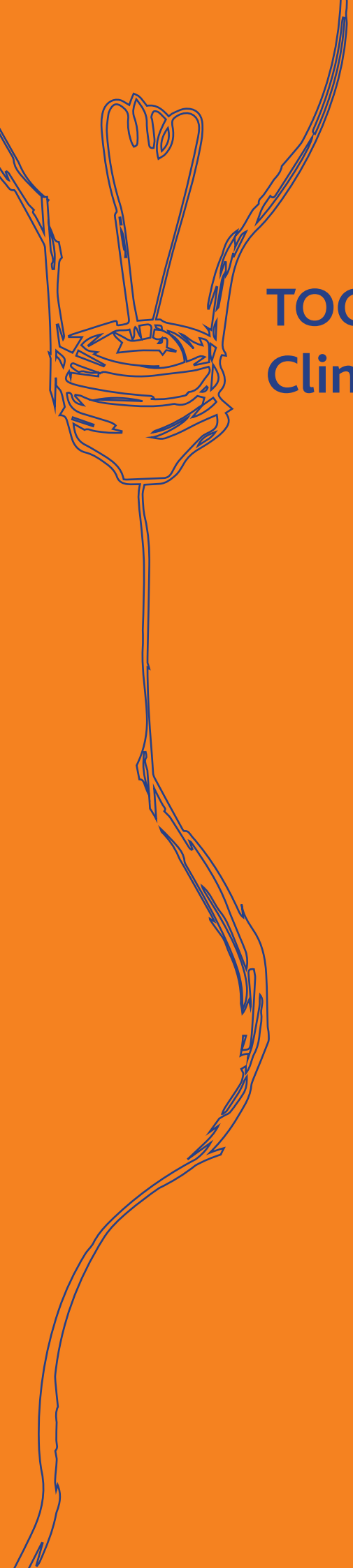
PHASE 6: REFLECT AND DEVELOP BETTER IDEAS

Last but not least, participants should take the partners feedback into consideration and improve the design accordingly. At the end, each participant can present the final results.

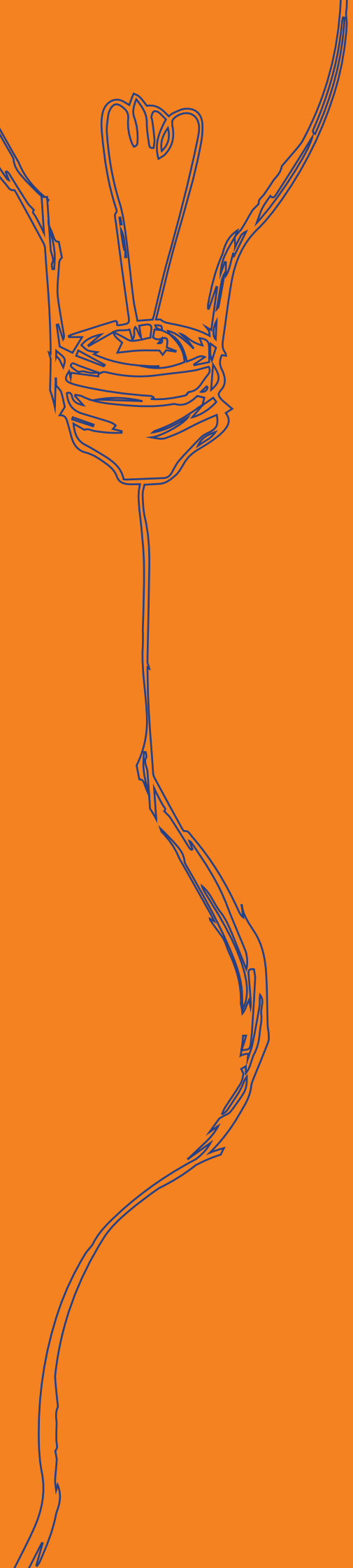
Recommended time is 3 minutes.

REFERENCES

Meles Project Partnership (2016). E-Book (http://meles-project.eu/files/ebook.pdf). Wallet Project.



TOOL 10_Business Start-Up Clinic



TYPE OF TOOL

The tool can be implemented in form of a workshop. The workshop can be conducted for one individual start-up team (in-house) or for a group of start-up teams (5-10). Participants can work individually, yet it is highly recommended to form and work in teams. Recommended size of teams is 2-4 members.

TOOL IN BRIEF

Business start-up clinic provides start-ups teams, students, and researchers who have business ideas with the exact steps that they should follow in order to elaborate the idea into a working business model. It can unlock a lot of advantages and disadvantages of the business idea and will give a solid business model as an output, which can be the foundation for developing a business plan or presenting the ideas for others.

TARGET GROUP

Business start-ups, students, researchers, and innovators can use this tool to turn their plain ideas into a solid business model.

TOOL OBJECTIVES

Innovative ideas are worthless if they can't be reflected with the appropriate business model. Business Start-Up Clinic, just as the name says, is a tool that enables start-ups to turn business ideas into successful business models with an innovative approach.

The tool aims to achieve the following objectives:

- Guiding business start-up teams through the process of developing a business model out of a business idea.
- Entrenching the importance of innovation principles as an essential part of developing a business model.
- Raising awareness about the importance of entrepreneurship and innovation among students and researchers.

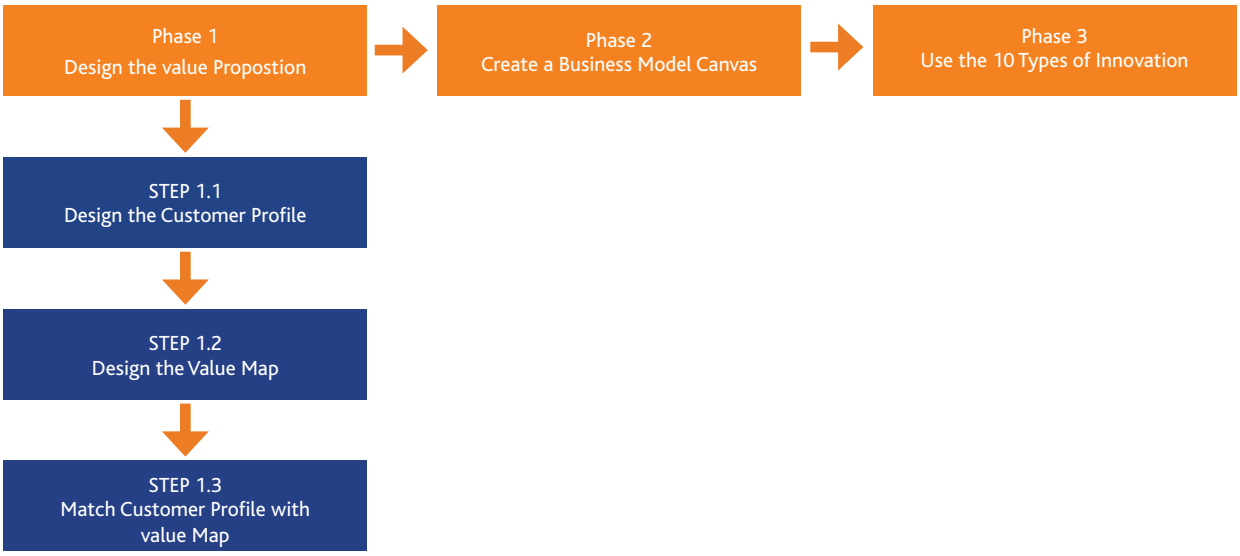
REQUIRED MATERIALS

For a smooth conduction of the workshop, the following material is required:

- Value proposition canvas template for each team.
- Business model canvas template for each team.
- Pin board for each team or a wall with tape to hang the templates.
- Note stickers with pens to fill in the business model canvas.
- An overview of the 10 Types of Innovation for all the teams.

IMPLEMENTATION GUIDELINES

This tool can be implemented in three phases; each of them consists of several steps.



PHASE 1: DESIGN THE VALUE PROPOSTION

In the first phase, the goal is to understand customer demand and to design the respective value proposition.

PHASE 2: CREATE A BUSINESS MODEL CANVAS

Creating a business model canvas that covers all essential parts of a business model is the objective of the second phase.

PHASE 3: USE THE 10 TYPES OF INNOVATION TO ENHANCE THE BUSINESS MODEL

At the end, participants will check the 10 Types of Innovation and try to apply them to the business model to create added value.

PHASE 1: DESIGN THE VALUE PROPOSITION

Value proposition design means to organise information about what customers want in a simple way that makes the patterns of value creation easily visible.

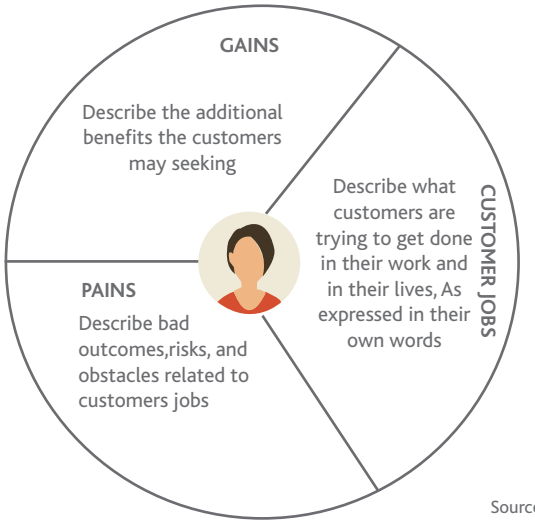
The Value Proposition Canvas has two sides:

- Customer Profile: To clarify your customer understanding
- Value Map: To describe how you intend to create value for that customer.

The main idea of this phase is to create a value proposition that fits well with customer characteristics that one can assume, observe, and verify in the market.

STEP 1.1: DESIGN THE CUSTOMER PROFILE

The Customer Profile describes a specific customer segment in a business model in a more detailed way. Following the approach by Osterwalder et al. (2014) one could differentiate here between: customer jobs, pains, and gains.



Source: modified from Osterwalder et al. (2014)

CUSTOMER JOBS

Customer jobs describe the things the target customers are trying to get done in their work or in their life. Here we can differentiate between several types of jobs:

- Functional jobs: when customers want to complete a specific task.
- Social jobs: how customers want to be perceived by others.
- Personal/emotional jobs: when customers seek a specific emotional state.
- Supporting jobs: when customers act as co-creator of value, transmitter of value.

Sometimes a combination of several types of customer jobs can be identified in the market in a specific customer segment.

CUSTOMER PAINS

Customer pains describe anything that hinders a target customer using a new product or service on the market. Here one can differentiate between undesired outcomes, obstacles, and risks:

Undesired outcomes

Here we can differentiate between:

- Functional level: a solution doesn't work.
- Social level: customer looks bad doing this.
- Emotional level: customer feels bad doing this.

Obstacles

There can be a lot of obstacles related to the use of a new product or service in the market. One very important obstacle is related to the time the customer has to invest in using the new product or service. Another obstacle can be related to getting access to the new product or service.

Risks

Risks are related to negative consequences for the customer, e.g., customer might lose credibility using a new service or product.

CUSTOMER GAINS

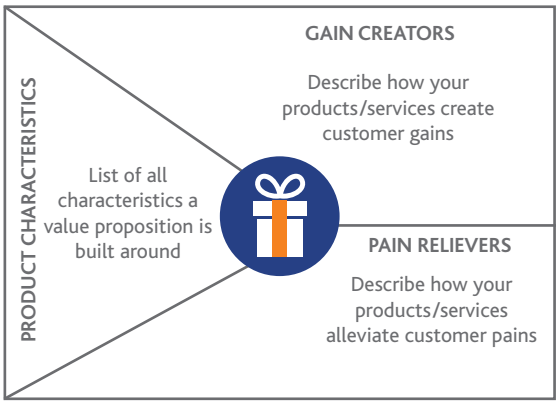
Customer Gains can be translated into additional benefits the target customer may want. These additional benefits are either desired by the customers (it means directly expressed) or they represent a more latent demand. Here the company would surprise the customer when they respond with a new product or service. Once again one can distinguish different types of customer gains:

- Social gains
- Positive emotions
- Cost savings.

In the development process of a customer profile one should always focus on the 3 to 5 most important customer jobs, pains, and gains.

STEP 1.2: DESIGN THE VALUE MAP

The Value Map presents how a company intends to create value for the target customers. It is a perfect tool to describe the value proposition in more detail. Following the approach by Osterwalder et al. (2014) one could differentiate here between: product/service characteristics, pain relievers, and gain creators.



Source: modified from Osterwalder et al. (2014)

PRODUCTS/SERVICE CHARACTERISTICS

It represents a list of all the product/service characteristics the customers can see in the "shop window" of the company. In order to structure this listing one could differentiate between basic and performance characteristics:

Basic characteristics

- "Must have"
- Not mentioned by the clients
- The supplier does not advertise them
- Represent a market "threshold".

Performance characteristics

- Essential decision-factors for the customer
- Directly compared to the ones of the competitors
- Directly related to the customers' satisfaction
- Clients are disappointed if the functionality or quality declines.

Here it is important to list especially the most important performance characteristics.

PAINS RELIEVERS

Pain relievers describe how exactly the new product/service alleviate specific customer pains. Here it is important to show how the company is eliminating or reducing all the barriers the customer could have in using the new product or service. Companies should focus on pains that matter to customers, in particular extreme pains, because it is very difficult for a company to provide pain relievers for every pain identified in the customer profile. Thus, one should provide solutions for only few extreme pains but they have to be alleviated extremely well.

GAIN CREATORS

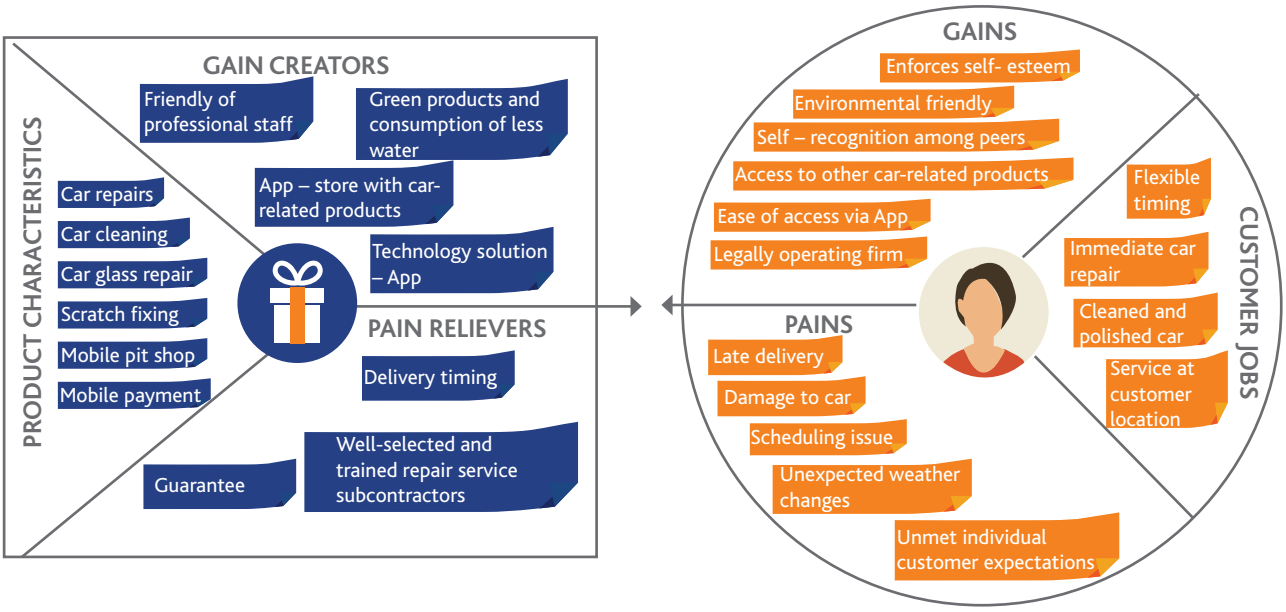
Gain creators describe how a new product/service creates additional customer benefits focusing on unexpected benefits. Gain creators are not missed when they are absent, but can make a difference when present. They may cause enormous satisfaction and therefore contribute to long-term customer loyalty.

STEP 1.3: MATCH CUSTOMER PROFILE WITH VALUE MAP

Finally it is important to create a fit between the value map and customer profile by:

- Addressing essential customer gains and pains
- Addressing the relevant jobs for the customer to get done.

As an example of the last three steps, here is the Value Proposition Canvas of a mobile car care services company:



Source: Modified from Osterwalder et al . (2014)

PHASE 2: CREATE A BUSINESS MODEL CANVAS

The goal of this phase is to design the business model. For that matter the participants should use the business model canvas. They can complete it on their own and get assistance from the workshop instructor in order not to miss any aspects of the business. Check the steps of completing the business model canvas from the tool Innovative Business Model Redesign (Tool 3).
Here, it is important to use the information from Phase 1 to fill in the value proposition block.

PHASE 3: USE THE 10 TYPES OF INNOVATION TO ENHANCE THE BUSINESS MODEL

In 2013, Larry Keeley et al. published a very insightful book about 10 types of innovation. His categorisation of innovation types is based on a deep analysis of a large number of business models of mainly well-known US companies. The 10 Types of Innovation are considered as a very helpful tool to discuss the ways how one could further innovate in business models. Check the steps of using the 10 Types of Innovation from the tool Innovative Business Model Redesign (Tool 3).

REFERENCES

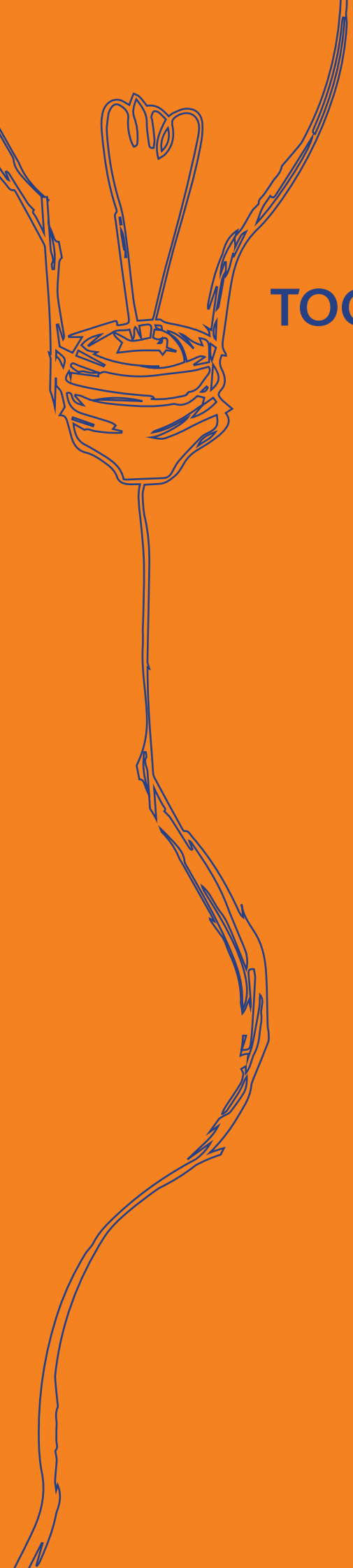
Dornberger, U. et al. [Ed.] (2012). Managing the Fuzzy Front-End of Innovation, Leipzig.

Dornberger, U. (2017). Manual – Certified Innovation Manager, Market-oriented Product and Service Development, Leipzig.

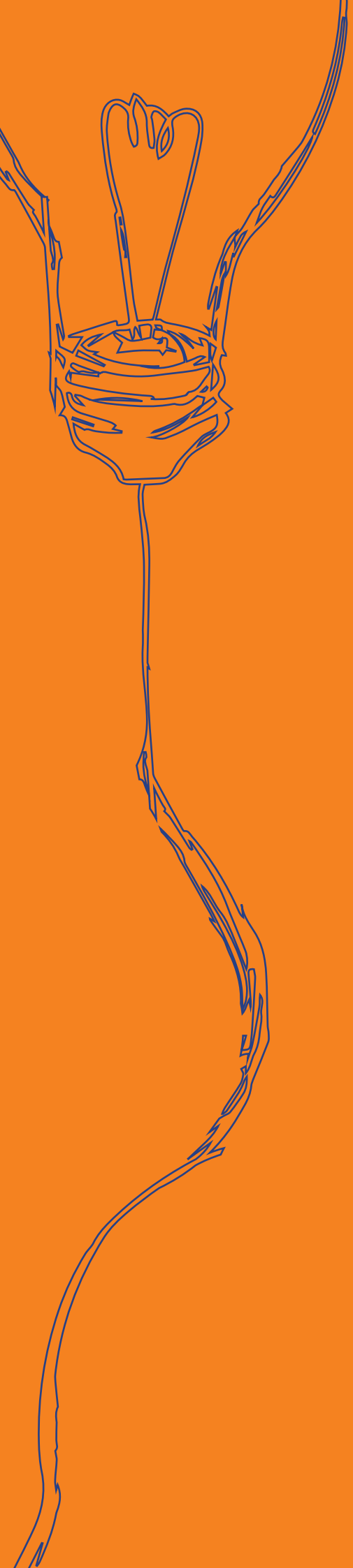
Osterwalder, A. et al. (2010). Business Model Generation: A Handbook for Visionaries, Game Changers, and Challengers, New York.

Osterwalder, A. et al. (2014). Value Proposition Design: How to Create Products and Services Customers Want, New York.

Perkin, L. (2013). The Ten Types of Innovation. Perkin Digital and Media Consultancy.



TOOL 11_Innovation Games



TYPE OF TOOL

The tool presents serious business games as workshop techniques that facilitate creativity. They are usually integrated in workshop settings to facilitate group work. The actual size of teams depends on the respective tool.

TOOL IN BRIEF

Creative individuals have four competencies: They preserve new ideas, seek challenges and manage failures, broaden their skills and knowledge, and change their physical and social environment. These competencies are within all people and can be stimulated. This tool presents serious business games that foster creativity by using game mechanics and techniques in business contexts. It presents business games as a micro-world, which can be utilised to create and explore a deeper understanding of a particular topic of interest. Business games are presented as techniques that support the process of discovering options, shaping options, and prioritising options. A different business game is presented for each of these steps.

TARGET GROUP

The games can address companies, start-ups, students, or researchers. Big companies can implement them in the scope of a specific product or project.

TOOL OBJECTIVES

The development of creative interventions is not a "black box" that is left to "creative people". Rather, creativity is a capability that decision makers in SMEs need to have in order to respond to the dynamically changing business environment of today's world. The purpose of this tool is to present different techniques that foster creativity. Serious business games that foster creativity by using game mechanics and techniques in business contexts will be presented.

The tool aims to achieve the following objectives:

- Integrate emotions into a problem-solving process, which helps to focus, remember, decide, perform, and learn.
- Involve the people participating into a structured process that breaks up the complexity of the real world.
- Provide a framework that allows the production of unpredictable, innovative results.
- Challenge business managers by fostering small changes that may lead to dramatically changed results.

GAMIFICATION PROCESS

Games create alternative worlds in which the rules of reality are suspended for a while. Alternative "rules of the game" are in place and create a model world. This game space is the playground one can use to leave the constraining notion of reality to unlock the creative potential that resides in all people.

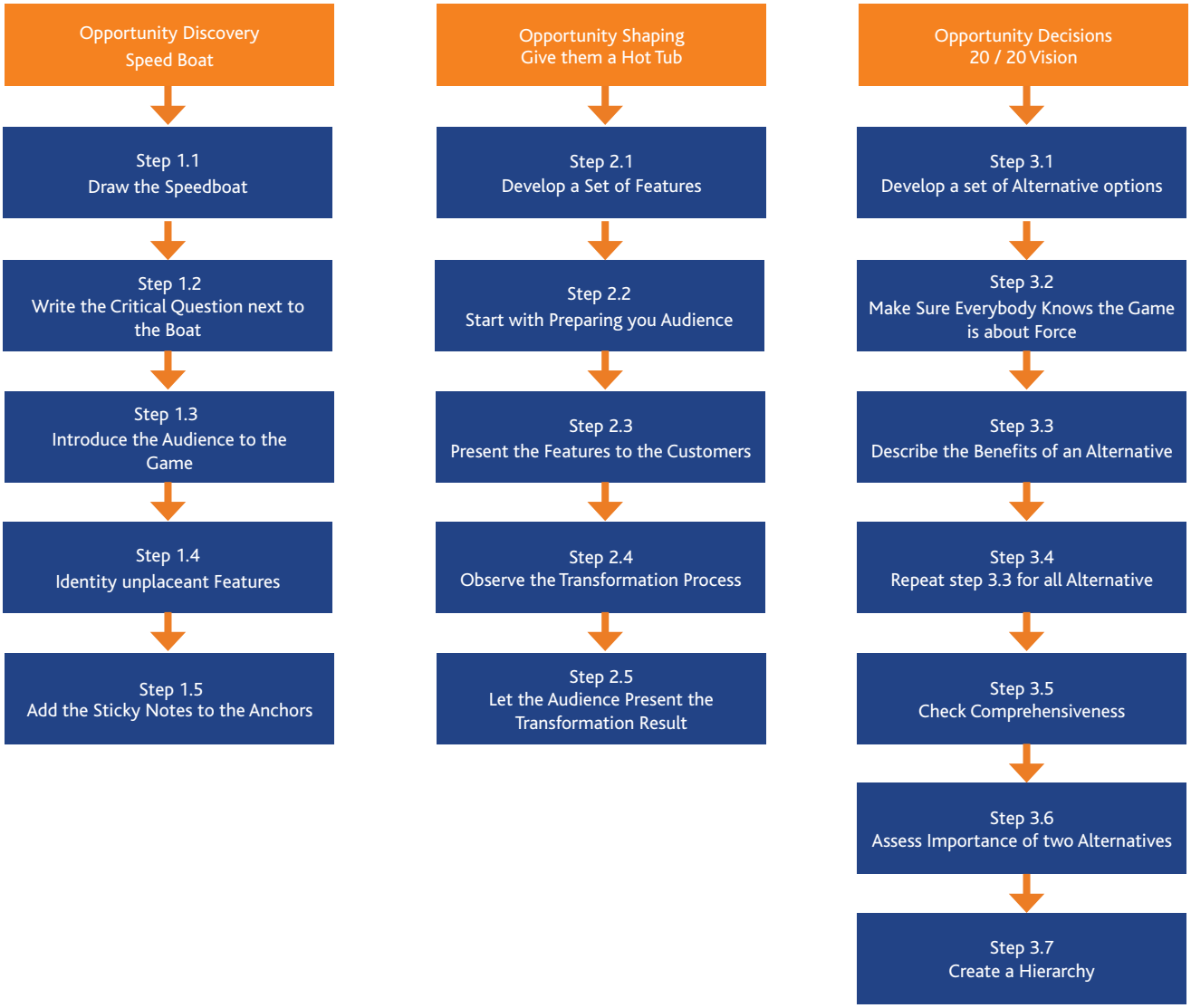
The games presented cover the following aspects:

- **Opportunity discovery:** Games that produce a large set of often unexpected and innovative ideas.
- **Opportunity shaping:** Games in which participants explore, navigate, combine, interpret and, as a result, discover something.
- **Opportunity decisions:** Games that help participants make a decision through prioritisation, voting, or comparison. Games that find and create the commitment and alignment needed to meet that end are included.

Different business games are often systemically combined and form a workshop-structure. An overview of common business games is provided in the following table [6]. Of these tools, "Speed Boat" (discovering opportunities), "Give them a hot tub" (shaping opportunities), and "20/20 vision" (deciding on opportunities) are presented in more detail later in the chapter.

Discover	Shape	Decide and Act
• Me and my shadow • The apprentice • Product box • Prune the product tree • Spider web • **Speed boat**	• Start your day • **Give them a hot tub** • Remember the future • Show and tell	• Buy a future • **20/20 vision** • My worst nightmare • What would Bourne do?

[6] For more information about the other games take a look at "Innovation Games: Creating Breakthrough Products Through Collaborative Play" (2006) by Luke Hohmann.



The three games in bold will be explained individually, the chart above gives an overview of the implementation steps of these games:

DISCOVERING OPPORTUNITIES

GAME 1: SPEEDBOAT

The overall goal of the game is to identify what customers do not like about the product or service of a company.

OBJECTIVE

All clients have something to criticise about a service or product. Speedboat offers an efficient way to identify what clients do not like and what the barrier is to full satisfaction. Those offering products or services sometimes do not see the wood for the trees. Speedboat is a game that provides insights from other stakeholders on potential barriers to the goal of fully satisfying clients.

NUMBER OF PLAYERS AND DURATION

It is recommended working with 5 to 10 players. The game can be conducted within 30 minutes.

REQUIRED MATERIALS

For a smooth conduction of the workshop, the following material is required:

- One pin board with big white paper for drawing.
- Sticky notes with pens.

IMPLEMENTATION GUIDELINES

When conducting the game, the following has to be kept in mind:

- Speed boat is not about summarising complaints. It is a systematic way to gather information on how to improve a product or service.
- The audience needs to understand that the aim is to reveal everything that is not fully desirable, so that those striving for excellence are empowered to change.
- A common problem when conducting the game is that the audience does not focus on the problem, but proposes actions to solve them. This needs to be avoided, as it disrupts the nature of the game.

PROCESS

STEP 1.1: DRAW THE SPEEDBOAT

Draw a boat on a white space visible to all players. Draw the anchor of the boat and name it after the product or service in question. The result is the basic metaphor for the activity - the anchor represents the barriers that prevent the boat from gaining velocity.

STEP 1.2: WRITE THE CRITICAL QUESTION NEXT TO THE BOAT

The question of interest is made visible to all participants by writing it next to the boat. Examples of questions are:

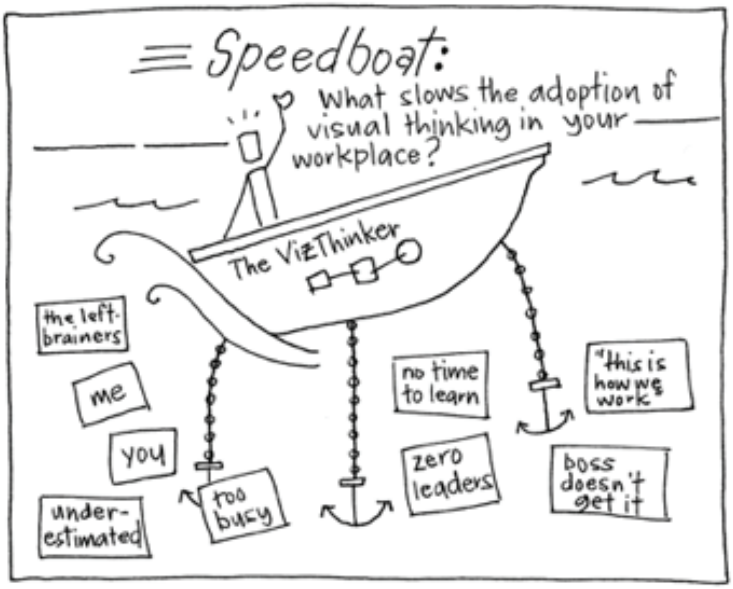
- What prevents our customers from liking our product?
- What is preventing us from meeting a specific target?

STEP 1.3: INTRODUCE THE AUDIENCE TO THE GAME

Start the game by introducing it to the audience as an option to identify the barriers to full customer satisfaction. Seek feedback on the guiding question and adjust it if necessary. Discuss the current features of the product or service and the environment surrounding the goal.

STEP 1.4: IDENTIFY UNPLEASANT FEATURES

Ask the audience to summarise the features of the product or service that they don't like, or any of the variables that stand in the way towards full customer satisfaction on sticky notes. Ask them afterwards to estimate the velocity increase that the removal of each of the variable would cause.



Source: Gray et al. (2010)

STEP 1.5: ADD THE STICKY NOTES TO THE ANCHORS

Ask the audience to add the sticky notes to the anchors under the speedboat. Afterwards, cluster the notes according to reoccurring themes and discuss the content. Look for "ahas" and insights. Identify reoccurring themes, as they indicate a consensus on what is holding one back from meeting the goals.

SHAPE OPPORTUNITIES

GAME 2: GIVE THEM A HOT TUB

Use outrageous features to discover hidden breakthroughs.

OBJECTIVE

The objective of the game is to conduct a brainstorming session. It aims at revealing extra features of products or services that would lead to competitor differentiation. The game capitalises on a condition called "cognitive dissonance" – a situation of mental discomfort of a person that contradicts personal beliefs, ideas, and values.

NUMBER OF PLAYERS AND DURATION

10 – 20 minutes, depending on the number of participants, which can be between 4 -12. The game can be played by employees of a company. However, to develop unexpected solutions, it is recommended to work with external actors (customers, students, etc.) to get an unbiased feedback.

REQUIRED MATERIALS

For a smooth conduction of the workshop, the following material is required:

- One pin board
- Sticky notes with pens

IMPLEMENTATION GUIDELINES

When preparing the game, facilitators (such as external trainers) should keep the following in mind:

- Conventional brainstorming is biased towards internal groups of people. This game works best if you work directly with your customers.
- The game starts with hypothetical features of products or services, proposed by the actor preparing the workshop.
- The biggest challenge in the preparation process is to develop features that are extreme enough to cause causal dissonance, yet not so extreme that customers reject the game.
- The game needs to be moderated in teams with one person guiding through the game, and at least another person observing the customer's behaviour.

PROCESS

STEP 2.1: DEVELOP A SET OF FEATURES – OF WHICH SOME ARE CRAZY

Develop a set of product features. Write them on cards – each card should consist of one feature. Come up with several examples of features that are outrageous. If you are selling pens, add features like "can fly". If you are selling MP3 players, add features like "cools ice-cream". What will happen if you present this to your customers?

STEP 2.2: START WITH PREPARING YOUR AUDIENCE

Let the participating customers know that you are presenting something unexpected. Though this might reduce the level of cognitive dissonance, it also reduces the possibility that participants reject the game. Furthermore, it increases the number of ideas generated, as participants are aligned with the fun aspect of the game.

STEP 2.3: PRESENT THE FEATURES TO THE CUSTOMERS

Stick the cards to a board and present it to the audience. Invite the customers to react to each feature in one of the following ways:

- Accept the feature with no changes.
- Reject a feature if they don't feel comfortable with it.
- Transform the feature into something that they do want.

For instance, a customer might transform a fountain pen that can cut metal into a fountain pen with a longer lasting nib. This process might give you an indication of the desire to improve the nib.

STEP 2.4: OBSERVE THE TRANSFORMATION PROCESS

The result of a transformation does not tell you much about the root cause of a problem the customers wanted to address. Key for successfully conducting the game is to observe the customers during the process of transforming a crazy feature into something they consider desirable. This should be done by dedicated team members and not left to the moderator of the game.

STEP 2.5: LET THE AUDIENCE PRESENT THE TRANSFORMATION RESULT

The final step is that the customers present the result of the transformation process to the group. The purpose of the presentation is that the customers further address the problems a transformation seeks to address. This step usually involves personal experiences, such as "I lent my fountain pen, which my grandfather gave me, to my colleague. He dropped it; the nib was destroyed, and can't be repaired". Again, it is essential to take notes of the discussion, as detailed and unbiased information on the functionality of a product of interest will be received.

DECIDE ON OPPORTUNITIES

GAME 3: 20/20 VISION

Participants negotiate the relative importance of different alternatives in projects, initiatives, or product features.

OBJECTIVE

A group clarifies which of a set of alternatives is the most desirable. The game can be played with customers and related to alternative product features, such as price versus functionality. Alternatively, the game can be played internally and related to opportunities such as alternative projects or initiatives.

NUMBER OF PLAYERS AND DURATION

5 – 10 participants, with duration of 30 minutes to 1.5 hours.

REQUIRED MATERIAL

For a smooth conduction of the workshop, the following material is required:

- Two whiteboards
- Sticky notes with pens

IMPLEMENTATION GUIDELINES

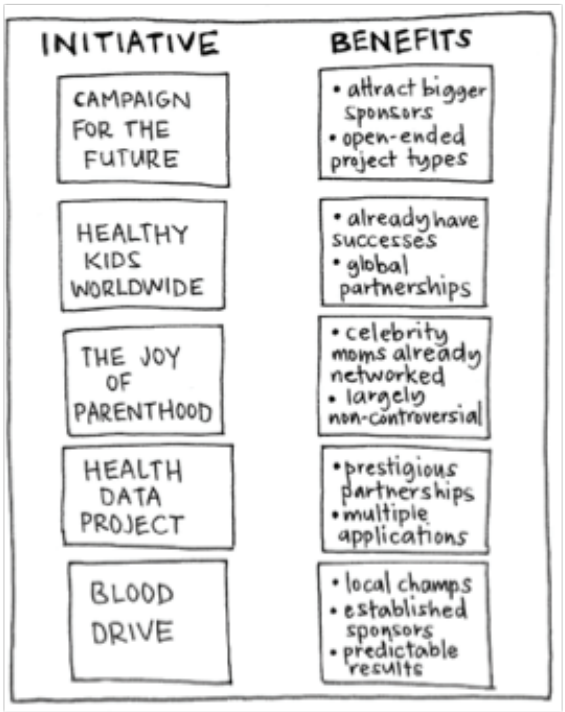
The following should be kept in mind when facilitating the game:

- The description and capturing phase of the game is of central importance as it provides the groundwork for the hard part, which is to determine priorities. Hence, this first phase needs to be conducted carefully.
- Facilitate a general agreement on benefits. Do not waffle on discussing the benefits of the alternatives. The group must take this decision.
- Acknowledge those that oppose the prioritisation, as they usually bring important insights at later stages of the game.

PROCESS

STEP 3.1: DEVELOP A SET OF ALTERNATIVE OPTIONS

Develop a set of alternative options and write them on sticky notes, one option on each note. It is essential that these different options are presented randomly.



Source: Gray et al. (2011)

STEP 3.2: MAKE SURE THAT EVERYBODY KNOWS THAT THE GAME IS ABOUT FORCE

The key aspect at this stage is that a 20 / 20 vision game is about forced prioritisation. The basis for this process is the perceived benefit of an option. Letting the audience know that this is what the game is about significantly reduces resistance to consensus building.

STEP 3.3: DESCRIBE THE BENEFITS OF AN ALTERNATIVE

Post one of the alternatives on a wall visible to all participants. Ask the audience to describe the benefits of that alternative, which may be a project, a product, a service whatever needs to be decided on. Write the descriptions of the benefits on sticky notes and stick them next to the alternative of interest. If the group disagrees on the benefits, ask them to prioritise. In case there is a consensus, do not spend too much time on this exercise.

STEP 3.4: REPEAT STEP 3 FOR ALL ALTERNATIVES

Characterise all of the alternatives by repeating Step 3.3.

STEP 3.5: CHECK COMPREHENSIVENESS

Ask the audience if the list of alternatives is complete. If an alternative is missing, add it to the list and repeat Step 3.3.

STEP 3.6: ASSESS IMPORTANCE OF TWO ALTERNATIVES

Take two of the alternatives from the wall. Ask the audience which of the alternatives are of higher importance for the specific goal of the game.

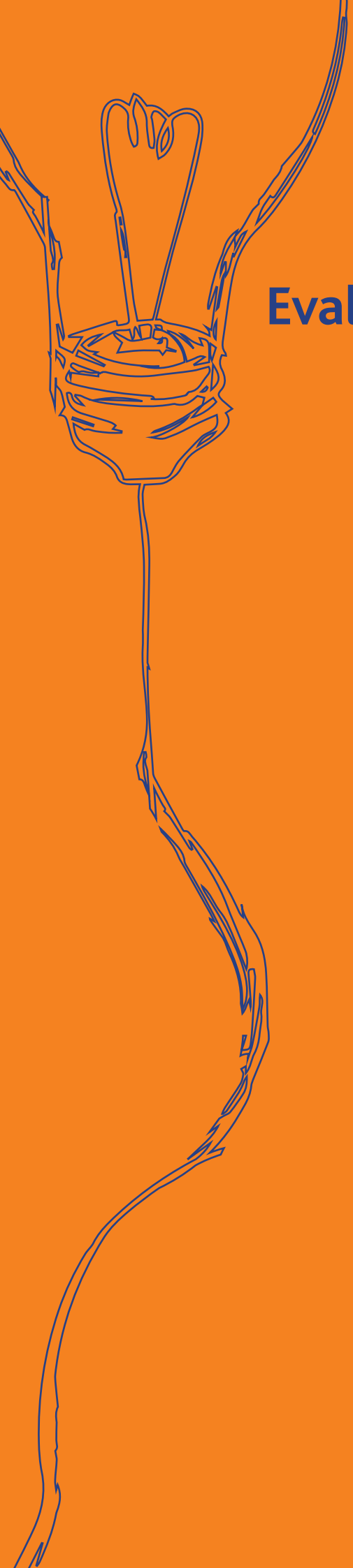
STEP 3.7: CREATE A HIERARCHY

Use a new white board to stick the alternative which has been assessed of highest importance above the alternative that a group agrees is of lower importance. Conduct this step for all alternatives. Ask the group whether it is of higher or lower importance than the two alternatives already posted and place accordingly. Repeat the process until all of the alternatives have been discussed and prioritised. As a result, a clear periodisation of different alternatives in projects, initiatives, or product features has been developed.

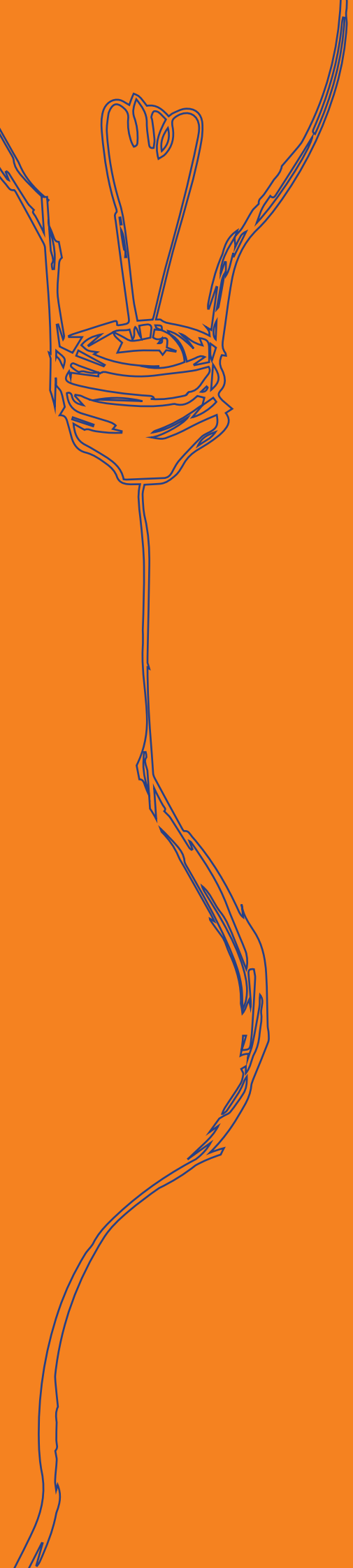
REFERENCES

Gray, D., Brown, S., and Macanufo, J. (2011). Gamestorming. A Playbook for Innovators, Rulebreakers, and Changemakers. O'Reilley and Associates, Sebastopol.

Epstein, R. (2000). The Big Book of Creativity Games. Quick, Fun Activities for Jumpstarting Innovation. McGraw-Hill, New York.



Evaluation, Bibliography, Annexes



EVALUATION OF InnoAware TOOLS

All tools presented in this toolbox are realised as workshops or events. In order to improve the performance for your specific target group, all tools should be evaluated after conducting them. Below you will find a proposal of an evaluation sheet. The sheet has to be adapted depending on if the tool was realised as a workshop, event, or part of another project you are organising with your target group. Make sure that your adaptations do not interfere with the comparability of the different evaluations of the other InnoAware tools you are doing.

EVALUATION SHEET

Company / Organisation:

Position of respondent:

Implemented tool:

Name of trainer:

In order to assess the impact of InnoAware Tools, we kindly ask you to take five minutes of your time to rate the following statements on a scale of 1 to 5, using the following scale: 1 = Not at all; 2 = To a small extent; 3 = To a moderate extent; 4 = To a great extent; 5 = To a very great extent.

Nr	Criterion	1 Not at all	2 To a small extent	3 To a moderate extent	4 To a great extent	5 To a very great extent
1	The training/event was well planned					
2	The duration of the training/event was sufficient					
3	The instructor was capable of conducting the training/event properly					
4	The objectives of the training/ event were clear in my mind while conducting the training session/event					
5	The chosen method of the training was appropriate (event, workshop, business game, questionnaire…)					
6	Through the training/event I was introduced to valuable skills and knowledge that raised my awareness on the importance of innovation					
7	The content of the training/event was easy to comprehend thoroughly					
8	The introduced knowledge will help me to be more innovative in my field of work					
9	I can measure a progress in the performance of my company / start-up / business initiative after the training/event					
10	I will recommend this workshop to other colleagues / companies					

Your feedback is very important, please share with us your comments about the organisation, implementation, or content of the training session and usefulness of the introduced knowledge:

BIBLIOGRAPHY

Amabile, T. (1998). How to Kill Creativity. Harvard Business Review, Vol. 76(5), p. 76- 87.

Amabile, T. et al. (2005). Affect and Creativity at Work. Administrative Science Quarterly, Vol. 50(3), p. 367-403.

Amabile, T. et al. (2008). Creativity and the Role of the Leader. Harvard Business Review, Vol. 86(10), p. 100-109.

Battering, M. (2009). Profiting from External Knowledge. How Companies Use Different Knowledge Acquisition Strategies to Improve their Performance. Wageningen Academic Publishers, Wageningen.

Chesbrough, H. (2006). Open Innovation. The New Imperative for Creating and Profiting from Technology, Boston.

De Bono, E. (1990). The Use of Lateral Thinking, London.

De Bono, E. (1993). Serious Creativity: Using the Power of Lateral Thinking to Create New Ideas, New York.

Dietrichs, E., Engel, K., and Wagner, K. (2006). Assessment of Current Practices in Innovation Management Consulting Approaches and Self-Assessment Tools in Europe to Define Requirements for Future "Best Practices". Europe INNOVA Paper 2, Luxembourg.

Dornberger. U. et al. [Ed.] (2012). Managing the Fuzzy Front-End of Innovation, Leipzig.

Epstein, R. (2000). The Big Book of Creativity Games. Quick, Fun Activities for Jumpstarting Innovation. McGraw-Hill, New York.

European Union (EU). (2012). IMP³rove: HIGH-IMPACT INNOVATION MANAGEMENT Enterprise and Industry Consulting services for SMEs. Europe INNOVA Paper 18, Luxembourg.

Global Knowledge Initiative (2015). Collaborative Innovation Tools. Top 10. Accessible via: http://globalknowledgeinitiative.org/wp-content/uploads/2017/05/3-GKI_Top-10-Tools-for-Collaborative-Innovation.pdf.

Gray, D., Brown, S., and Macanufo, J. (2011). Game Storming. A Playbook for Innovators, Rulebreakers, and Changemakers. O'Reilley and Associates, Sebastopol.

Guilford, J. (1950). Creativity. Psychologies, Vol. 5, p. 444-454.

Herb, R. et al. (2000). TRIZ. Der systematische Weg zur Innovation, Landsberg.

IMP³rove Academy (2015). IMP³rove Innovation Management Support Services in Hungary. Accesible via: https://www.improve-innovation.eu/wp-content/uploads/2015/03/IMP%C2%B3rove-Services-in-Operation-Program-Hungary.pdf

Keeley, L. et al. (2013). Ten Types of Innovation: The Discipline of Building Breakthroughs, New York.

Majaro, S. (1994). Marketing Y Creatividad. Un Enfoque Instrumental, Madrid.

Muñoz A. (1994). Métodos Creativos para Organizaciones, Madrid.

Osterwalder, A. et al. (2010). Business Model Generation: A Handbook for Visionaries, Game Changers, and Challengers, New York.

Osterwalder, A. et al. (2014). Value Proposition Design: How to Create Products and Services Customers Want, New York.

Perkin, L. (2013). The Ten Types of Innovation. Perkin Digital and Media Consultancy.

Meles Project Partnership (2016). E-Book. Wallet Project.

Rao, J., and Weintraub, J. (2013). How innovative is your company's culture? MitSloan, Management Review. Vol. 54. No.3.

Runco, M. (2004). Creativity. Annual Review of Psychology, Vol. 55, p. 657-687.

ZUKUNFTheute (2017). Netzwerk Canvas. Accessible via: www.bosbach.mobi/ specials/netzwerk-canvas/

LINKS

http://www.fepic.eu/UK/index.php

http://www.mycoted.com/Category:Creativity_Techniques

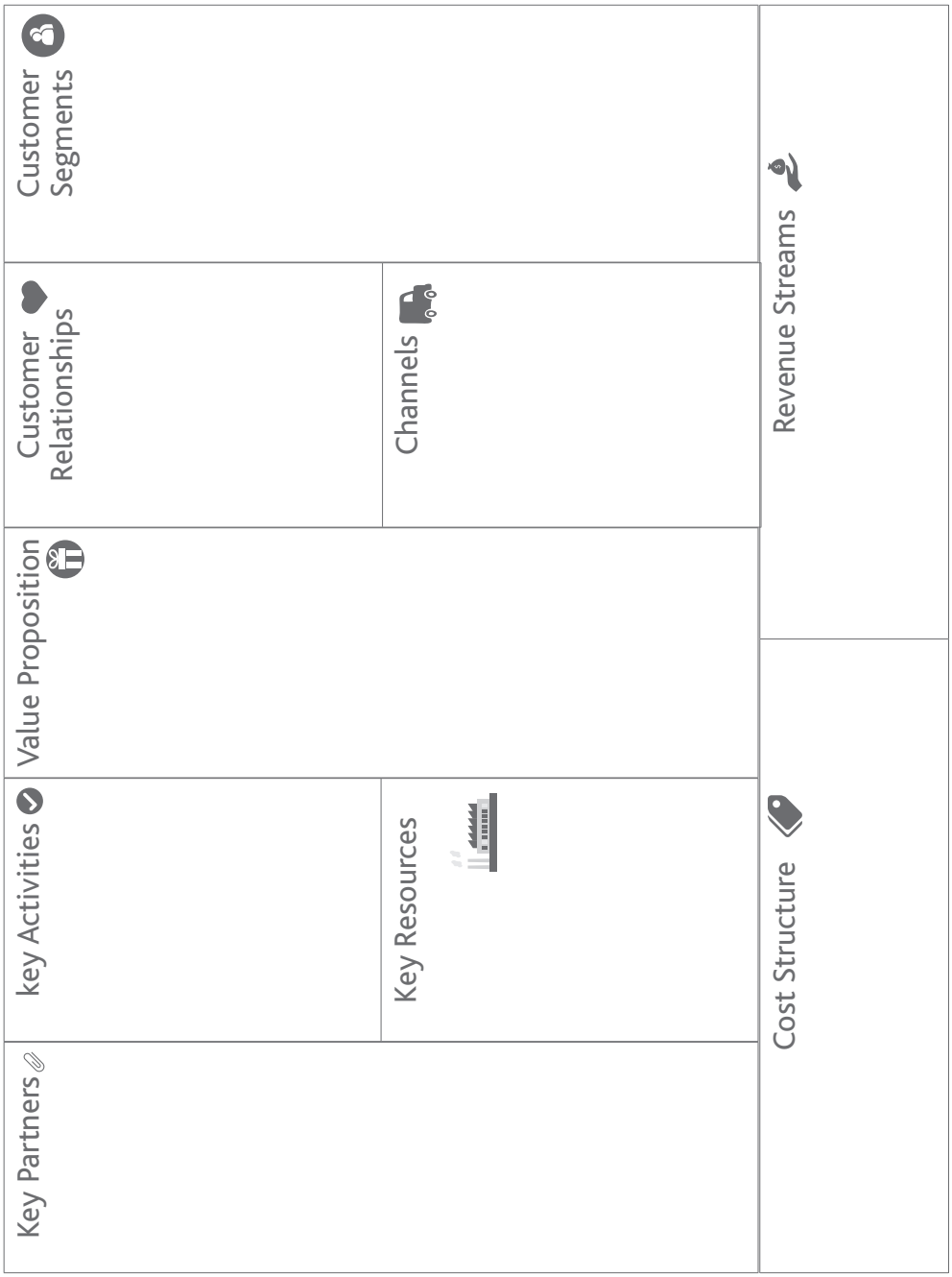
http://1000ventures.com/

ANNEXES

Here you can find the important graphics and canvases for the implementation of the presented tools.

1.BUSINESS MODEL CANVAS FOR TOOL 3 AND TOOL 10

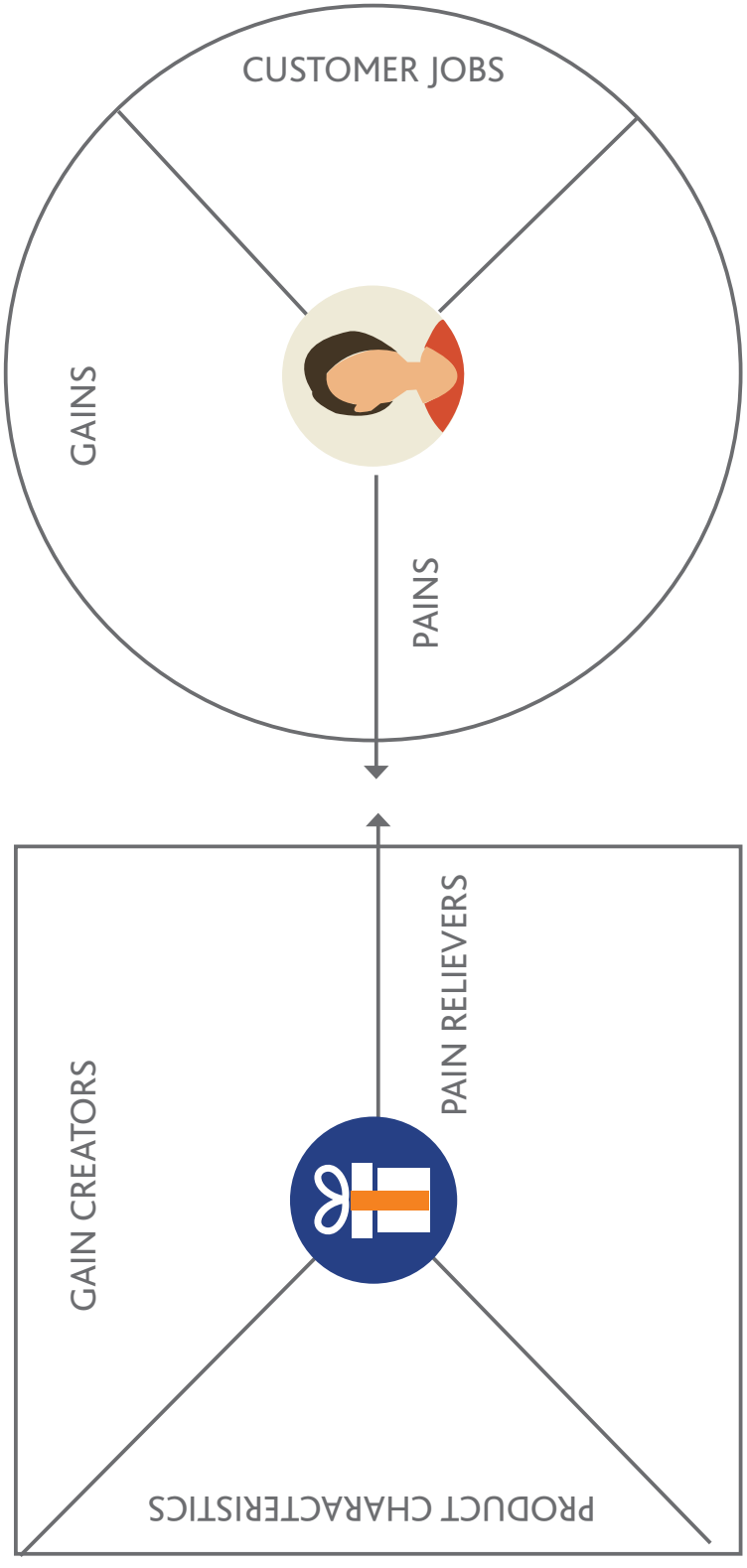
BUSINESS MODEL CANVAS



Source: Modified from Osterwalder et al. (2010)

2.VALUE PROPOSITION CANVAS FOR TOOL 10

VALUE PROPOSITION CANVAS



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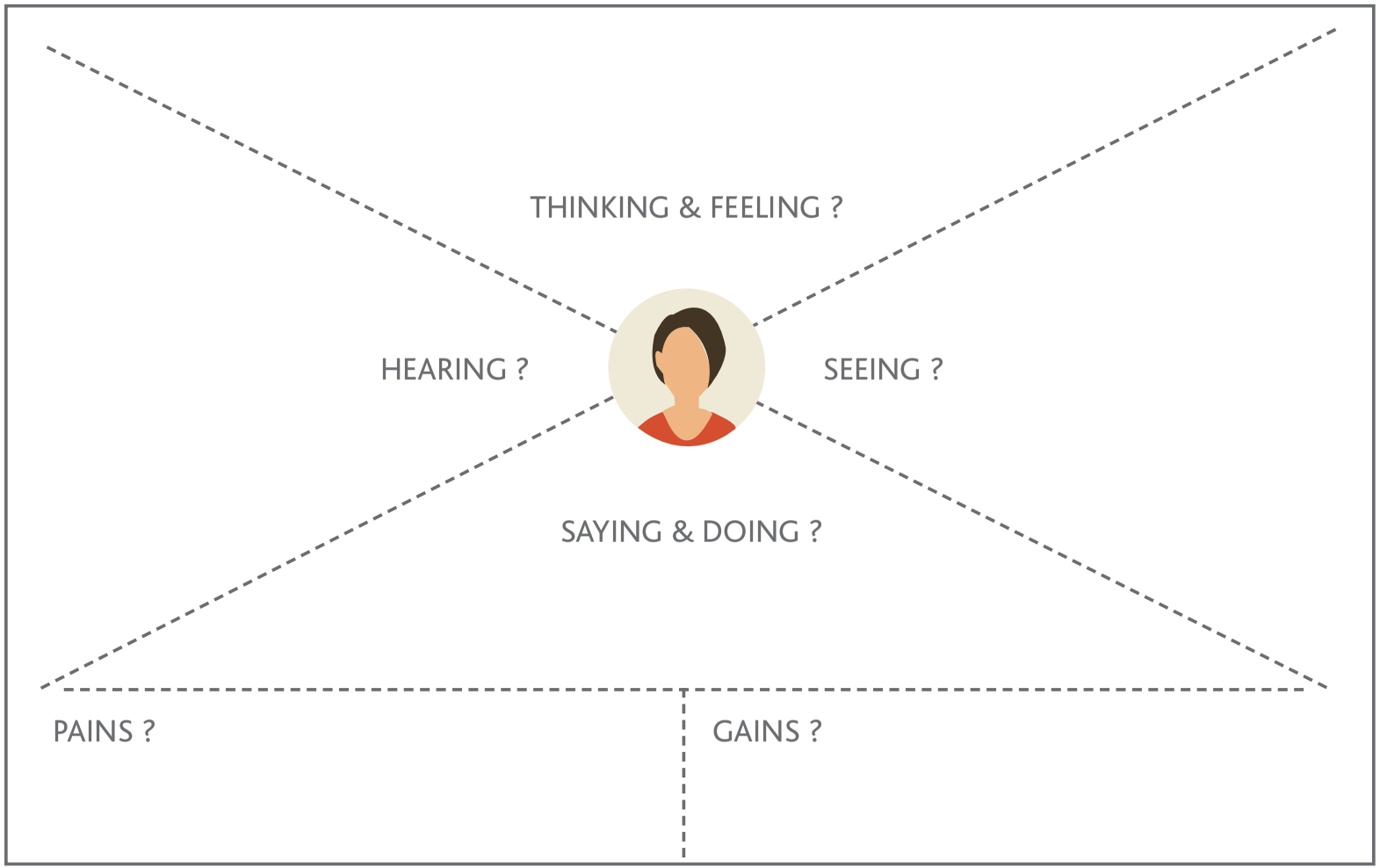
3.EMPATHY MAP FOR TOOL 6

EMPATHY MAP



Modified from Osterwalder et al . (2014)

4.THE WALLET PROJECT FOR TOOL 9

Design the Ideal wallet

- Draw 3 min

Sketch your idea here!

Your new mission: Design something useful and meaningful for your partner. Start by gaining empathy

1 Interview

8 min (2 sessions * 4 minutes each)

Notes from your first interview

Switch roles & repeat Interview

2 Dig Deeper

6 min (2 sessions * 3 minutes each)

Notes from your second interview

Switch roles & repeat Interview

Reframe the problem

3 capture findings 3 min

Goals and wishes:
What is your partner trying to achieve?
*Use verbs

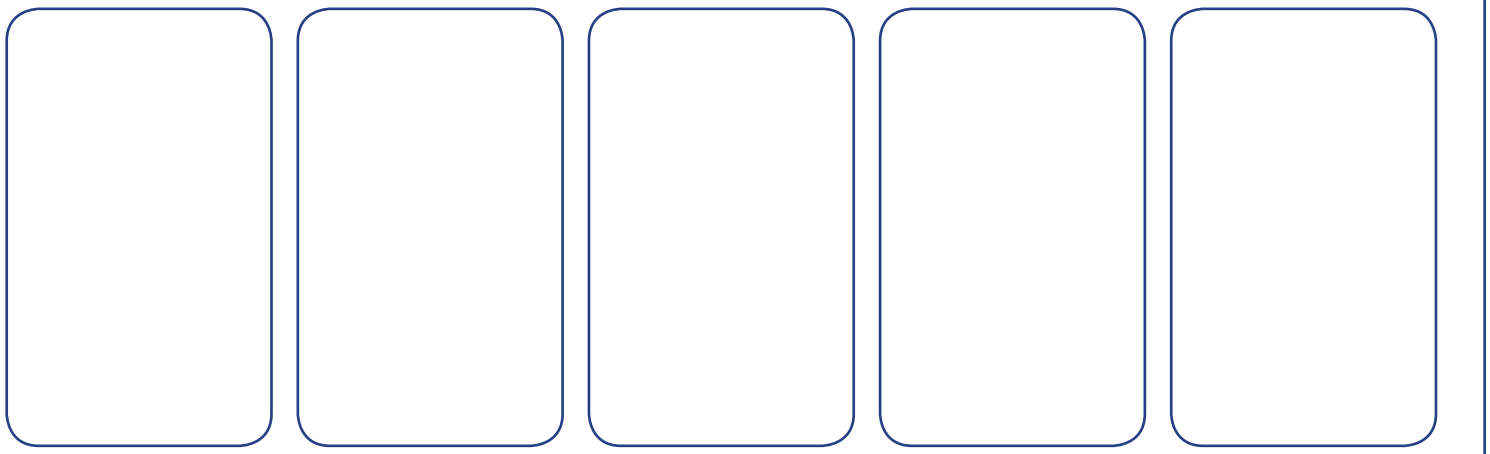
Insights: New things learned about your partner's feelings and motivations. What is something you see about your partners' experience that maybe they do not see?*

*Make inferences from what you heard

Ideate: generate alternatives to test

4 sketch at least 5 radical ways to meet your user's needs. 5min

Write your problem statement above



5 share your solutions & capture feedback. 10 min (2 sessions *5 minutes each)

Notes

Switch roles & repeat sharing

Iterate based on feedback

6 Reflect & generate a new solution. 3 min

Sketch your big idea , note details if neccessary

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