DISH

Module 4

Design Thinking and Business Model Generation

Module Outline

- Introduction to Design Thinking
- Inspiration Phase
- Ideation Phase
- Implementation Phase and Business Modeling
- Communicating Business Ideas/Pitching

Module Duration

This module requires a 200 hours of formal study time.

You may spend an additional 8-10 hours for revision

Introduction

This module is about an introduction to design thinking which has become a popular method of innovation. The three spaces of this method namely inspiration, ideation and implementation will be dealt in this module. Further, the concept of business model generation which focuses on how an enterprise creates, delivers and captures value is going to be addressed by relating to the implementation space of the design thinking method. Therefore, the nine building blocks of every business enterprise will be discussed in this module. The last part of this module presents about pitching (communicating business ideas).

Learning Outcomes of Module 4

Upon completion of this study unit, you should be able to:

4.1 Discuss Design Thinking method.

4.2 Describe the three overlapping spaces of Design Thinkıng.

4.3 Illustrate Business Model Generation and the nine building blocks of Business Model Canvas.

Terminologies

Design Thinking	Human-centered method of innovation.
Business Model Generation	Describes the logic of how an enterprise creates, delivers and captures value.

4.1 Introduction to Design Thinking

So far, you learned that there are new sources of innovation and there are a number of management tools and methods that would help you to tap the new sources of innovation and it should help you with the non linear and interrelated nature of innovation and entrepreneurship processes. In this topic you will be introduced to design thinking. Design thinking is a method for coming up with innovations. It consists of three overlapping spaces namely, inspiration, ideation and implementation which will be discussed later, in this chapter. Using this method, you are expected to come with innovations after this course. This approach is selected because it has become a popular method and it integrates and reflects many aspects you can use in your future career as entrepreneur/innovation manager. These aspects including understanding needs, nonlinear processes and team work to mention few.

The concept of design thinking is mainly attributed to the works of David Kelley and Tom Brown. It is inspired by the thinking of engineers operating within the new challenges of the industrial revolution. Before we look at the process of design thinking in more detail, let's briefly discuss design thinking in relation to an organization's innovation strategy. Companies around the globe, including the big corporations are becoming interested in design thinking and its main message is to take a human centered approach. Design thinking also makes a very good business case. If you understand your customers better you, will do a better job at satisfying the need which is the most reliable source of long term profitability. However, this is increasingly not just a one side of proposition of customers who just have to be understood and then organizations can exploit that.

Figure 1 Organizations and Design thinking: the business case

4.1.1   Organizations and design thinking: the new social contract.

On the other side, the reason why businesses are more and more taking a more human centered approach is because peoples' expectations are also evolving. These days we are facing very complex societal challenges and both organizations and consumers recognize that we all ends together. Design thinking also implies a new social contract between organizations and consumers driven by a shift in the dynamics between sales of goods and providers of services on the one hand and those who purchase them on the other hand. The industrial revolution brought us a wave of new products, sweeping innovations and technologies. Think of for example cars, radio, TVs and household goods led to growth in the manufacturing sector. Today's, industrial empires such as GE, or Siemens were born and efficiency gain a mass production, lowered costs and flooded with affordable products. Companies started to invest heavily into R&D labs to come up with more and more new products to continue to grow.

However, over time services started to gain importance. The shift from manufacturing to knowledge creation and service delivery led to an enhanced focus on service and process innovation. Increasing customer expectations and a growing market for retailing, food service, banking and insurance led to a growth in the service sector dealing with people. But, at the same time also industrial manufacturers started to focus on the service and process aspects of their product for a stronger focus on product use and product design. However, the argument so far is that improved product and services is not enough anymore. We are moving towards a new social contract between organizations and consumers- a contract in which experience and human centered innovations considered to deliver the experiences become the central component. According to the new social contract, you need to understand what people do and how they do it. This goes hand in hand with an emotional understanding. Taking a constructivist approach and understanding that we have different mental pictures about the same thing is in line with the shift towards experiences.

Within the systems paradigm, communication and understanding about what actors are people actually talking about is often the key to meaningful innovation that it is relevant for the organization-consumer interaction as well. Furthermore, experience also involves active participation. Consumers increasingly shift the way from passive consumption of mass production. This implies that we are all together in the system planet and that creating the best

possible experience also requires a holistic understanding of the social and environmental impacts of innovation. Thus, the design thinking method is designed for coming up with innovations that focus on this social contract.

4.1.2 Design thinking as a Method

In line with the new insights on the innovation process, design thinking is not a linear approach. It is a systematic tool instead of a linear approach. It consists of three overlapping phases/spaces. The first is inspiration space which is about the problem or the opportunity that motivates the exploration for solutions. Next, there is the ideation space which involves the process of idea generation, development and testing. Third, there is the execution/implementation space which is about the path from the project's area to the market. These three spaces overlap in the design thinking process. However, instead of a linear sequence from inspiration to ideation to implementation, design thinking is based on iterative cycles in which the three spaces overlap. This implies that there is no best single way to move for the project. Insight from the implementation phase may lead to new inspirations and initiates a new cycle.

For coming up with the solution this naturally raises two questions. First of all, does that mean that it is not systematic at all? Second, will it take forever to come up with something? When do you stop? The design thinking approach claims that both answers are No. It does not mean that it is not systematic and it does not mean that it is never going to stop. Design thinking is a project based approach and deadlines have to be kept. The mechanisms that help controlling the iterations are prototyping, testing and refinement. Design thinking is about experimenting with the tentative solutions in the very early stages of the process. It means that developing basic prototype very early on and integrating the feedbacks to change or find a solution. Regarding the time of the design thinking project, it can even lead to a faster results, because prototyping and testing initiates self- correcting mechanism that will help to avoid pushing a less promising idea to the very end of the project.

4.1.3 System of constraints

Let's move on to the second main element of the design thinking method which is to base the project on a system of constraints. The reason is that best design often happens within sever constraints. It is much more challenging to come up with an affordable yet well functioning

product. So, let's look at the system constraint design thinking proposes. The central idea of design thinking is to aim for a combination of useful design with feasible technology and viable business strategies.

Feasibility is about functional possibility within the foreseeable future. In other words, it deals with the technological aspect. Viability is about the likelihood to become part of a growing/sustainable business model. So, it is about the business aspect. Desirability is about what makes sense to people, so is about the human aspect. Depending on the project, some system constraints might be emphasized but the overall purpose is to search a solution which balances and harmonizes the system constraints. However, design thinking claims that it is harmonization to add the thinking into the design and has the potential for radical innovation. It is not about resolving the solution for each system but about balancing the solution across the systems. This means that we might have to start back from using the best possible technology if it is not viable and or desirable.

In reality, what often happens is if the company over emphasizes one of the system constraints, for example it may overemphasizes on what fits into the business model. It focuses on what is efficient right now to the current business model and just copy what the competitors do: do it a little bit better and wait for their response. The risk here is that you will end up with incremental innovations and uniform products. A good example is the car industry. Companies may also over emphasize technological feasibility. This often happens to engineering and drafting companies that focus on the R & D. They would do R & D and only then see how it fits into the existing system. The problem is that technological innovations usually involve a high risk and that R & D projects are very expensive. So what they are going to do is that they will focus on a small and very targeted number of projects again risking on coming up with incremental innovations.

Finally, companies and organizations may also sometimes overestimate human needs and desires. They may create an artificial demand for meaningless products. Vitic Pupnek, a designer and educator, once said that "they persuade people to buy things that they do not need with money they don't have to impress neighbors who don't care." At the same time, even if some solutions may pursue a meaningful goal, for example clean water supply for rural communities

in developing countries. If the solution can't be sustained either technologically or/and on the financial side, it will ultimately not become a successful innovation.

"Good design is good business." Thomas Watson, president IBM (1950)

Review Questions

1. What is design thinking?
2. Why is Design thinking important for innovation and entrepreneurship?
3. what are the three spaces of design thinking?

4.2 Design Thinking: The inspiration phase

This sub-topic deals with a basic discussion on the inspiration space of the design thinking. Ideally, the inspiration space starts with the project brief. The project brief can address a set of technological, financial and social constraints the project is placed within. For a design thinking project the project brief is ideally a good mix of freedom and constraints. If it is too narrow; it more or less implies the solution and if it is too broad; the project team will keep drill around in the fog. A good idea is to start projects with a very short brief in the form of how can we question. For example, if we take this course, one of the project's brief from the teachers side could be, how can we improve the learning experiences of students focusing on digital technologies.

Next, in order to come up with good results, starting with the right team is important. Preferably, the team members should have different backgrounds the ability to be emphatic, think integrative, be optimistic, be open to experimentation and be able to collaborate. If you think about the systems innovation approach, you should by now know about the value of collaboration.

Once we have the team and a project brief the question is where do we get started for inspiration. Now, you are familiar that the design thinking is a method for developing innovations by focusing on understanding what people want and need in their life. You might say that this is just demand pull model, just to go out and conduct a market survey; asking people what they want. The problem is that this is not really easy. What is needed is to convert need into demand. But, if we just have to make a market survey, then why there are no more success stories? The reason is this , Henry Ford once said "had I asked my customers what they wanted, they would have told me a faster horse." The problem is that asking people what they

want usually leads to only incremental innovation. Because, people most of the time do not know or realize what they could benefit from. This thing is very good at adopting to inconvenient situation. When somebody comes up with a really useful innovation people usually say that this is so obvious why did no body come up with this before? So, if market survey that asks people what they want are not the best way to come up with radical innovations, then what can we do?

We have to start with putting people first. We can start with the people we know and see if we can get in depth insides into other peoples' lives and learn from them. We need to open our eyes towards many thoughtless acts that we did before in our everyday lives. This requires to observe how people behave. In doing so, keep in mind that a behavior is never wrong or right, but always meaningful. For example, few of us read instruction manuals when we unpack our gadgets. If we did, we might avoid some problems we might run into latter on; yet, for getting inspiration, looking at what people don't do can be a very good starting point, just like listing to what they don't say. At the same time, inspiration often comes from involving users into the experience early on. In doing so, asking why rather than what questions often leads to particularly good insights. Furthermore, we often have to make our mental pictures visual in order to create a common understanding and finally once we have gained insights from individuals we also need to look beyond them and think about how people and groups of people interact with each other.

Review Questions

1. What is the inspiration phase of the design thinking method?
2. Where does the inspiration phase of the design thinking begins?
3. What is a project brief?

4.2.1   Design Thinking: The Ideation Space

In the previous sections, we discussed the factors that hold people back from becoming an entrepreneur. One among those factors is that people think they don't have a good idea. They have not yet found the right opportunity and they constantly look for the formula to get the good idea. However, you already know, from the previous session, that entrepreneurial opportunities are not necessarily out there, just waiting to be found. You have learned that sources of innovation are not only the technological innovations from Universities and R&D labs. More often, entrepreneurial opportunities come from within ourselves. They are based on the things we

like and the things we don't like, things we wish we had, things we would like to get rid off and things we and people in our network care about. This is not to say that inventions and finding opportunities out there does not matter in the beginning or at some stages of the entrepreneurial process. But, whatever we come across out there, entrepreneurial opportunities are created by how and why individuals act on the things they come across. Many successful businesses initially departed from very minor ideas. Where you are taking them in the long run depends on what interests and drives you. You can create opportunities and transform them.

What should you do if you want to become an entrepreneur after this course? May be ideas will come to your mind while taking this course or during the interaction with your friends/ partners. Entrepreneurship in its early stage is very much like playing scrabble. There is a word there and you add a letter and you get credit for the whole work. If you want to get started, start now. There is no need to wait for the great idea that might never come. Many successful entrepreneurs started with simple problems which they could see an implementable solutions or what they thought was simply fun and worth doing.

In general, remember that in the beginning it is about getting started and being enthusiastic about it. Mary Kay Ash, founder of Ash cosmetics in the 1960 had a similar opinion on this topic. She did not only found a successful company selling cosmetics for direct sell to people in their homes but she also introduced the business model that enabled many women back then and today to earn their own money.

"A mediocre idea that generates enthusiasm will go further than a great idea that inspires no one." Mary Kay Ash
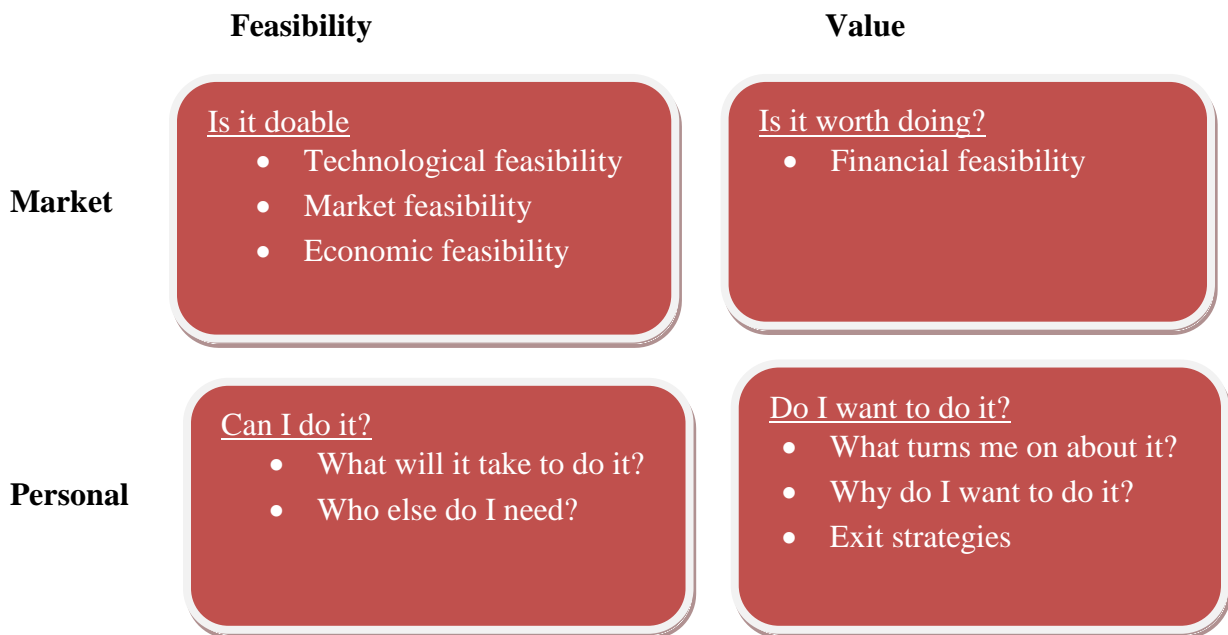
4.2.2   Assessing Opportunity Do-ability

So far, we discussed about getting started. If there is no road map and we don't know the final outcome, it is highly likely that we will be lost along the road. Hence, we will discuss more about this in the upcoming sections. For now, let's have a look at assessing opportunity do-ability framework. It is a simple framework consisting of four key concepts to consider on your way to transforming and developing your initial idea. The first two elements concern external factors like technology and the market environment. The last two factors are internal and include you. They depend on your personal circumstances and motivations. First of all think about whether your idea is doable that is the technology is available or could be made available. Are

there similar products already out there? Are there any road blocks from the government? For example, if this is illegal what you want to do then you might have to take a different road, then address the value in the market. Is it worth doing in terms of the initial fund required? Would you invest your own money in it?

Second, look at the personal level in terms of feasibility for yourself. Do you think you can do it? What is it going to take and are you willing to invest time and disappointments? What are your own strength and weaknesses? Who do you need to make it work? Then, think about the personal value for you. Do you really want to continue on that journey? What do you really want to do it? What are you going to get out of this? And why are you doing it?

In general, this framework can be considered as a checklist. However, it should not be override. It does not matter how good your checklist looks like. An idea is not a good idea before you implement it and the best way to start is to find somebody who is willing to support it in one way or the other.

	Feasibility	**Value**
Market	Is it doable • Technological feasibility • Market feasibility • Economic feasibility	Is it worth doing? • Financial feasibility
Personal	Can I do it? • What will it take to do it? • Who else do I need?	Do I want to do it? • What turns me on about it? • Why do I want to do it? • Exit strategies

Source: Read et al (2011)

Now, we will look on how design thinking and the ideation space links to the entrepreneurial process and entrepreneurial opportunities. Design thinking is important for entrepreneurs because much in business is about designing the product, the processes and the business itself.

Design thinking reflects the entrepreneurial process in a way that there is uncertainty about the outcome and the processes are usually nonlinear and iterative. By starting with what you know and you have, for example the constraints, you can iteratively come up with the next best solution even though it will not be the ultimate perfect one. Before you take your idea to a large scale getting feedback, new inspirations and an improved solution would always lead to go beyond the incremental idea. However, it does not mean that you cannot start with one and then work on your way towards something more radical by cycling back and forth through the design thinking process. As discussed in the first section of this chapter, creativity and knowledge are the prerequisites for invention and innovation. The inception for every knowledge, invention, and innovation is an idea and novel ideas emerge from the creativity process. The following section will, thus, discuss about the creativity tools, techniques and how to facilitate the creativity process which will help you to come up with innovative ideas.

4.2.3 Creativity

This is the second part of the idea generation space. Previously, we have seen that many people are good at becoming with good ideas. But, finding out whether these ideas themselves make a good business opportunity depends on implementing it in a creative way. Remember, creativity and innovation are not the same. Creativity drives innovation and knowledge is the bases for creativity and innovation. Creativity does become one central element for entrepreneurship and innovation. It is about the ability to generate ideas and further develops them.

What stimulates creativity and why are we not more creative? First of all, creativity is part of our evolution and problem solving approaches. History of human evolution has shown that human beings are actually pretty good at coming up with new ideas. However, approaching problems in a logical and analytical way focusing on what is and what we have and what could be done blocks creativity. While this approach is necessary and this led to many advances for our society; it sometimes oppresses the creative problem solving approach. Let's have a look at some facts that drive and impede creative problem solving approach.

First, research has shown that creativity is often driven by thinking outside of the box. Similarly, creativity is often associated with using both the right and the left sides of our brain. At the same time, creativity is often driven by time and necessity; for example, when there is a need to come

up with a better solution. Creativity also depends on the environment we are in. The creative process is embedded on individuals, in groups and in interactions with other people. Organizational culture can drive creativity if there is a stimulating and supportive environment that is based on trust and empowerment. If we look at the factors that block creativity, we can again start at the individual level. Creativity is often blocked by negative self talk. People tell themselves that they are not the creative one and then creativity is left to those who can draw in a nice way. Furthermore, creativity is often blocked by too much reliance on past experience and expertise which can make it difficult to think out of the box.

If we again look at the organizational level, many things that block creativity are embedded in our interactions with other people. Organizational culture which is very much risk averse in a sense of not leaving any room for testing out new ideas will block creativity in the long run. At the same time, zero tolerance for failure, no room for experimentation as time is money, and group pressure block creativity. In general, these are the most important factors that facilitate and block creativity. You can see that much of it depends on the organizational culture in which individuals are imbedded in. That is why many organizations today are trying to create more creativity supportive environment.

Now, we will see one of the factors that blocks creativity in more detail. Let's start with a little experiment and soon you will know which factor it addresses. In the 1945, Kern Muncker started a series of experiments he called "candle experiment". He asked people the following questions. How would you mount a candle on a wall, in such a way that it can be lighted safely and does not drip by only having matches, a box of nails, and the candle available as your equipment? Here is the best solution. You simply empty the box of nails. Put the candle inside, use the nails to fix the box against the wall and use the matches to light. It sounds simple, but what most people did, who were taking part in the experiment, was that they did not come up with this solution. Instead, they were trying to fix the candle to the wall with the nails or some were trying even to melt candle wax to stick the candle to the wall. The problem is that many people see only the nails inside the box. They did not see the box itself as something they can use it, just not seeing the packing material as a part of the solution.

The nine dots (see the following figure) exercise is also another tool which shows on what blocks creativity. The purpose of this exercise is to connect the nine dots using four straight lines, without lifting the pencil/pen off the paper. If your pen or pencil goes twice or more on the same path, i.e., overlapping lines, it should be counted as many times as you go through that stretch.
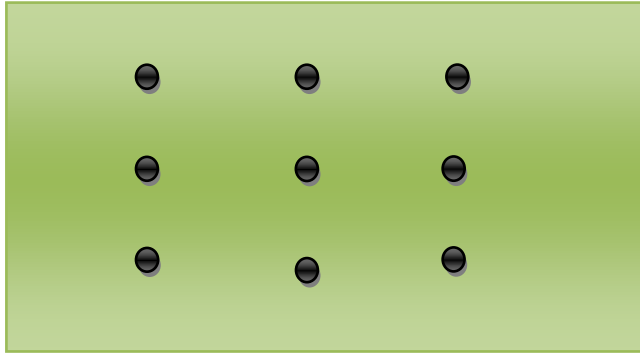

Figure 2 Nine Dots Exercise

Visit the appendix for the correct solution. You may not get the solution presented. Perhaps, you were looking for a solution that was within the supposed "square" suggested by the arrangement of the nine dots. If so, you were trapped in this "square", which limits you not to think out of the box. But, why do you think this phenomenon happens? Our mental model of the "square", refers to the paradigm we have which are formed on the influence of family, the educational system of beliefs and social values. Often, people unconsciously adopt paradigms and are useful to our life. But, this can't be used as justification for entrepreneurs to allow their vision being limited by it. If they do so, they may not perceive other aspects that can be excellent business opportunities precisely because they do not fit to the common pattern. It is necessary to develop a divergent thinking, seeing beyond the boundaries and developing a more open and inclusive vision of other possibilities. It is also necessary to "go outside the box," to go beyond the limits, to break paradigms, it is required to have creativity, boldness and curiosity. This can be developed through practical actions such as changing the course of actions, participating in trade fairs and conferences in other areas, reading books of different subjects to your reality and business, developing new hobbies, seeking diversification in various aspects of your life.

Research in this direction led to insights on how too much experience and expertise tends to block creativity. Karn Duneker's candle experiment was the starting point for a research on an

effect called functional fixedness. This means, when individuals are solving problems they are often constrained by their past experiences. This does have an effect on someone's predisposition to be creative because it impedes individuals from applying novel strategies to solve problems and makes them to impulsively fix the problem using the traditional approach. It is a cognitive constraint that we are facing. Functional fixedness is a concept on individual level. Similar fact happens on the organizational level. Organizations solely depending on internal knowledge and expertise to solve problems will be less likely to bring innovative solutions since functional fixedness will block creativity.

On the level of the organization, functional fixedness is often called local search bias. Within the systems innovation approach overcoming local search biases has become an important issue for many organizations. At the same time, there is a risk associated with going too far. In the previous topics we raised the absorptive capacity, the ability to understand, evaluate and assimilate knowledge. If we move too far away from our experience and expertise we are at risk of compromising absorptive capacity. This is by now a well know problem in the innovation and entrepreneurship literature. So far, research has shown that there is an 'inverted U shape' relationship between increasing cognitive distance and the learning effect. The novelty value increases when we move away from what we are familiar with. However, at the same time absorptive capacity decreases. We learn most when we are at the optimal cognitive distance - the distance we move away from the local but are not going too far. We have to look beyond our own box, but in order to keep our absorptive capacity, we need to keep the relation to our problem.
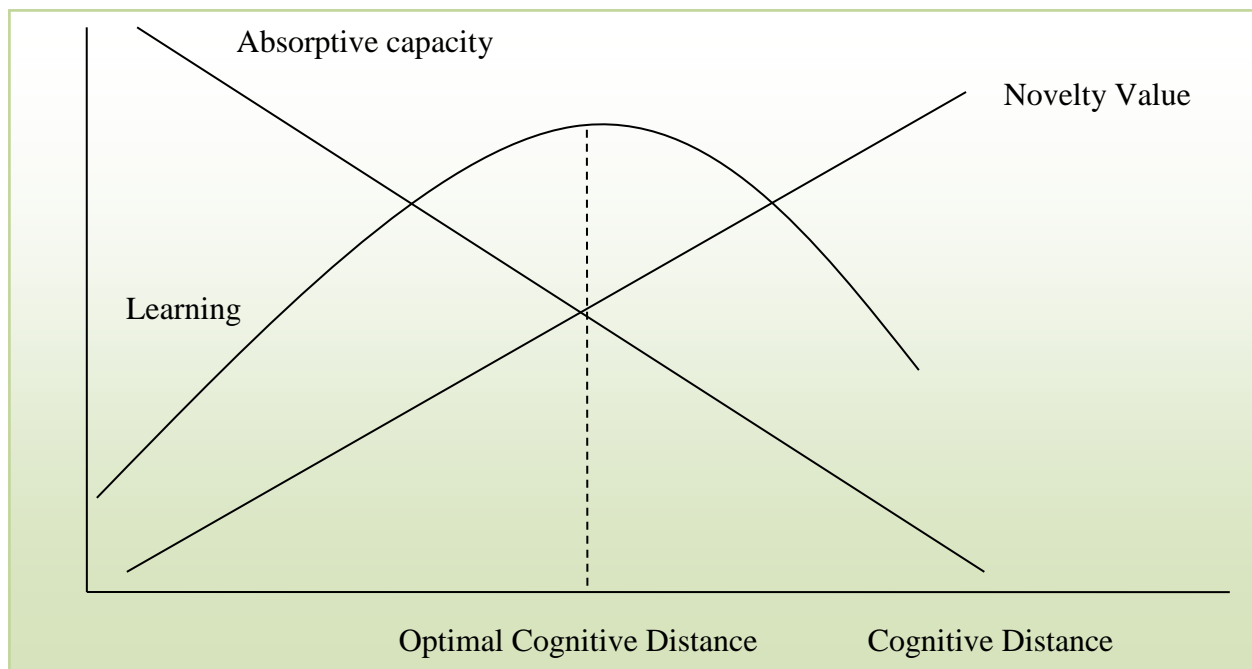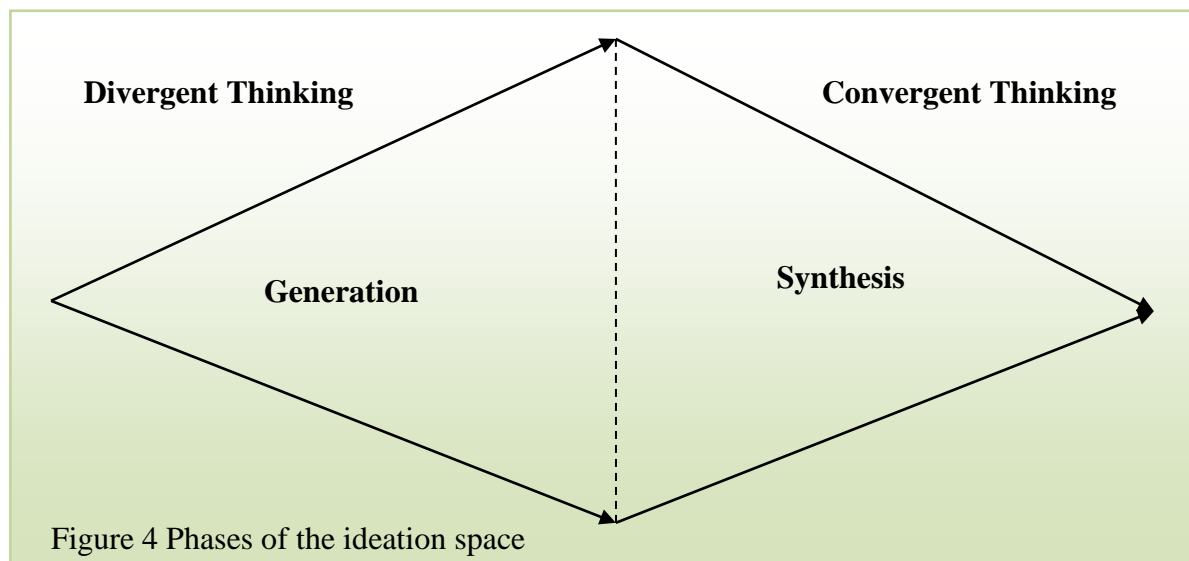
Figure 3 Optimal cognitive distance (Nooteboom,1999).

4.2.4 Facilitating Ideation

This part focuses on how the creative process can be facilitated. The process of creating new ideas is called ideation. There are models that help us to understand and facilitate it. Let's start with the two phases of the ideation process. The ideation space, ideally consists of two phases in each iteration. First, there is a phase called divergent thinking. This phase is about opening up possibilities and generating as many ideas as possible. The divergent phase is then followed by a convergent thinking phase in which we try to synthesize the ideas and make a decision on the idea we want to proceed with for the time being. We get a set of options and we are supposed to select the best possible one. However, we are often having difficulty with the idea generation phase especially with combining the two phases. This process even is more challenging when we are working in teams, though we are often rewarded with better idea when we work together.

Divergent Thinking   **Convergent Thinking**

Generation   **Synthesis**

Figure 4 Phases of the ideation space

Now, we will continue to look at how the ideation process, in a team, looks like. The starting point is the new topic, in this case the problem definition and then we proceed to generate ideas. In the beginning, we usually come across a number of familiar opinions and incremental solutions. But, after sometime the diversity of idea increases. We arrive at the point where we have a few quite diverse perspectives. In this site it is not time to narrow down. We consolidate our thinking, refine ideas and then we reach a decision point.
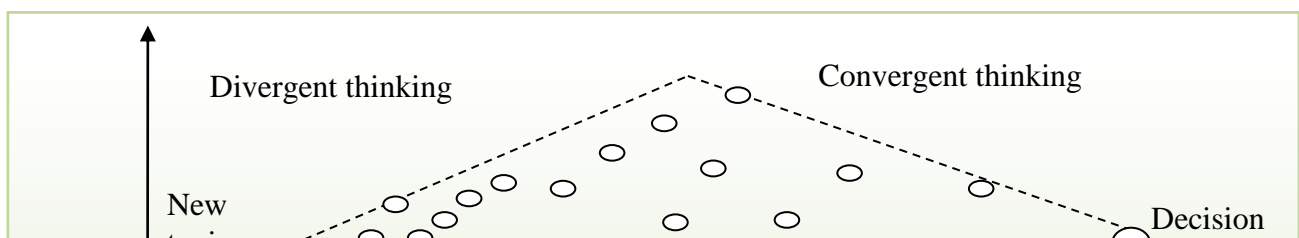
Divergent thinking   Convergent thinking

New   Decision

Figure 5 The Diamond of participatory-decision making; (Kaner, 1996

Unfortunately, idea generation processes typically is different in real life. What usually happens is that the decision point is either moved into an early stage of the process or it does not happen at all. There are two possibilities. First, we sometimes make too quick decisions. We focus and decide on the obvious solutions and in doing so we risk premature closure before we explore more novel and diverse ideas. Second, we don't really arrive at a solution at all. We enter into the more divergent phase, come across controversies, run out of time and we end up with no or poorly defined solutions. The problem in here, as soon as we move away from familiar opinions, we get into uncomfortable zone. When more diverse perspectives come up, we sometimes tend to react with 'No' reactions. It takes us time to arrive at a common mental frame for more diverse ideas are actually there, and we start to be concerned of being stacked and running out of time, especially if this is a workshop and we want to go home at some points.
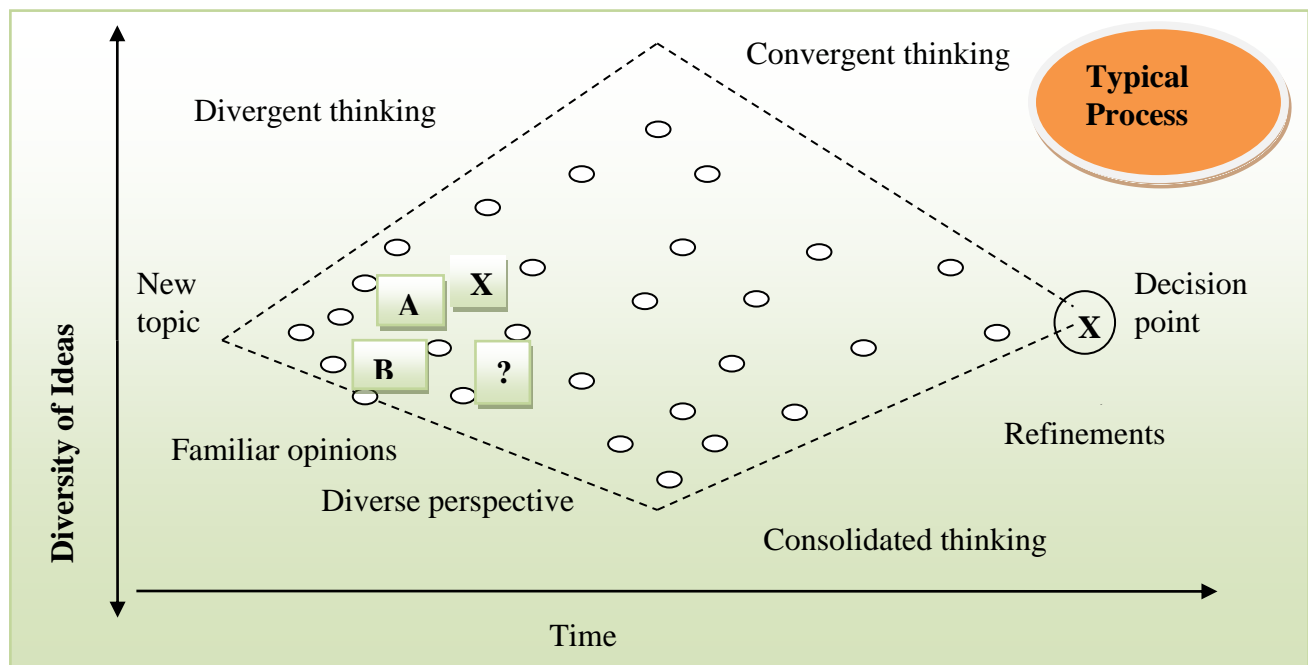
Figure 6 Dynamics of Group Decision Making

It is important to note that in an innovation project, we should not end up with quick decisions. For other projects this might be a good and important, but innovation is all about coming up with novel ideas, so we need to move beyond the familiar. Acknowledging that there is a difficult zone called groan zone in the middle of the ideation process and paying attention to how the team is going to experience at this stage is necessary.

In groan zone, we will feel frustrated, confused, anxious and exasperating. This is because, we suddenly go beyond the familiar and now we are dealing with different perspectives and competing frames of reference/pictures of mental maps. We are often tired and we are facing an overload of information. How should we behave in that stage? We should be patient, persevere, be tolerant, and should not lose our sense of humor. This will help us to arrive at a shared perspective and shared framework of understanding and finally good decision making. However, this is not easy. What you can do is to become aware of this zone and either become facilitator yourself or assign an internal or external person who explains and continues to explain about this zones, call for stretches, breaks, encourages and supports. This person can for example, interfere when there are conflicts about an idea and suggest to make a drawing or visualize it in a different way. He/she can also remind people to step back or stop some team members from judging the idea too early on.
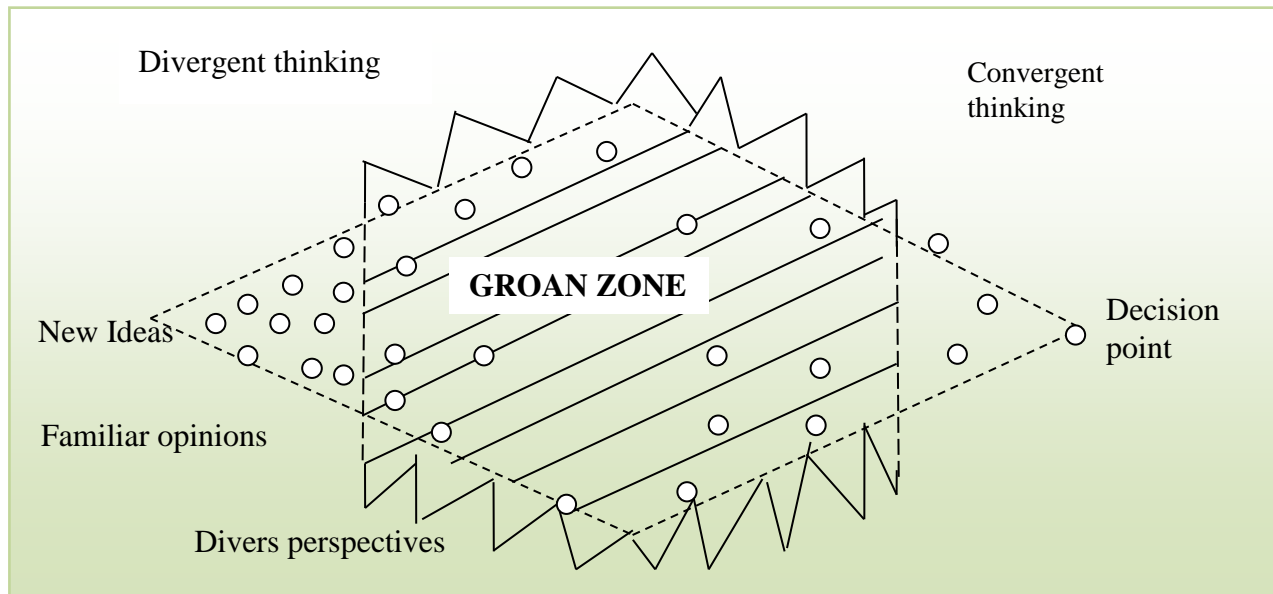
Figure 7 Groan Zone, Kaner, 1996

4.2.5 Creativity Tools and Techniques

This topic deals with the creativity tools and techniques that you can use during the ideation phase. As we discussed earlier ideation is a process that can be facilitated. First, we need to understand the two phases of ideation, the divergent and the convergent. Moreover, there are a several tools and techniques which can assist you to generate ideas and think out of the box. The most familiar tool is brainstorming. So, let us get an over view of the different techniques which are categorized as fluency, excursions, pattern breakers and shake up exercises. A brief description of each the technique is presented below.

First, there are **fluency** techniques which focus on stimulating idea generation, usually in a more goal focused and straight line thinking approach. Tools in this category include brainstorming, brain writing and mind mapping. Next, there are so called **excursions**, that focus on pushing the mind out of the usual and towards the unpredictable and novel. These techniques aim to take the individual or the group away from the common work to a different perspective. They usually use stories and imaginations to pull out ideas. Example techniques include synoptic questioning where you make use of ridiculous ideas to get people out of tunnel vision/conventional mindsets. Also include tools which focus on a painting to create a story and techniques that foster visualization through making mind movie.

Similarly, **pattern breakers** force us to stretch our minds towards finding patterns between dissimilar concepts. These techniques usually involve a more problem focused techniques such

as metaphorical exercises where you can link photo to goals. Another technique is to celebrate a party in which you imagine that the innovation is already a success. Finally, **shake up exercises** where you try to make the team loosen up and open to unusual ideas are important creativity techniques. These techniques focus on making people laugh, as humor can help us relax and break self censoring mechanism. Techniques include role plays and team games for example body storming-a technique that should get people to figure things out by trying. Further, techniques in this category are also outdoor fun activities or watching funny movies together.

Type	Purpose	Techniques (Examples)
Fluency Techniques	Stimulate idea generation, usually goal-focused, straight line thinking	• Brainstorming • Brain writing • Mind Mapping
Excursion Sessions	Push the minds towards, wandering, the unpredictable, novel, ...take individual/group away from the problem to (unconscious) work on it from a different perspective; usually focus on stories, and imagination to pull out ideas	• Synoptic questioning (make use of absurd ideas, get people out of tunnel vision/traditional mindsets) • Focus on a painting or a word • Mind movies/creative visualization
Pattern breakers	Force them to stretch to final pattern between dissimilar concepts to find unusual ideas or restate problems	• Metaphorical exercises (e.g. link random photo to goals) • Powers of 10 • Imagined party (for celebrating a successful innovation, think about the factors that lead to success)
Shake up exercises	Games and team activities to loosen up and make group members more receptive to unusual ideas, usually focused on helping them relax and laugh (humor breaks self-censoring mechanisms, make people less inhibited)	• Role plays (e.g. body storming) • Outdoor fun activities • Cartoons, funny movies

You are now familiar with the different tools and techniques of creativity. But, the outcome depends on the right use of each technique. These techniques have to used differently in the different phases of the ideation process. There are tools for opening up, for exploring, and for closing. Fluency techniques like brain storming are often used for all phases and work well when they are supplemented by other technique. Excursion sessions work well for the opening phase.

While pattern breakers are useful for exploring diverse idea and for starting to synthesize them. Shake up exercises can again support all phases of the project. Further, there is one very simple technique that works well for breaking and exploring diverse ideas. It is called the power of **what if** questions and simply means asking questions with what if and that is followed by an idea that changes an existing way of reaching a particular goal. For example, take this statement what if furniture buyers picked up a component in flat pack from a large warehouse and assemble the products themselves in their homes?
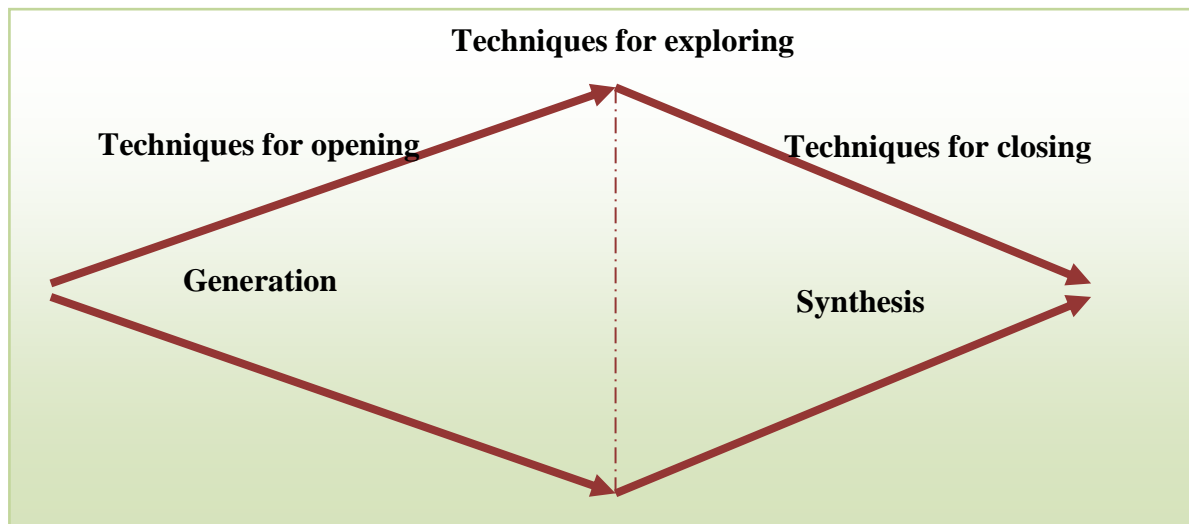

Figure 8 Different techniques of creativity for different phases

Review Questions

1. Define what ideation is in the design thinking?
2. What is opportunity Do-ability Assessment Framework? Why is it important?
3. Mention at least three factors that inspire creativity?
4. Explain the two phases of the ideation space?

4.3 Design Thinking: Implementing Phase and Business Model Generation

4.3.1 Introduction

So far, you have become familiar with the basic concepts of innovation and entrepreneurship process management. Besides, we discussed on the design thinking process which consisting of three overlapping spaces. After the inspiration and ideation spaces, we are now going to discuss the implementation phase. In particular, we will focus on implementing ideas through the business models. In this chapter you will be briefly introduced to the business mode canvas

which is a tool for business modeling as well a method for coming up with business model innovation.

The issues we discussed in the previous chapters help us to define our problem and search for potential solutions. Now, we are moving to actions necessary to implement solutions and turn them into innovations. We want to implement our ideas, be successful and happy about it. But, what should we do in order to get there. Let's assume that either we created or found an opportunity and we have already spent much time talking about that. Then what kind of action are we supposed to take? Basically, we need to either have an existing firm or establish a new organizational structure that will help to implement the idea, to bring innovation to the market. In line to what we have learned this building process is rarely unidirectional as the actions we take to build and shape organizations are in both directions. Our idea will influence what kind of organization we build and at the same time building the organizational structures themselves is likely to transform our idea. Overall, the organizing process around novelty is the very essence of entrepreneurship, either a new start ups or so called intraprenuership in existing organizations.

Entrepreneurship and innovation require an understanding of organizations and organizational structures. Regardless of whether this is a new business start up, a single person business, or a large private or public sector organization, innovation is implemented through and embedded in layers of an organization. First, there is overall planning level, the strategy level of an organization. This layer deals with vision, long term goals and objectives of the organization. On the bottom, there is the implementation level, process layer. This layer deals with the operational aspects of the business that is how are everyday tasks and work hours organized. Production and operation manuals that address exactly how and how much an organization produces are embedded in this level. In between is a layer that is most interesting one for entrepreneurship and innovation, the business model layer. This layer deals with the architecture of an organization. Essentially, the business model layer is about how the organization is build to create value and earn money from whatever products or services they offer and this is what makes this layer interesting for entrepreneurship and innovation.

Table 1 Organizational layers

Level	Layer	Focus
Planning	Strategy	Vision, Goal and Objectives

Architectural	Business Model	Value creation and money earning logic
Implementation	Process	Organization and work flow

4.3.2 Definition of Business Model

Business model "describes the rational of how an organization creates, delivers and captures value (Osterwalder and Pigneur 2010)." A business model is something very universal for all organizations. All organizations are involved in some form of value creation, delivery and capture. Private business may emphasize profit and public organizations cost coverage. Thus, business model describes the value propositions that a company delivers to its customer segments. There are two fundamental aspects; value creation and for whom you are creating value. Furthermore, the business model describes the architecture of the organization and its network of partners that makes the value creation and delivery to the customers' work. Finally, it looks how the whole process generates revenue streams either profitably or at least sustainably.

In principle, the business model process is as follows. First, the entrepreneur identifies and proposes the right business logic which responds to market conditions. For example, if this is about commercializing a very new technology, the right business model design addresses how customers may get in touch and be familiar with it and how compatibility with existing system can be achieved. After that, the entrepreneur will work on how the business model is going to be financed. If this is an existing company, the entrepreneur might look for internal funding options or raise the stock market capital. If this is an entrepreneur starting a new venture, he/ she might search for venture capital or for a business angel. If that is successful, the business model has to be implemented that is after you build the architecture in your hand, actual factors and offices should be built. People have to be hired and they should know what they should do.

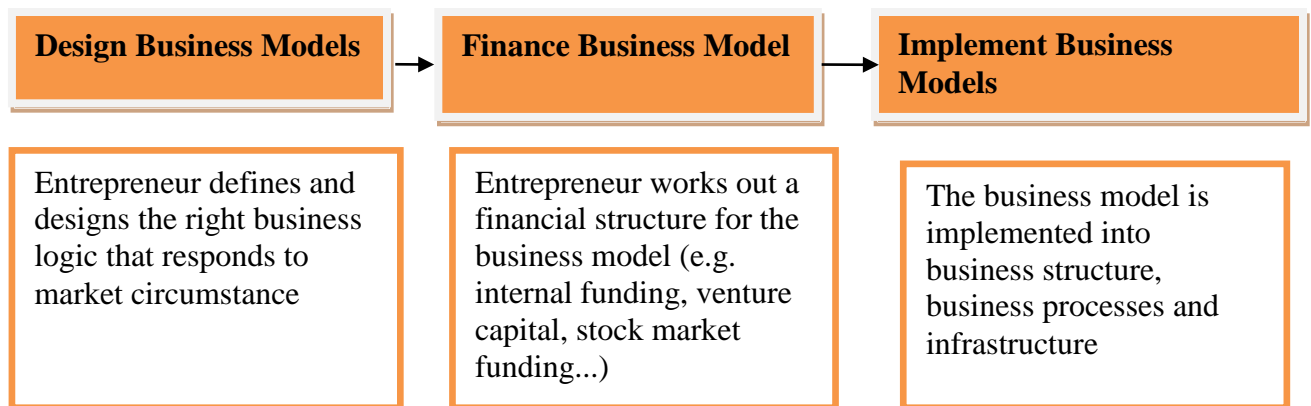| Design Business Models	Finance Business Model	Implement Business Models
Entrepreneur defines and designs the right business logic that responds to market circumstance	Entrepreneur works out a financial structure for the business model (e.g. internal funding, venture capital, stock market funding...)	The business model is implemented into business structure, business processes and infrastructure

Figure 9 Summary of business model structure

This process does not take place in isolation. The business model builds the middle and connects ground for the business strategy and the business organization layers and it does connect to the internal information systems of an organization. External factors that influence the business models are the social and legal environment, customer demands, and technological change. Furthermore, competitive forces in the business model environment shape the business model. However, competition is not part of the actual business model. It is part of the environment the business model is embedded in. As it has been mentioned earlier, business model and business modeling are interesting aspects of the entrepreneurship and innovation process. Because, the business model embodies the actions we need to take to turn an opportunity into a business idea. It is about how creative and innovation we are in building this architecture that defines entrepreneurial success. In conclusion, just focusing on product innovation is not enough anymore. Running a desirable, feasible and viable business is depending on the business model innovation. So, apart from new product, service or process innovations we need new business models that address new ways of creating and capturing value. If business model generation is becoming more important we have to start with a common understanding of what it actually is. For this, we need simple, relevant and intuitively understandable business model concept. What we need to do when words don't work? Dan Roam, author of " blah blah said the following. " Any problem can be made clearer with a picture." So, we need a visual business model.

Figure 10 Business Model Generation Canvas (Osterwalder and Pigneur, 2010)

Let us now briefly look at the business model canvas which consists of nine building blocks. In the middle, we have the parcel which is the value proposition that is the value that you are proposing to your customers (the guy on the right building block). The value proposition refers to the specific attributes of the product or service you are going to deliver. For example, a less invasive drug, a more comfortable travel experience or a seamless access to audio files where ever you are. The area with heart symbolizes the kind of relationship you are going to build with the customer that is how you are going to inform him/her about value you propose and how you are going to maintain this relationship, for example, through customer support or an online community.

The truck symbolizes the distribution channels. How are you going to physically deliver the value? This depends on your product or service and can literally be a truck or virtual highway. The cash register at the bottom right building block symbolizes revenue streams you are going to get by delivering the value to your customers. Moving to the left side of the canvas, the guy trying to dig a hole in the ground represents key activities that you need to perform to be able to produce the value and deliver it. In order to deliver these activities you need tools that is key resources represented by the guy with the hummer. Such key resources are your employees,

your technology and others such as licenses, your physical assets such as building and offices and the intangible assets that you need such as knowledge, brand and reputation. Since it is difficult for organizations, especially for startup companies to perform all the key activities by themselves and they need key partnerships symbolized by marriage ring building block. These partners can perform some of the key activities and provide resources. However, all of this is will consume money symbolized by the cost sheet in the bottom of the left building block. Ultimately, your costs have to be at least equal with your revenues to be able to sustain your business model.

4.3.3   The Business Model Canvas

In this part, you will be introduced to the business model canvas and its uses. The business model canvas describes the business model through the basic building blocks that shows how a company proposes to create, deliver and capture value.
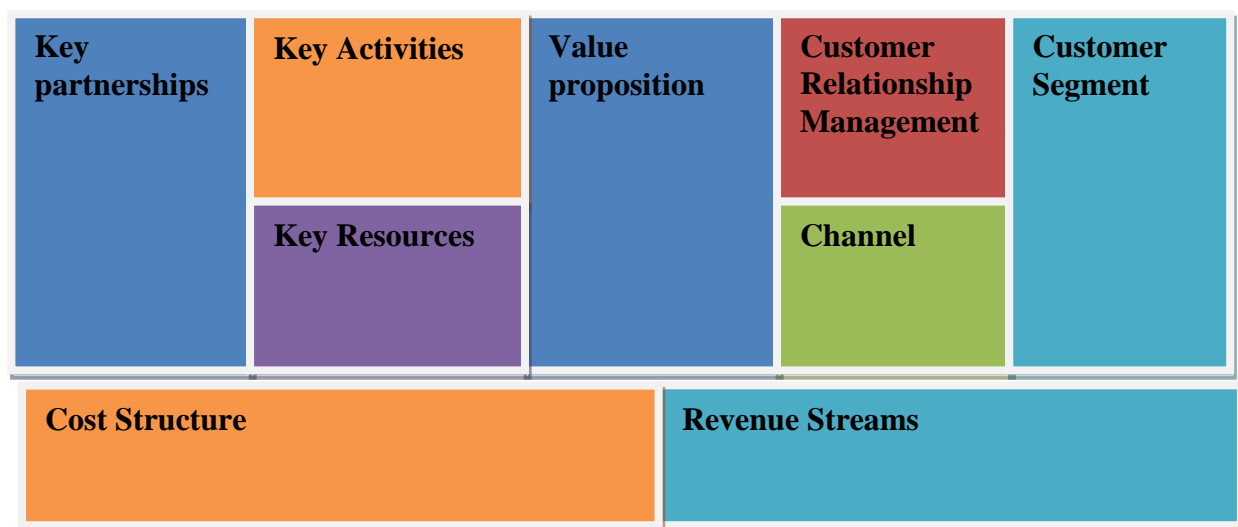

Figure 11 Business Model Canvas

Description on each of the 9 building blocks has been done in the previous section. So, in here the focus is on the summary of what the canvas will help with. First, the canvas helps to describe and think through the business models. The business model canvas can help us understand how organizations actually make money or at least how they are able to deliver and finance what they are doing. For future innovation managers and entrepreneurs, it can be useful to understand the current value creation logic of an organization and see whether there is a room for change and improvement. Therefore, why we use the business model canvas is due to the following reasons. It facilitates a shared understanding through providing a shared language. It

also helps to systematically challenge assumptions and initiative changes. Further, it is simple and covers the four main areas of business viz. customers, offer, infrastructure and financial viability. It also serves as a design for a business strategy which is executed through organizational structures, processes and systems. Moreover, business model canvas helps to develop and test now business which leads to business model innovations.

For entrepreneurship and innovation, the canvas can be useful to communicate an idea. You can use the canvas to communicate a very rough idea/more elaborated one. For a rough idea the canvas can be useful to explore enabling factors that is what would it take to make the idea work. Later on, the canvas can be filled with more detailed information that can be turned into feasibility and viability study. Furthermore, it helps to test ideas and allows you to test the ideas right there on a paper. When you do that it can lead to all types of innovations and combinations. In summary, the canvas allows for entrepreneurs to experiment at different scales. You can ketch out many prototypes and learn from exploring all ideas even the absurd ones without any other consequences that are wasted on a piece of paper. For this course, we are using a design thinking approach and there is a good fit between the canvas and design thinking approach. The canvas can help to address some of the said overall constraints we talked about in the design thinking content. The value proposition and the customer aspect address **desirability**. The key features to deliver the value addresses **feasibility** and the cost and revenue streams address **viability**.

Figure 12 Business Model Canvas and Design Thinking

In addition, process wise the canvas is also a good fit because it can be used in all design thinking spaces. As it allows for prototyping at different scales, the canvas can be used as a game for exploring. It can also be made more detailed for implementation. It facilitates feedback and testing because it provides a shared understanding. In conclusion, the canvas can help creating options from which to choose from. The prototyping aspect is particularly important also for business modeling. The problems are if we freeze and refine ideas too quickly we risk pushing a worst solution to the end of the project.

Quote: *"If you freeze an idea too quickly, you will fall in love with it. If you refine it too quickly you will become attached to it and it becomes very hard to keep exploring, to keep looking for better. The crudeness of the early models in particular is very deliberate." Jim Glymph*

Remember, at the beginning of the innovation process, the focus is about quantity. Many ideas increase likelihood of one good idea. Experimenting with ideas very early helps us to roughly assess the quality of many ideas. This is something that might be difficult for us to do, to rapidly come up with many ideas and let them go off then.

4.3.4   Given Goals versus Imagined Ends

One of the major things that makes innovation and entrepreneurship difficult is that we are dealing with uncertain outcomes. Most of our educational and professional experience is on goal driven thinking. We have to produce a predetermined outcome and our task is to find the best possible way to achieve it. So, what we do is select a means that will help us reach our goal in the best way. This can be called causal or managerial thinking. However, as entrepreneurs, when we are dealing with innovation we have this very disturbing problem that the outcome is by definition uncertain. So, scholars recently found out that what successful entrepreneurs and innovators tend to do is to reverse the thinking process. In the absence of a pre-determined goals, they focus on a pool of given means and start to imagine possible new ends that could be the outcome of using a given set of means. Imagined ends are not predetermined and all shaped by new means and new insights along the way. This can be called entrepreneurial/ effectual thinking.
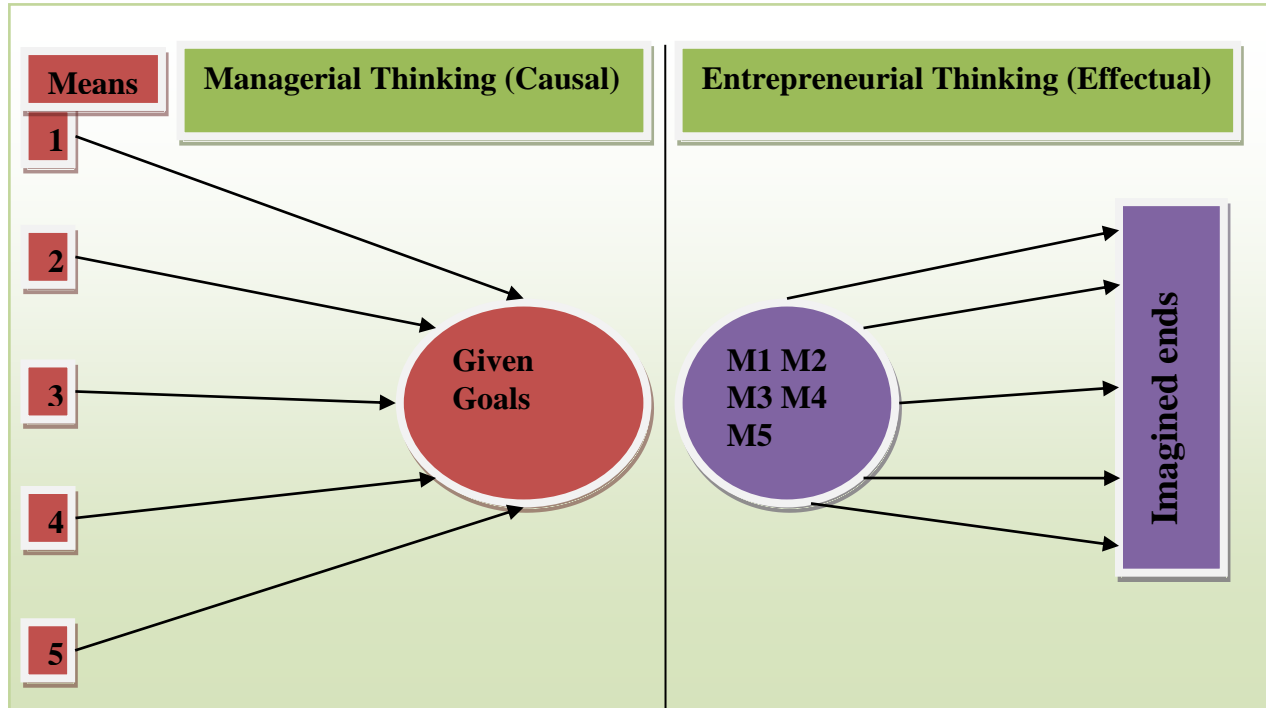
Figure 13 Given Goals versus Imagined Ends (Sarasvathy, 2008)

What makes this way of thinking so difficult for us is that we are accustomed with the linear reasoning in line with the goal driven approach. Thus, even when we hear iterations we tend to think about a step by step process just making a wrong step and going one step back, adjusting the right direction and go ahead again. Yet, thinking about iterations as a step by step process is still very linear orientated. Innovation and entrepreneurship is like standing at the gate of a corridor and it is impossible to see what it holds, until you proceed. New and unintended opportunities can arise as you choose to open doors and windows; enter the rooms and leave them again. In doing so, you are going to learn and build an insight. Your actions and experiences will shape your path.

Review Questions

1. How do entrepreneurs implement their innovative ideas?
2. What is Business Model Generation?
3. Sketch the business model generation canvas together with its nine building blocks?
4. What is value proposition?

4.4 Communicating Ideas

Communicating your idea is important in all spaces of the entrepreneurship and innovation process. This topic will, therefore, focus on communicating your idea, in particular about the so called pitch. You are now aware of that entrepreneurship emerges out of the intersection between opportunities and actions. In this unit we are going to discuss one essential brick of building organizations. We have learned that the use of feedback, getting partners and new means or resources on board is key to building ventures that create value. So, the ability to communicate your idea in a way that enables to obtain valuable feedbacks and makes people willing to commit to the new venture is an essential building block for success in entrepreneurship.

4.4.1   What is a pitch?

The tip of the communication iceberg is so called business pitch which translates into a couple of minutes of attention you have to get from people and make them give you money, new insights and new collaboration. The pitch is usually a super short description of your idea. It is often referred us an "elevator pitch" as you would be able to deliver the pitch in the time it takes to travel on a lift from the ground floor to the investors on the top floor which is less than three minutes. The pitch should be precise and condenses explanation of your idea. It can be an important or an opener on your path along the corridor. In more detail, the pitch should answer questions like What is the problem/ need? What is the solution? Who will it help? How can we make money? and What do we need in order to move forward? Overall, a good way to prepare a pitch is to start out by discussing those questions in your team or with friends. The business model canvas will be useful for addressing these questions. It can also help you to visualize the questions when you make your pitch.

4.4.2   Why a pitch?

A pitch is important because you want to tell and sale your story. Making a pitch is about starting conversation. You want to get feedback on your idea and to get partners on board. The pitch is one of the most important tools for an entrepreneur. The main massage you want to get across is that you meet people and bring them on the board. You want to get commitments and resources. Possible ways to achieve include; showing them your quality product, even if it is a prototype or pointing out a critical need and what you did to solve the problem and high lighting the actual value you are creating. By pointing out very specific key features of your solution, you can show people how talented you are and convince them. However, a simple verbal communication about your proposed value creation is less persuasive. High lighting one prototype adds stability to

your presentation and provides easier and entry points for people. This does not mean that you should not be open for feedbacks and changes along the path. As long as you keep doors for critical questions; the pitch is a great way to learn about the path you are taking. Pitch is also about getting feedback and integrating new perspectives and resources into the next iteration. By integrating and involving your audiences, you can continuously sharpen your idea.

Talking about the audiences brings us to the next section. Most people think of pitching to investors but pitch can be made to customers, employees, strategic partners and many other people who could come on board of your venture. One important thing is that there is no standard pitch. We are going to pitch to different audiences and each audience has different information need and they are going to use the pitch to different end. It is up to you to find out what they really want to know and how they want to know it. Investors are very fast at screening processes. Smaller initial investors will not be able to provide you huge investments and the non-profit partner will be particularly interested in the normal monetary value you create. Ask yourself, who are your audiences? What are you talking? What is that person hearing? What is the one thing you want the person to go with? You might need people who have less time for you than elevator ride. Thus, be prepared for a rocket pitch (30 seconds, 4-5 bullet points). For this, imagine your business for one slide or to five bullet points.

4.4.3   How to Make Good Pitch?

Your pitch is a good pitch if it is as short as simple as possible so that everybody can understand.
 A good pitch consists of three elements.

1.   The content: it should have substance and is the cover of your presentation.
2.   Presentation: the performance of your presentation.
3.   Pitch design: the way you design helps you to link to the performance.

Review Questions

1.   As an Entrepreneur for whom are you going to communicate your business ideas?
2.   Why is pitching so important?
3.   What are the strategies for an effective pitching?

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Suggested Reading Materials:

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Appendix: Solution- connecting the nine dots using four straight lines