MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE

NATIONAL TECHNICAL UNIVERSITY
«KHARKIV POLYTECHNIC INSTITUTE»

LECTURE NOTES

of the academic discipline «Innovative Entrepreneurship and Startup Project Management»
for full-time and part-time students
in the specialties 123 «Computer Engineering», 131 « Applied mechanics», 263 «Civil security»
and 274 «Automobile transport»

Approved by
the editorial and publishing council
of the university,
protocol № ___ from _____2024.

Kharkiv
NTU «KhPI»
2024

Lecture notes of the academic discipline «Innovative Entrepreneurship and Startup Project Management» for full-time and part-time students in the specialties 123 «Computer Engineering», 131 «Applied mechanics», 263 «Civil security» and 274 «Automobile transport»/ authors: Havrys O.O., Havrys O.M. – Kharkiv: NTU «KhPI». – 2024. – 52 p.

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INTRODUCTION

Startups (innovative company or business) are a form of entrepreneurial activity that has become popular in the world since the 90s of the last century in connection with intensive development of information technologies. Startups are characterized by flexibility and a constant search for a business model, the possibility of rapid scaling. **In the world economy startups play an important role in the development of technology, the creation of new industries and thousands of new jobs.**

Innovative entrepreneurial (business) activity implies a high level of risks at the initial stages of creating a business. In the same time, when applying the right approach and methodology to startup development, in particular the Lean approach* and the Fail fast principle*, entrepreneurs can quickly try new ideas, technical solutions, business model and in case of failure, quickly change the decision model and start testing new strategies. It is very important for young entrepreneurs to start acquiring such experience and skills as early as possible.

The *goal of studying the discipline* "Innovative entrepreneurship and startup projects management" *is the formation of a system of knowledge and practical skills in the creation and management of startups at the initial stage*, preparing students to participate in incubation, acceleration and grant programs for the support of startups.

The *main objectives of studying the discipline* are to learn how to fully navigate the basic concepts of startups and understand how to develop your startup; learn how to develop the first project with a business model, marketing plan, team; develop prospects for the further development of this project incubation or acceleration programs.

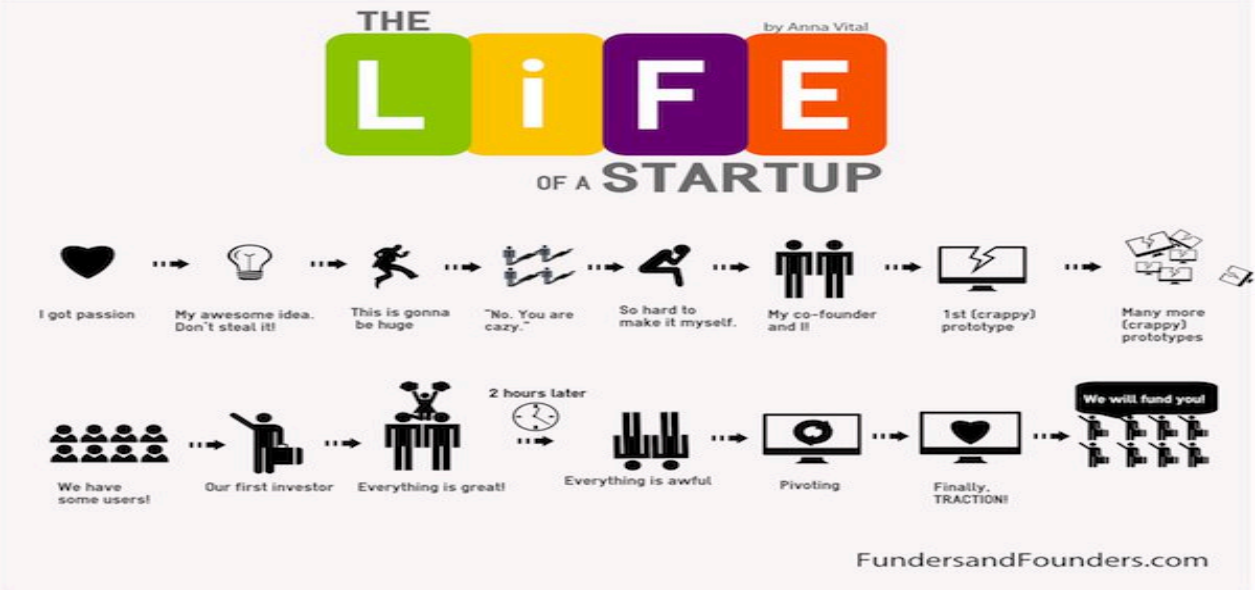
After completing the study of the discipline:

- is fully oriented in the basic concepts of startups;
- has an understanding of how to develop one's own startup;
- has a first project with a business model, marketing plan, team;

- has prospects to develop this project further in incubation or acceleration programs
- has the opportunity to interact with mentors and partners from various fields of activity

***The lean startup methodology is a method of managing and building a business or startup by experimenting, testing, and iterating while developing products based on findings from your tests and feedback.**

***Fail fast is the principle of freely experimenting and learning while trying to reach the desired result. By quickly finding the failures, you can catapult learning and optimize solutions instantly to reach your goal.**



The concept of "startup" arose in the 30s of the last century in America. It was then that two students - Hewlett and Packard - founded a tiny enterprise and called it "start up". It turned out that the company has a great future - these days it is known under the name Hewlett-Packard, or HP.

TOPIC 1. STARTUP ECOSYSTEM

1.1 Basic concepts and startup characteristics.
1.2 Stages of startup development
1.3 Startup ecosystem
1.4 Questions for self-control
1.5 Sources of information

1.1 Basic concepts and startup characteristics

All entrepreneurs start a company with the ambition of making it big; and all companies face inevitable stages of growth and setbacks. A large percent of companies

fail; according to Investopedia (Investopedia is the world's leading source of financial content on the web, ranging from market news to retirement strategies, investing education ect), 90% of startups ultimately dissolve.

Startup is a young company established by one or more entrepreneurs to create unique and irreplaceable products or services. It aims at bringing innovation and building ideas quickly.

It is important to understand that a startup is not a small version of a large company - it is its other, earlier stage. The repeatability of a business model is its ability to adapt over time and be profitable in the long run.

In summary, the main characteristics of a startup are:

1) Temporality. A successful startup often turns into a company, exits (is sold) or is absorbed by competitors;

2) Innovativeness. A startup must have a certain innovative component to successfully compete on the market;

3) Scalability. *Scalability* - the ability to quickly, without a lot of resources, enter new markets - is one of the key characteristics of a startup;

4) Constant uncertainty and lack of stability, great risks.

Figure 1 shows the main characteristics of the startup.

1.2 Stages of startup development

Being an entrepreneur involves quite a lot of risks. And almost all of them are difficult to foresee or overcome. That's why it comes as no surprise that eight out of ten young companies fail in the first several years of their existence. One of the reasons why it happens is that entrepreneur does't have a clear picture of where startup is heading. For that reason, entrepreneur needs to be aware of the gist of phases of a startup to see when is the right time to raise funds so as not to lose your company.

A startup is a company founded by an entrepreneur (or a group of them) to meet market demand (sometimes hypothetical) with the help of a product or services they provide under uncertain and volatile conditions.

When starting a business, you'll go through different phases like with any journey you undertake. This next section introduces different startup journey theories to give you some idea of what to expect over the life-cycle of your growth. Understanding which phase you're at is useful as it helps you focus better on the task at hand and helps you prioritise.

There's no exact or universal classification of startup phases. Hence, you may find a lot of scattered information and definitions across the various sources and from different entrepreneurs. The reason behind is that stages of startup development are as volatile as startups themselves, and they can be convoluted and intertwined with one another to a certain degree. That's why it's difficult to draw a clear line where one stage finishes and another one starts.

The detailed classic as they say the *classic correct model* offers the following stages of startup development:

Team Building -> Problem Finding -> Idea/Solution ->

Validation of the problem and target audience (Customer Discovery phase) -> Prototype (MVP - Minimum Viable Products) -> Testing (Customer Development phase) -> Product Development/Improvement -> Output to market/Scaling.

Three stages from startup commons: This framework lays out the path from the initial idea to having a product and then scaling it (fig. 2).

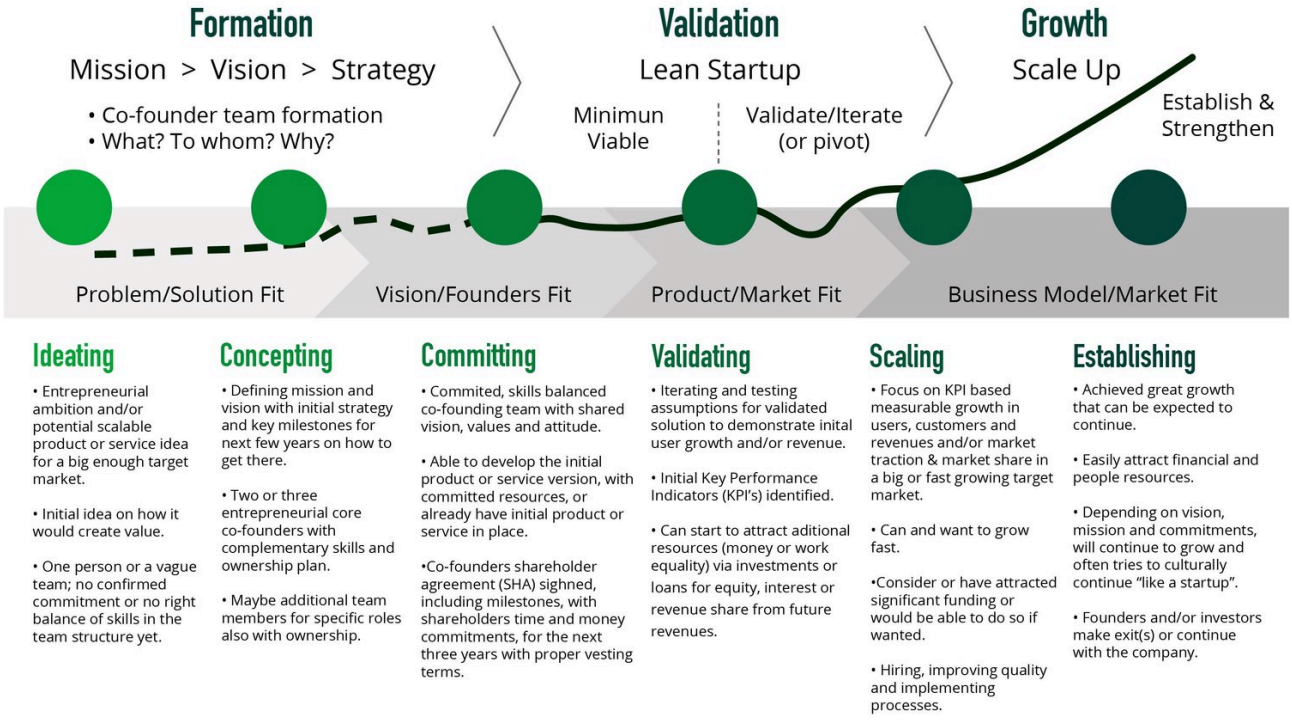


Figure 2 – Main stages of startup development

As we have already understood, startups go through several stages or steps during their life cycle. Each stage has its own special challenges and tasks. The seven stages of a company's life include the following stages: idea, prototype, MVP, product launch, scale, potential profitability, and cash cow (figure 3). This is essentially a reflection of the previous sequence shown in figure 2, but from the original angle of view.

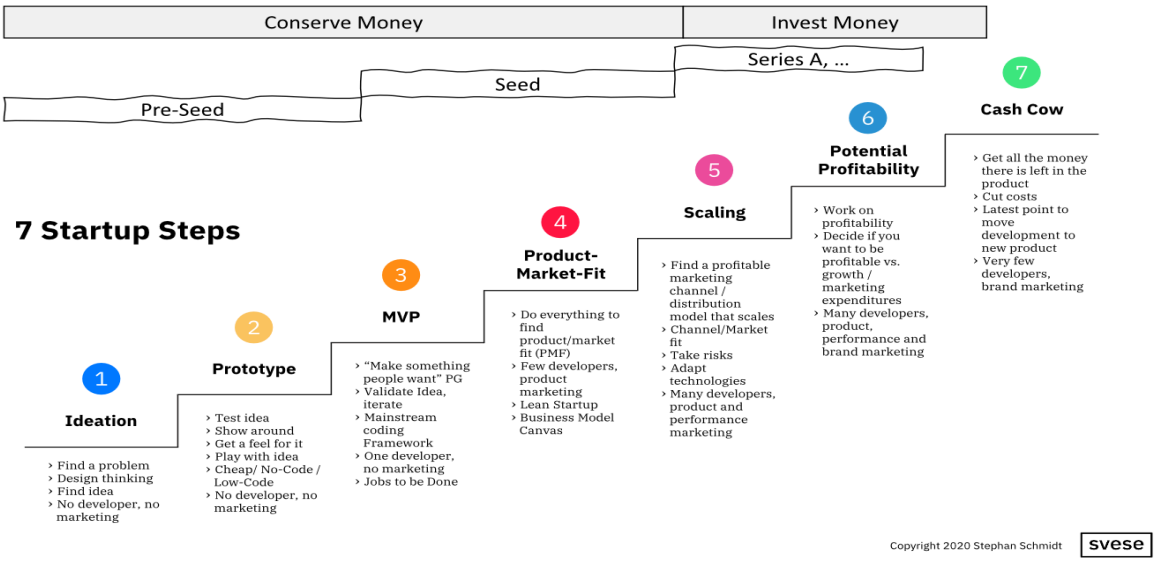


Figure 3 – Main stages of startup development

1. The first phase is Ideation. **Here a startup needs to find the right problem to solve and the right idea for a solution**. Many founders have their idea and jump over this phase and neglect it. Whether you have an idea or not, do not skip this phase. There might be a slightly different, slightly better idea. Getting the idea right prevents a lot of costly work later. This phase is often characterized by Design Thinking to help find an idea for a problem. You can use a fake landing page to early test demand. There is no need for technology, a developer or for marketing in this phase.

2. Next, it is time to build a prototype. **The goal is to test an idea, play with the idea, test feasibility and have something to show around to friends, potential customers, potential employees and investors**. Technology is characterized by cheapness. There often is no need to write code. Instead no-code or low-code solutions are enough here. If the technology of your idea is challenging and not of-the-shelf, you can use that technology in the prototype to see if you can make it work. Remember that people will judge your idea by how it looks. Either take that into account when evaluating feedback, manage expectations or invest in a designer. Again, in this phase, you do not need developers or marketing.

3. Build an MVP. The difference of the minimum viable product (MVP) to a prototype is that the MVP is something people could buy and would pay for. Many startups confuse an MVP with a prototype and mix these two phases up. If you build an MVP to test the feasibility of your idea, you are doing it wrong. **As Paul Graham says,**

“Make something people want”. Validate the idea with the market and potential customers. Learn about the jobs to be done (JTBD) from potential customers and round out your product to something a customer is willing buy. Iterate on the idea until it is right. Often startups use exotic technology, the newest shiny kid on the block. Do not do that. Use a mainstream coding framework to create your MVP. Everything mainstream should be fine, be it PHP, Ruby, Python or JavaScript. The main benefit is a framework where you do not have to write all the code yourself. One developer is enough in this phase, you do not need marketing. One common mistake is to hire marketing in this phase or more than one developer.

4. The fourth phase is the most difficult one, where startups make the most mistakes. It is about finding product market fit (PMF). **You need to concentrate every effort in the startup on finding product market fit. Do not deviate and do not get sidetracked**. In this phase the lean startup methodology really shines and helps you find PMF. Product market fit means that the market pushes into your product and you no longer need to pull everyone in from the market. Product market fit means sticking customers and tailwind from the market. The biggest mistake is to not find product market fit and buy growth with investor money. This often happens when you have significant investment before you have achieved PMF. Then VCs might push for growth. Many startups think they have PMF when they have not. They cannot endure the time it takes to find product market fit and skip this phase to premature scaling. Scaling on top of a product without PMF leads to high churn and low customer satisfaction. Every penny spent on scaling in this phase is wasted. Startups need only a few developers in this phase as finding product market fit is not parallelizable. Resist hiring too many developers to “get more done”. You urgently need product marketing in this phase. Product marketing tells customers about the product, explains the product, tells customers about new features and increases feature usage. When customers use your features, they will stick. You do not need performance marketing, growth marketing and obviously not brand marketing before product market fit.

5. **Now it is time to spend money.** The scaling phase is here. The goal is to find a profitable marketing and distribution channel and find channel market fit. Then spend money with the channel that is working to scale your startup. You have a working product, but in the scaling phase you might need to adapt technology to your growth. So, parts of your tech stack need to be specialized other parts need to be replaced. Not only do customers grow in this phase, but so does you startup. To scale you need many developers. Marketing spend is a mix of product marketing and performance marketing to support and fuel growth. The beginning of the phase is the last time to take risks. The time to take risks in a startup is as early as possible. The earlier the better. With growing customer numbers and growing revenue, the appetite for risk vanishes.

6. Then there is profitability, or at least potential profitability. After growth is maxed out or growth money has dried up **it is time to look at the costs. The goal of this**

phase is to get into a position where you can decide to be profitable or not. If you cut marketing down, you are profitable. If you want to grow faster and spend more on marketing, you decide not to be profitable. But it is your decision not something forced on you by costs. You still have many developers working on the product and marketing works on product marketing, performance marketing and brand marketing. It is now time search for new product development and find a new product or new main feature that drives your next growth curve. Many companies miss this point and move into the next phase without having started new development.

7. The last phase for a product is cash cow. The product has achieved a high market share and future growth is limited. **The goal of this phase is to get all the money that is left in the product.** Optimize for costs to increase margins. After the beginning of becoming a cash cow is the last point to find the next star. It is already late to start a new product as most of your employees that can invent and scale a product probably have already moved on. The biggest mistake in this phase is not to stick to new product development. A new product is like a new startup, it takes years to succeed. You only need very few developers in this phase. Companies usually have too many developers working on their cash cow because they have not moved into new product development. Developers develop features that do not move the needle. Marketing is mostly brand marketing.

How can you make this work for you? To prevent frustration a startup needs to know in which phase it is in and act accordingly. Do the right marketing for the step, hire the right amount of developers and align the whole company. Every employee needs to clearly know where the startup stands, what is the goal of the current phase and what needs to be achieved to successfully get to the next step. Then success does not depend on luck and everyone is acting in concert.

Today, startups are becoming one of the most attractive places for investment, and the majority of innovative and new products and services are created by startups. Startups can develop more effectively in a developed startup ecosystem.

1.3 Startup ecosystem

The term "ecosystem" comes from biology and means a community of living organisms, their habitats, communication systems, the exchange of matter and energy between them. There are many ecosystems. We should pay attention to one of them - the startup ecosystem.

When talking about a successful ecosystem, they often refer to the example of Silicon Valley. But no one comes to Silicon Valley just to rent an office - obviously, there are cheaper places. They come just for the ecosystem, for what is happening inside - this is a network, access to talents and cool mentors, a vibe and a culture in which it is important not how many times you fell, but how many times you made new attempts on the way to success. This is a special culture of entrepreneurship.

Startup ecosystem is an environment in which all players related to the startup industry in one way or another interact. The more actively and openly the players of the ecosystem interact with each other, the more opportunities there are for startups.

In a simplified form, the startup ecosystem consists of the following components (fig. 4):

1. Entrepreneur (sturtups);
2. University;
3. Government;
4. Corporations;
5. Investors.

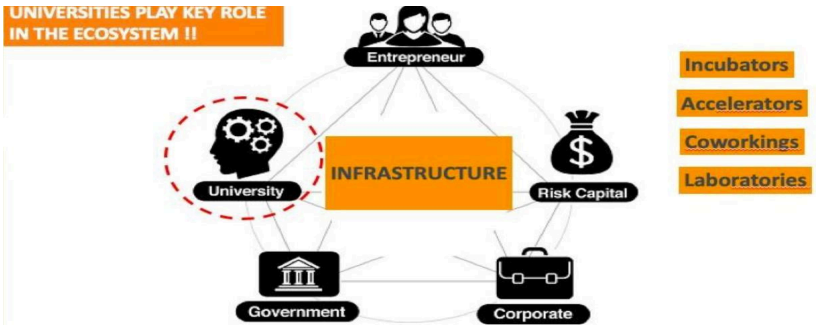


Figure 4 - View of the startup ecosystem (MIT Innovation ecosystem Model)

The *university* should create all the conditions for education and the growth of student startups. The scientific infrastructure of the university should contribute to the emergence of science-intensive and technological startups.

The *government* should support entrepreneurs and implement relevant legislative initiatives.

Corporations often become initial customers of startups and help in testing ideas, hypotheses and testing.

Investors provide seed capital and help startups grow and enter the market.

Also, an important element of the ecosystem is the *infrastructure*, which includes organizations that promote the development of startups - *incubators and accelerators, coworking spaces, laboratories,* etc (fig. 5).

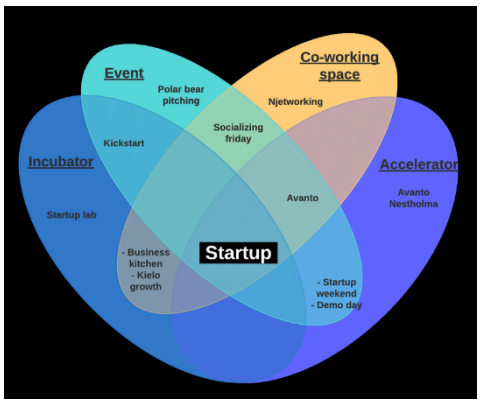


Figure 5 - Organizations that promote the development of startups

Incubators and accelerators are one of the most important components. These organizations are created to help startups in the early stages of development. Accelerators and incubators create such an environment in which it is easier for young entrepreneurs not to make mistakes. Educational programs are conducted, mentoring support and grant funding or first investments are provided. Participation of a startup in incubation or acceleration programs significantly increases the chances of success at an early stage. Probably the most famous startup accelerator on the list, YCombinator has launched over 4000 startups. YCombinator one of the best startup accelerators in the US. Portfolio companies include Stripe, Airbnb, Coinbase and Twitch. **Information about the 50 Best Startup Incubators & Accelerators in the USA (2022) you can find here** https://altar.io/best-startup-accelerators-usa/

Startup ecosystems are formed often in a relatively limited area with a center of gravity like a university or a concentration of technology companies. This ecosystem draws together key actors and stakeholders that gravitate towards growth ventures, including new entrepreneurs, mentors, incubators, sources of talent such as universities and corporations, investors and supporting services like startup-savvy law and accounting agencies.

Startup ecosystem is formed by people, startups in their various stages and various types of organizations in a location (physical and/or virtual), interacting as a system to create new startup companies.

These organizations can be further divided into categories: universities, funding organizations, support organizations (like incubators, accelerators, co-working spaces etc.), research organizations, service provider organizations (like legal, financial services etc.) and large corporations. Different organizations typically focus on specific parts of the ecosystem function and/or startups at their specific development stage(s) (fig. 6).

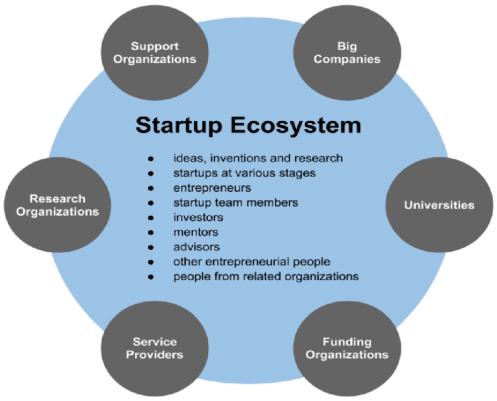


Figure 6 – Startup ecosystem

The information about the 10 hottest startup ecosystems in the world you can find here https://venturebeat.com/business/the-10-hottest-startup-ecosystems-in-the-world/

Global Hub	Overall Rating
Silicon Valley	75
Stockholm	67
Tel Aviv	65
NYC	64
Seoul	58
Boston	58
Los Angeles	57
Beijing	55
London	53
Berlin	53

TOPIC 2. PRINCIPLES OF STARTUP TEAM BUILDING, ROLES IN THE STARTUP TEAM

2.1 Startup team building
2.2 Vision and Mission of startup
2.3 Roles in the startup team
2.4 Questions for self-control
2.5 Sources of information

2.1 Startup team building

Most startup developers consider having an original idea their key success factor. However, the lack of people nearby who are able not only to fully understand the essence of the author's idea, but also to implement it as efficiently as possible, despite the presence of various obstacles and unfavorable factors, is fraught with the fact that the startup project will not take place at all. From 75% to 90% of startups fail. And one of

the main reasons is not having the right team in place to make the company successful (fig. 1).

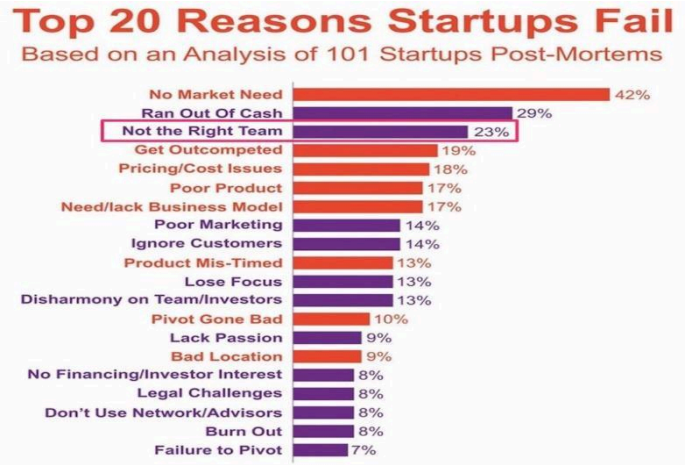


Figure 1 – Reasons why startups fail

The startup team at the initial stages usually consists of friends and like-minded people, but with the development of the project and the growth of its implementation, there is a need to attract professionals in various fields (marketing, finance, sales, operations, attracting investments, etc.). Therefore, the *formation of a well-coordinated team is the most important issue for the successful development of a startup project. To launch your startup and make it work, you need to build a strong team that can put your idea into action.*

Team (from Latin commando – "I entrust", "I order") is an association of like-minded people guided by a common goal (goal for startup team is creating the successful startup). Given the limited resources at the initial stages of the implementation of the idea, the issue of the number of people in the team must be approached carefully and increased as necessary.

So, *team* is a group of people who are united by a common goal and complement each other in achieving the goal, share common values and have a common vision and mission. Complementarity is one of the key components in a team. However, it is obvious that the skills and approaches of all team members must be different in order to effectively implement a startup.

2.2 Vision, Mission and of Values a startup

Figure 8 –

The *vision* is long-term, the *mission* is current.

Vision is an understanding of where a startup and a team are moving and where they should come in the long run. A vision is comparable to an almost unattainable dream. It is important that the long-term vision is the same for all team members. What is a startup for? Where is the team going?

The *mission* is the team's understanding of exactly how to achieve the vision with its product or service. This is what the startup does and how it does on a day-to-day basis to achieve long-term goals. What is the company doing now? What products does it create? What distinguishes it from competitors?

Values are views that are shared by the entire team and are the main criteria for making certain decisions.

Examples:

Disney - "Making people happy" (**Vision**).

Instagram - "Capture and share moments from around the world" (**Vision**).

IKEA - "To create a better everyday life for people" (**Vision**).

IKEA - "To bring our vision to life, our business idea is to offer a wide range of beautiful, functional home furnishings at prices so low that everyone can afford them" (**Mission**).

2.3 Roles in the startup team

For the most efficient work of a startup team, it is important to correctly distribute the roles in a startup to get a high result.

We all know the stories about Steve Jobs and Steve Wozniak, Bill Gates and Paul Allen (fig. 10). There are two distinct types in these stories:

1. The author of the product is *hacker*. His area of responsibility: product, creation and production of a product, an expert in a certain subject.
2. Business producer, organizer, entrepreneur - *hustler*. His area of responsibility: sales, resources, communications, an expert in a particular market.

The author is looking for a producer who can provide him with a market, sales and all the necessary resources, so that he does only what he loves and is not distracted by sales, logistics, administrative concerns, etc.

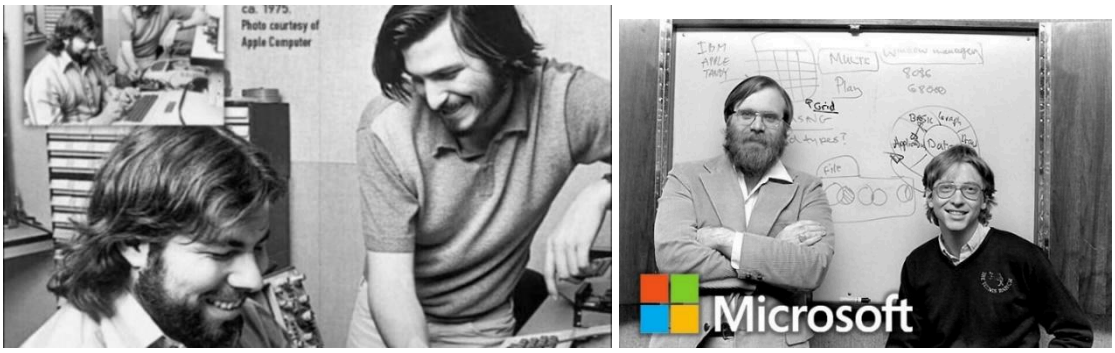


Figure 10 –Steve Jobs and Steve Wozniak, Bill Gates and Paul Allen (*hacker and hustler*)

At the very beginning, at the idea stage, when the founder is not yet a founder, but only a person who came up with a brilliant idea, the whole team is himself - a *hacker* - the creator of the idea. At this stage, this may be enough, because now the goal of a future startup is to test its idea for viability (to conduct primary market research, describe the characteristics of a product that will bring value to users, communicate with these very future users). If the founder is up to these tasks, then it can be called a *minimum viable team*. This is how it is customary to call a team that is able to convey the minimum value to the user of their product, solving their problem. The prerequisite is the sale of value or the promise to deliver that value when the product is created.

However, it is believed that to create a *minimum viable team*, you need 3 types of roles, which, being in your team, together create a kind of formula for success. These 3 roles should be to interest the investor, move forward to success and actively grow. The first to put forward this theory was AKQA CTO Rei Inamoto and called it "3H" - *Hipster, Hacker, Hustler*." In figure 11, you can see the features of each role.

1. *Hacker* is a developer or someone who is responsible for all the technical issues that arise when creating a product.
2. *Hipster* is a designer who creates a beautiful wrapper and generally makes the product attractive.
3. *Hustler* is someone who promotes the product, a businessman who is looking for sales markets.

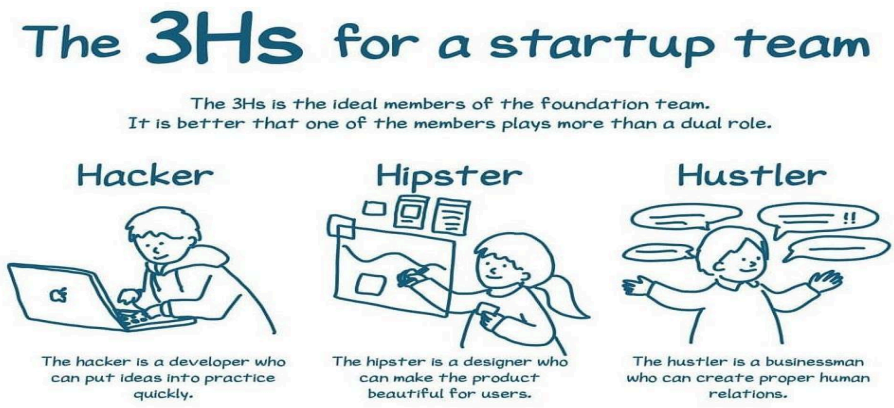


Figure 11 – «3H»: Hipster, Hacker, Hustler

In Figure 12, you can see the very famous triad of Apple creators - each has its own role.

Figure 12 – «3H»: *Hipster, Hacker, Hustler* in Apple

Recall that startups have become popular since the late 90s of the 20th century and the number of roles has gradually increased over time, so let's consider the following theory of roles in a startup. According to many, one more should be added to the previous 3 roles, because there is a lack of an *handler* – a researcher who would identify mistakes and find ways to avoid them in the future. So, the following model includes 4 roles – Hipster, Hacker, Hustler and Handler (fig. 13).

1. *Hustler* – the business lead who makes the sales
2. *Hacker* – the principle developer who builds the product
3. *Hipster* – the person concerned with user experience and design
4. *Handler* – the person managing time and road mapping features

Of course, there are other approaches to the distribution of roles in startups, especially in those that are already on their feet and have a larger size, larger sales volumes, and a larger number of employees. So, let's consider another more modern classification of roles in a startup, which already contains more roles and applies to larger startups that have finally gained strength.

Startup roles are heavily dependent on what the company does. The number of roles also changes based on their size. This is why it is often useful to understand roles in the context of personalities, rather than job positions.

Officers who hold C-level positions are typically considered the most powerful and influential members of an organization; consequently, these executives set the company's strategy, make high-stakes decisions and ensure day-to-day operations align with fulfilling the company's strategic goals. They are also typically the highest-paid people in a company. C-level executives must have strong leadership and communication skills, as well as team-building abilities.

An example of roles in a developed company at the management level (*C-suite*) you can see at the figure 12.

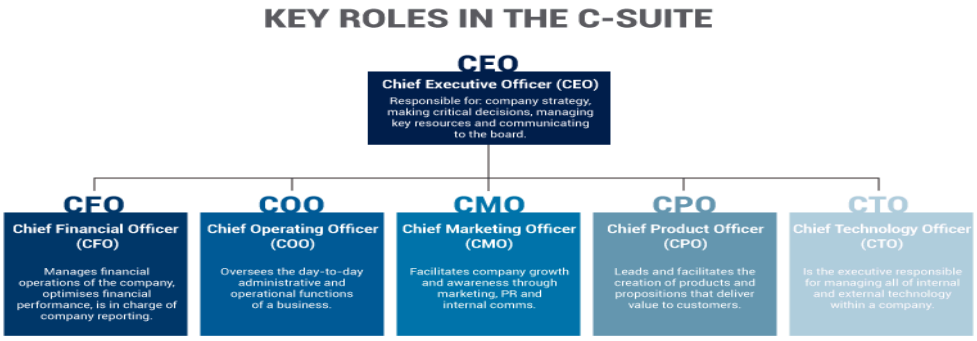
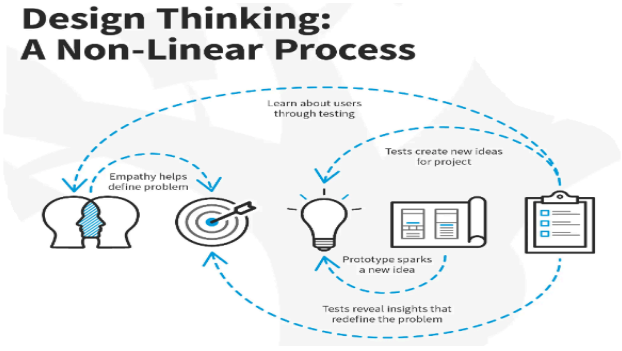


Figure 12 – Key roles in the C-suite

TOPIC 3. DESIGN THINKING AS A NEW PARADIGM OF STARTUP DEVELOPMENT

3.1 Basic concepts and principles.
3.2 Design Thinking as a step-by-step process.
3.3 Design Thinking as a way of thinking.
3.4 Benefits of Design Thinking.
3.5 Questions for self-control.
3.6 Sources of information.

3.1 Basic concepts and principles



The problem is why a startup is launching. The goal of every startup is to find a people's "pain" that can potentially be solved. In this context many people will have come across the term *Design Thinking* but may not be 100% sure on what it means or how to apply it.

Design Thinking (DT) is a way of problem-solving that prioritizes user needs, whilst encouraging creativity and collaboration within a multi-disciplinary (multi-profile) team (specializing in several areas, that is, the team has people with different skills, abilities and experience). Typically, it is used in the development of products or services but can ultimately be applied to any challenge involving a human experience and is scalable to global issues such as tackling poverty and climate change.

There are several good definitions of *design thinking*, but the most popular is Tim Brown's* definition: "*Design Thinking is a* ***human-centered approach to innovation*** *that relies on a designer's toolkit to integrate the needs of people, the capabilities of technology, and the requirements of business success."*

* Tim Brown is CEO and President of design company IDEO. The company has developed more than 5,000 products, including a computer mouse for Apple, a children's toothbrush for Oral B and much more.

DT brings together what is desirable from a human point of view with what is technologically feasible and economically viable.

Therefore, the aim of DT is to develop a product or service which lies within the intersection of the three aspects (fig. 1).

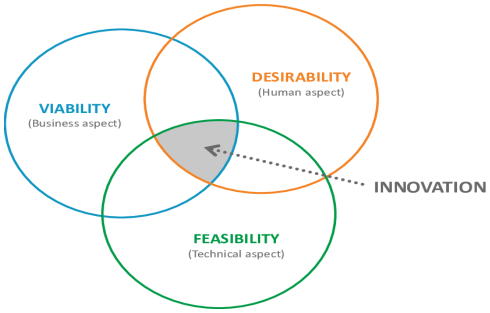


Figure 1 – Design thinking as a system of overlapping spaces

Desirability: What makes sense to people and for people?
Feasibility: What is technically possible within the foreseeable future?
Viability: What is likely to become part of a sustainable business model?

The *roots of Design thinking reach all the way back to 1969* when a Nobel Prize winner in Economics, Herbert Simon, defined a design as “the transformation of existing conditions into preferred ones”. In his work he differentiates between tasks that create something new and tasks concerned with existing reality, but he does not establish a connection between creative and engineering aspects (Johansson et al., 2011). Another key author who planted the seed for what was later named Design thinking was Horst Rittel (who in 1973 together with Webber coined the phrase “wicked problems,” a term referring to complex design hurdles (barriers)).

Figure 2 – Quotes of Herbert Simon and Horst Rittel with Melvin Webber

Contemporary forms of that process still exist today, in our time *Design thinking* is a *human-centered* approach to innovation – anchored in understanding customer's needs, rapid prototyping, and generating creative ideas – that will transform the way you develop products, services, processes, and organizations. By using design thinking, you make decisions based on **what customers really want** instead of relying only on historical data or making risky bets based on instinct instead of evidence.

If you work as part of a product development team, you have probably followed Design Thinking principles, even without realizing it. In reality, the ideas and methods unified by the practice were around long before the time when the term was born. They also overlap with several different frameworks including human-centred and service design. It is important to understand that Design Thinking is a mindset as well as a process, and that both are essential to promote innovation.

As already mentioned, the Design Thinking process is progressive and highly user-centric. Before looking at the process in more detail, let's consider the four principles of Design Thinking as laid out by Christoph Meinel and Harry Leifer of the Hasso-Plattner-Institute of Design at Stanford University, California.

- **The human rule:** No matter what the context, all design activity is social in nature, and any social innovation will bring us back to the "human-centric point of view". The problems must be solved by satisfying the human requirements and recognizing the human element in all technologies.
- **The ambiguity rule:** Ambiguity is inevitable, and it cannot be removed or oversimplified. Experimenting at the limits of your knowledge and ability is crucial in being able to see things differently. We perform experiments to the limits based on our knowledge, control events based on our limits, and liberty to see things *from different perspectives*.
- **The redesign rule:** All design is redesign. While technology and social circumstances may change and evolve, basic human needs remain unchanged. We essentially only redesign the means of fulfilling these needs or reaching desired outcomes. In today's world, technology and social events have been consistently

evolving. We must study and analyze how the requirements of humans were met in earlier times.

- **The tangibility rule:** Making ideas tangible (material) in the form of prototypes enables designers to communicate them more effectively. If we make our ideas tangible for prototypes, it facilitates designers to communicate effectively.

3.2 Design Thinking as a step-by-step process

Design Thinking is a method of developing products and services that are ***customer-oriented.*** In the most widely adopted model, the one from Stanford School, Design Thinking comprises of five stages – Empathise, Define, Ideate, Prototype, Test (figures 4 and 5).

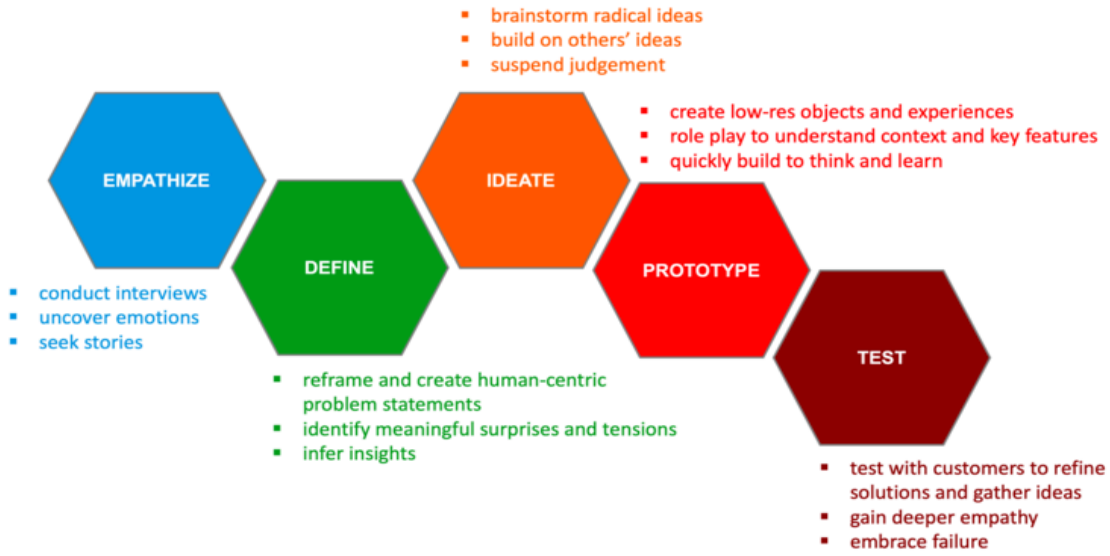


Figure 4 – Design Thinking Process

Each part of the 5-step process is described below. The goal of those descriptions is to give enough to understand why the step is important and what to do generally. When we zoom in on the process and look at the activities used during the process, we see where all the action happens. So those too are described or at least mentioned for common activities.

Note that there are countless activities and techniques that can be used for each of the five steps in the Design Thinking process. Here mentioned only a few that are good starting points. Google searches for the activities listed will yield more details.

❖ ***3.2.1. Empathize.*** This stage focuses on understanding your users' needs thoroughly by studying and observing their behaviors and feelings. Since trying to understand what users think or feel is more difficult as we cannot observe that

information directly, psychology knowledge helps us to interpret people's thoughts and feelings from their behaviors.

Empathy is the ability to put yourself in another person's shoes. Methods of building empathy:

1. Questions, interviews – live and online methods;
2. Observation (tendencies), interpretation of behavior;
3. Walk the customer journey yourself – do what customers do with their own hands – how do they solve the problem now? Try to repeat this path and find your weak points.
4. Involve the user in the development – involve the potential customer in the product development process.

It is important to understand that the Client is the one who pays, and the User is the one who uses. It can be 2 different types of people, or it can be one person?

Information can be obtained by primary and secondary methods. Primary – direct interaction - in-depth interviews, observations, experiments. Secondary – use of data, statistics, analytics, trend monitoring.

The main rules of the interview:

1) Ask "Why?". Rule 5 why.
2) Never say "usually".
3) Watch for inconsistencies.
4) Watch your body language.
5) Do not be afraid of silence.
6) Do not offer your own answers.
7) Do not ask rhetorical questions.
8) 1 question - a maximum of 10 words.
9) Ask neutral questions. "Do you like shopping" instead of "Do you think shopping is so much fun?"
10) Maximum of 4 people in a team.

To fix the results and deeper immersion in a person's life, an *Empathy Map* is used - a tool that allows you to better understand the user's context (Fig. 6, 7).

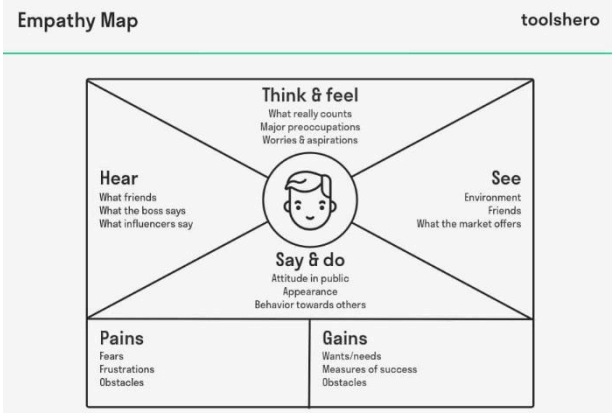


Figure 6 – Empathy map template

Advantages of using an Empathy Map:

- Better understanding of the end user
- Important information summarised in a clear visualisation
- Highlights of the most important insights from research are explained
- It's quick and cheap to use; easy to adapt.

An empathy map is a simple, easy-to-digest visual that captures knowledge about a user's behaviors and attitudes. It is a useful tool to helps teams better understand their users. Empathy mapping is a simple workshop activity that can be done with stakeholders, marketing and sales, product development, or creative teams to build empathy for end users. For teams involved in the design and engineering of products, services, or experiences, an empathy mapping session is a great exercise for groups to "*get inside the heads*" of users.

Creating an effective solution requires understanding the true problem and the person who is experiencing it. The exercise of creating the map helps participants consider things from the user's perspective along with his or her goals and challenges.

Empathy maps are most useful at the beginning of the design process after user research but before requirements and concepting. The mapping process can help synthesize research observations and reveal deeper insights about a user's needs. (The maps are most effective when based on research data, but like provisional personas, can be built using knowledge from internal participants or using existing personas.) It can help guide the construction of personas or serve as a bridge between personas and concept deliverables.

Empathy maps allow you to specify audience data and answer the question "What is your client?" in detail. It helps you:

1. *Divide the audience into "ours" and " others ".* "Ours" are those who you can help solve their problem with your product or service. "Others" are those who may not have the problem your product or service solves. You do not need to sell to those who do not need your product. Yes, you can create demand, but you will spend a lot of money and time.
2. *Consumer segmentation.* In the process of analyzing the target audience, it may turn out that you have several pre-defined segments. This is just good because you can create several promotion strategies in the future. Empathy maps help identify audience segments and offer solutions for each of them.
3. *Understanding what to talk about with your audience*. By detailing the needs of the target audience, you will understand what to talk about with customers. Empathy maps show things that your audience is interested in.

Why you can't do without marketing analysis? In many sources, there is a statement that empathy maps can be drawn up in half an hour or an hour. But actually, it

is not. In an hour, you can draw the map itself, if you have all the necessary data on hand. Otherwise, you need to conduct a marketing analysis, then systematize everything.

There is also an erroneous assertion that empathy maps are how you imagine a client, something that you can think of, fantasize. Yes and no. On the one hand, this is not a clear portrait. On the other hand, if it is based on marketing analysis, then it is closer to reality than the standard consumer profile.

Therefore, before creating an empathy map, marketing analysis is a must.

❖ *3.2.2 Define*. Successfully defining the problems faced by your users is essential to offer a clear focus for subsequent design stages. Spending time at this stage, engaging stakeholders, and using proven techniques will minimize obstacles moving forwards.

You'll gather all of your findings from the empathize phase and start to make sense of them: what difficulties and barriers are your users coming up against? What patterns do you observe? **What is the biggest user problem that your startup team needs to solve?**

By the end of the define phase, you will have a clear problem statement. The key here is to frame the problem in a user-centered way; rather than saying "We need to…", frame it in terms of your user: "Retirees in the Bay area need…"

There is a "5 why" method. You need to ask "WHY" at least 5 times *about a particular problem* to find a really deep reason.

Here also there is a *technique called "Point of view" or How might we*? How can we help a specific person do something with a product or service? The goal is to analyze the problems received during the empathy stage and break them down into narrower problems.

❖ ***3.2.3 Ideate.*** The Ideation stage is arguably **the most important phase of the process**. The hardest part of any new project or task is getting started. That's why the Ideate stage of the Design Thinking process is so important. The goal is just as it sounds: to propose as many ideas as possible to solve the problem of your clients at hand. The goal is not to evaluate or judge the viability of these ideas but, rather, to get the creative and problem-solving juices flowing.

Often, the first ideas shared during the Ideation stage are among the most obvious. Brainstorming ideation sessions can help design teams move beyond easy answers, challenge assumptions, and think outside of the box to find not just the easy answer, but the best answer.

There are a variety of ideation strategies you can use to generate ideas, so choose the ones that best suit your needs (fig. 9).

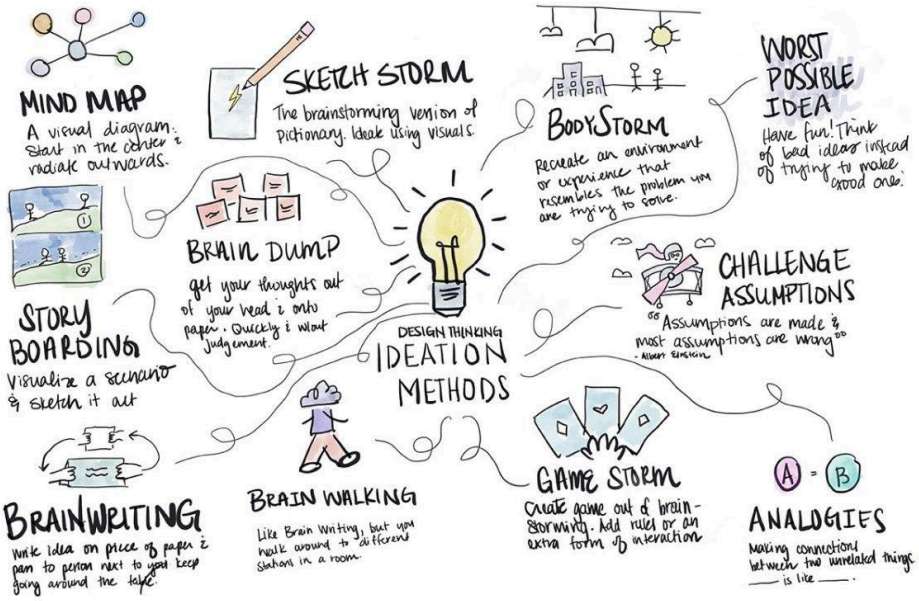


Figure 9 – Ideation techniques

❖ ***3.2.4 Prototype***

Stage 4 in the Design Thinking Process: Prototype. One of the best ways to gain insights in a Design Thinking process is to carry out some form of prototyping. *This method involves producing an early, inexpensive, and scaled down version of the product in order to reveal any problems with the current design*. Prototyping offers designers the opportunity to *bring their ideas to life*, test the practicability of the current design, and to potentially investigate how a sample of users think and feel about a product.

Prototypes are often used in the final, testing phase in a Design Thinking process in order to determine how users behave with the prototype, to reveal new solutions to problems, or to find out whether or not the implemented solutions have been successful. The results generated from these tests are then used to redefine one or more of the problems established in the earlier phases of the project, and to build a more robust understanding of the problems users may face when interacting with the product in the intended environment.

Prototyping methods are generally divided into two separate categories: low- and high-fidelity prototyping.

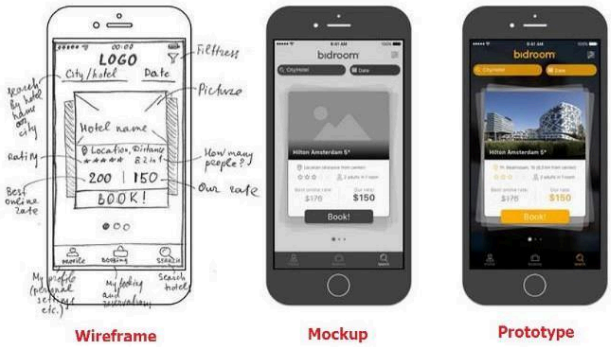


Figure 17 – Prototyping

Here is a diagrammatic representation of the flow of the design process. The further along the design process, the higher the fidelity expected.

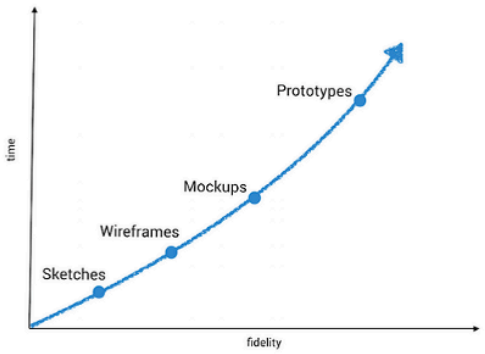


Figure 18 – Flow of the design process.

❖ ***3.2.5 Test***

Testing phase is when the final solution of a product is tested on a full scale. It helps to evaluate whether a solution might or might not work. At this stage you have a prototype that is as close to market as possible, but before putting it out into the market you need to carry out full-scale testing. Here the stakes are high. *If the end users are satisfied, you go into production*. If the end user is not satisfied then the entire process is repeated while incorporating feedback you've gathered to reframe the problem and follow the steps.

If the testing shows good results, you can start *implementing* the project. Thus, we can add this stage to the previous five, although to some extent it is already beyond design thinking (fig. 20 and 19).

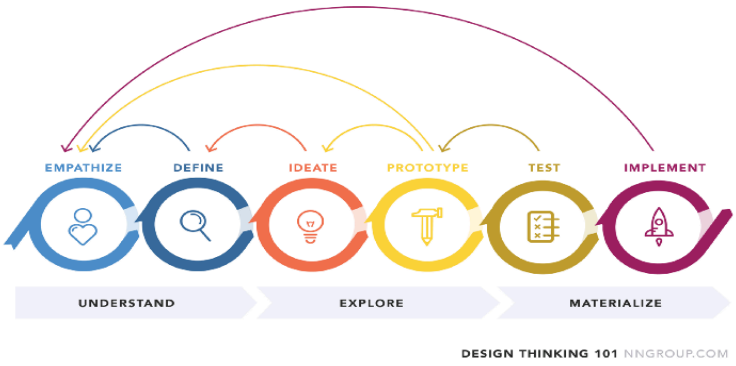


Figure 19

Implementation is taking an idea in your head, and transforming that idea into something real and usable by users. As impactful as design thinking can be for an organization, it only leads to true innovation if the vision is executed. The success of design thinking lies in its ability to transform an aspect of the user's life, and is arguably the most important step.

3.3 Design Thinking as a way of thinking

The six stages of Design Thinking are brought together by a common mindset which must be adopted to maximize the effect of the approach. This means that when building the project team, you should ensure members are open minded, curious, non-judgmental, and collaborative. However, you should also enlist those with specialist knowledge to offer different perspectives and expertise throughout the project.

By introducing the concept of Design Thinking upfront, you can be confident that everyone understands the process, and is ready to follow the principles below:

- **Keep the user in focus.** Understand and empathize with users in order to think beyond personal experiences and assumptions to reach innovative solutions. Place user insights at the core of each stage in the process, with a continued openness to research to address any unknowns.
- **See problems as opportunities.** Remain optimistic, with an open mind about how to solve each challenge, and re-frame problems in a way that motivates the team to move forwards. Recognize when there is an opportunity to build on the ideas of others to support development through collaboration.
- **Show, don't tell**. Communicate insights and ideas visually to support creativity, storytelling and impact within the team and wider business. Take the same approach to user testing, using visual prototypes to uncover natural reactions to solutions.
- **Bias towards action.** Drive progression by holding workshops instead of meetings and using low fidelity prototypes to realize and develop ideas early. Frequently gain input from users to allow iteration towards the best solutions.
- **Embrace experimentation.** Don't be afraid of ambiguity or failure and take risks early in the process when there are fewer consequences. When a technique, tool or idea isn't working, try something new whilst learning from previous outcomes.

3.4 Benefits of Design Thinking

Overall, Design Thinking helps teams to understand and address challenges, to improve both the user experience and success of the business. Some of the main benefits include:

The following are some *significant benefits* of following the design thinking process or approach:

- It helps to overcome the creative challenges: Design Thinking provides you with the freedom to have a look at problems from several perspectives. It involves a lot of brainwork to bring out the best ideas, which helps broaden the learner's knowledge.
- It helps to effectively meet the customers' requirements: As we discussed earlier, design thinking involves developing prototypes where you perform testing and implement the customer's feedback iteratively for quality assurance. By following the

design thinking approach effectively, your product will eventually meet the customers' requirements.

- It helps broaden your knowledge of Design Thinking: You will perform numerous evaluations in the design thinking process. You will always try to improvise your model by implementing the customer's feedback to ensure that the customer is satisfied.

Why does Design Thinking Appeals to Top Businesses?

- An empathy-driven approach toward problem-solving through experimentation and innovation makes design thinking a *solution-oriented methodology*, rather than that of problem identification. This particular ideology has made design thinking a favorite among business leaders since companies are always looking for ways to step into the future. See how PepsiCo reintroduced its brand and won back the market with design thinking.
- Recent times have thrown an increasing number of unprecedented problems at us, compelling us to consider human behavior and reactions to change and solutions. Design thinking is a framework to do just that, in a structured manner. It is a nonlinear methodology that involves empathy, ideation, prototyping, and implementation to tackle complex issues seamlessly. Qualities like empathy and curiosity are what make design thinking a unique problem-solving methodology, but it is perhaps the emphasis on human behavior that makes it the most effective.

TOPIC 4. STARTUP IDEA VALIDATION

4.1 Basic concepts and principles

It is important not to make the rookie (beginner) mistake when working on a business, product, or service idea that no one is interested in. Idea validation can save time by giving you a good idea of whether your idea appeals to your potential audience. And last but not least, it can also save you a lot of money. Your task as an entrepreneur (businessman) is always to save your limited resources - time and money. Validation is very important for entrepreneurs, because it is better to spend precious time and money if the idea will have a real demand, and not just a fantasy.

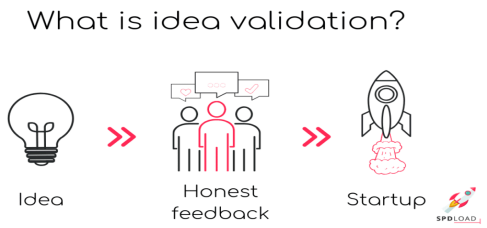


Figure 1 – Idea validation

An entrepreneur wants to turn their startup vision from an idea into a profitable business. It's often the case that startup founders are excited about their ideas, and that confidence is great, but at the same time, they need to be realistic. There is a lot of preparatory work that must be done before an idea can be implemented. It's just like when an architect builds a building, he spends a lot of time at ground floor level, where the main foundation needs to be laid.

By themselves, ideas do not carry business value - only proven or market-tested hypotheses that are suitable for further development. To reduce the probability of failure, the project idea must be validated. Validation of ideas is the process of checking your offer for its economic feasibility.

Validating the problem first and seeing if your solution can solve that problem is typically the smartest approach. Creating a solution first and only then looking for a problem it could solve, is a bad idea if you want to minimize the risks.

4.2 Startup (Business) Ideas Validation Process

Obviously, there are different ways to validate an idea. The best way to do this depends on the nature of the particular idea. If there is not much uncertainty, the test may not be necessary. *However, when it comes to new business ideas, products and concepts with higher risk, idea validation is highly recommended.*

After all, validation is about testing assumptions. It is important to test the riskiest assumption first and not waste time and money on something that has no potential.

You need to create a process that you will use to test ideas. Here are some basic processes (stages) that are often used, but remember that you will need to customize it to your own needs.

Let's start by simply breaking down the entire process of business idea validation into three distinct steps (fig. 2):

1. Market validation stage
2. Idea validation stage
3. Product validation stage

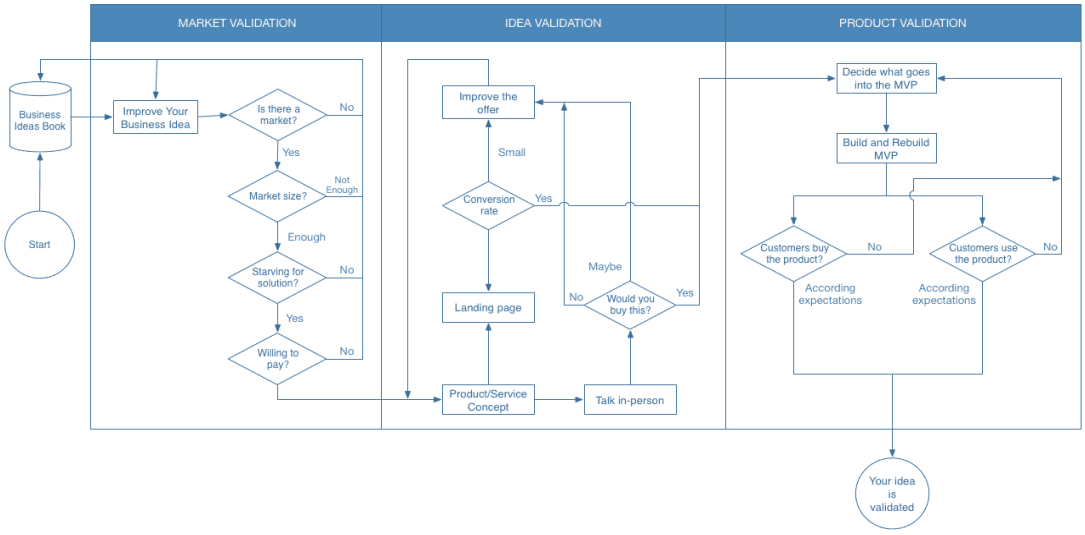


Figure 2 – Idea validation prosses

4.2.1 Market validation stage

Market validation is the first stage of your validation process (fig. 3). If your idea passes this stage of the validation process, you can continue with the next stages.

The *purpose of the market validation stage* is to find the answers to the following important questions:

- Is there a market for the product as a result of your business idea?
- If there is a market, is it big enough?
- Are there on the market people who are starving for the solution to the problem your product will solve?
- Are they willing to pay for such a solution?

4.2.2 Idea validation stage

In the previous stage, you have validated your market. Now you can start with this stage only if your previous market validation process proves that you have a market for your business idea, it is big enough, there are starving potential customers for your solution, and they are willing to pay you for the solution. Still, your solution is only in your head as a possible business idea. So, you don't have a product or a service to offer to the market, and you haven't designed or built anything yet.

In the Idea validation stage, you test whether the idea is viable and has potential. You need to do research to determine whether the idea is feasible and has potential. You also need to determine whether the problem that you identified in the ideation stage is real.

New ideas have unpredictable elements and if some of them go wrong, it can destroy your plans at once. Validation reduces the risk, speeds up the delivery of a value-creating service in the market, and minimizes the costs.

An idea should be validated before investing a significant amount of time and resources in developing it to avoid building and launching a product or concept no one wants or isn't willing to pay for.

4.2.3 Product validation stage

The product validation stage is the last stage in the process when you validate a business idea. When you come to this stage, you are already sure that there is enough big market for your product/service. People are starving for the solution and willing to pay you. Additionally, you are sure that there is enough interest for a potential product through the idea validation stage. Also, you want to ensure that people will buy from you.

A Minimum Viable Product (MVP) helps you to test your startup idea, get feedback, and gain experience at no cost. Consequently, its development should be your next step after you test your idea with startups and make sure that it is worth an effort.

A minimum viable product is a basic-version app (product) built with minimum features (such as your out-of-box idea) and is launchable in the market. Building an MVP is only considered after the PoC and prototype are built (fig. 9).

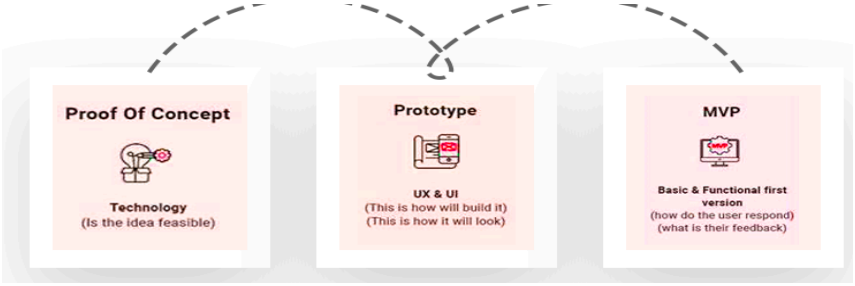


Figure 9 – Building an MVP

Example of a Minimum Viable Product.

Mark Zuckerberg's initial idea was to connect everyone on campus. He started with Facemash, a website where users compared two pictures and decided who was 'hot' and 'not.' Then it evolved to the website called Thefacebook, an actual MVP of the social networks. It was rolled out in 4 top American universities — Harvard, Stanford, Columbia, and Yale. After a year of testing on the segmented audiences, they opened access to everyone, and that is how the history of Facebook started.

The idea validation is crucial for the development of any digital product. It allows to reduce costs, increase production speed and minimize risks. Therefore, it is essential to have a clear and concise specification that describes all aspects of the product. The use of a discovery deliverable can help achieve this goal. If you have business ideas to create minimum viable products, you have to validate your idea first! You cannot build a solution or want to find a problem for your answer. After we validate our idea, the next step is to create product roadmap containing user flows and stories.

TOPIC 5. BUSINESS MODEL AS A STRATEGIC MANAGEMENT TOOL FOR ENTREPRENEURS (Business Model Canvas vs Lean Model Canvas)

5.1 Basic concepts and principles

What Is a Business Model? The term *business model* refers to a company's plan for making a profit (fig. 1). It identifies the products or services the business plans to sell, its identified target market, and any anticipated expenses. Business models are important for both new and established businesses. They help new, developing companies attract investment, recruit talent, and motivate management and staff.

Business model is a conceptual description of business activity, which explains how a company works, earns money and how it can reach its goals.

There are 2 most famous canvases for creating a business model:

1) Business Model Canvas (Osterwalder and Pigneur business model)
2) Lean Model Canvas.

5.2 Business Model Canvas (Osterwalder and Pigneur business model)

People tend to focus on specific parts of their business, such as what software packages are used, which vendor is the cheapest, how to optimize internal processes…?

They get so caught up in the details of day-to-day work that they lose the overall vision for their business. Without this vision, they fail to scale, make minimal profits, miss opportunities, struggle to innovate, and end up running "just another" business – one of many not very successful.

Fortunately, a business model framework exists that gives you both vision and clarity. The Business Model Canvas provides entrepreneurs, business owners, and strategists with a tool to analyze, structure, and evolve a business while always keeping the bigger picture front of mind. So, let’s take a closer look at how it works.

5.2.1 The history of the canvas business model. Two people created the Business Model Canvas – Swiss business theorist, author and entrepreneur *Oleksandr Osterwalder* and Belgian computer scientist and Professor of Management Information Systems at the University of Lausanne *Yves Pigneur* (fig. 3) at about 2010. Since then, the business model canvas template has been taught in business schools and replicated to

fit more niche businesses. During this time, it was applied and tested in such global organizations as IBM, Ericsson, Deloitte and many others.

5.2.2 Why is it so popular in business circles? Thus, developed in 2010 by Yves Pigneur and Alexandre Osterwalder, authors of "Business Model Generation," the Business Model Canvas was initially intended to be a tool for entrepreneurs and small business owners. Since then, it has been widely adopted by companies of all shapes and sizes around the world. There are many reasons for this:

- **It has many use cases.**
- **It is highly visual.**
- **It connects the dots.**
- **It is fun to create.**

Why else is it so popular in business circles? Its simplicity. The business model canvas allows us to carry out a high-level analysis without getting too deep or lost in detail. You just draw out the 9 building blocks on a blank canvas, fill them in as each concept relates to your business, and hang it somewhere everybody can see. *It's a visual overview of your entire business on a single canvas.*

5.2.3 Structure of Business Model Canvas. Example. Pros and Cons.

Business Model Canvas – scheme of nine blocks - key elements of business (fig. 4). Using it, it is possible to visually describe the activities of your company on one sheet, to find "bottlenecks"* and possible growth points. ***Bottlenecks refer to the situation where firms are unable to meet demand because of delays, shortages and lack of spare capacity. Bottlenecks can occur from a spike in demand or disruptions to supply. They can lead to higher prices, inflation, shortages of goods and even lower economic growth.**

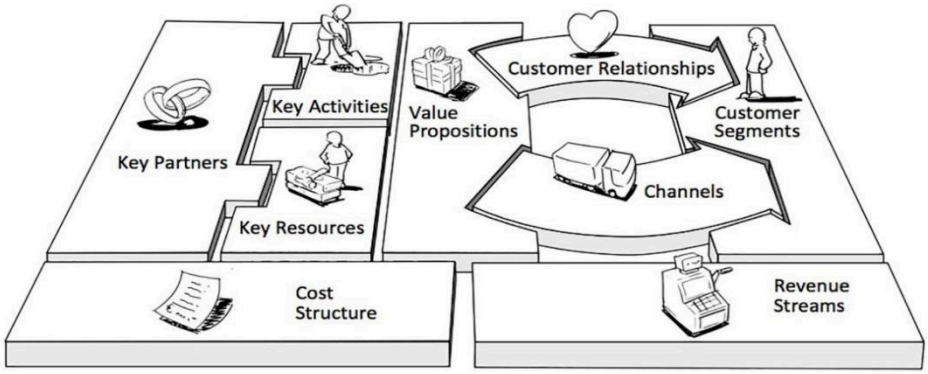


Figure 4 – Business Model Canvas
(scheme of nine blocks - key elements of business)

5.3 Lean Model Canvas

As mentioned above, when it comes to a *young startup*, it is more appropriate to use *Lean Model Canvas* - this is a business model template that allows you to collect key

information about a startup on one page. How is it useful? Often, at the beginning of work, we do not fully understand what we want to do and what will come out in the end. Especially if we are talking about a startup. And Lean Canvas helps to formulate the idea more clearly - and if something changes during the work on the product, the model can be easily changed.

American entrepreneur Ash Mauro (fig. 8) came up with the Lean Canvas model. He took Olexander Osterwalder's Business Model Canvas as a basis and adapted it to the so-called frugal (saving) approach, the essence of which is to minimize any losses.

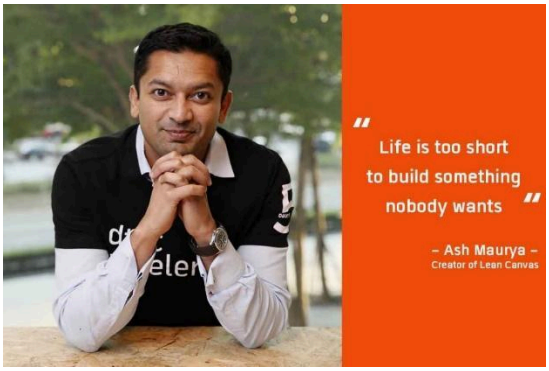


Figure 8 – American entrepreneur Ash Mauro

5.3.1 Difference between Lean Model Canvas and Business Model Canvas

To choose between Lean Canvas vs. Business Model Canvas, we need to know the difference between them. This model also includes 9 blocks, but there are certain differences (Fig. 9). Changed blocks are highlighted in red.

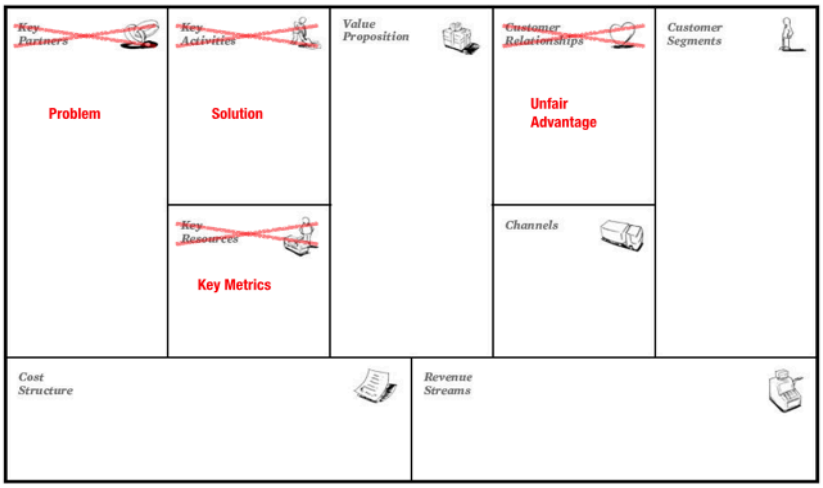


Figure 9 – Lean Canvas vs. Business Model Canvas

5.3.2 Structure of Lean Model Canvas

Lean Canvas also uses the 9 blocks concept except they've been modified slightly to suit the needs/ purposes/requirements of a Lean Startup (fig. 10). The Lean Canvas is the perfect one-page format for brainstorming possible business models, the blocks

guide you through logical steps starting with your customer problems right through to your unfair advantage (often the hardest block to answer).

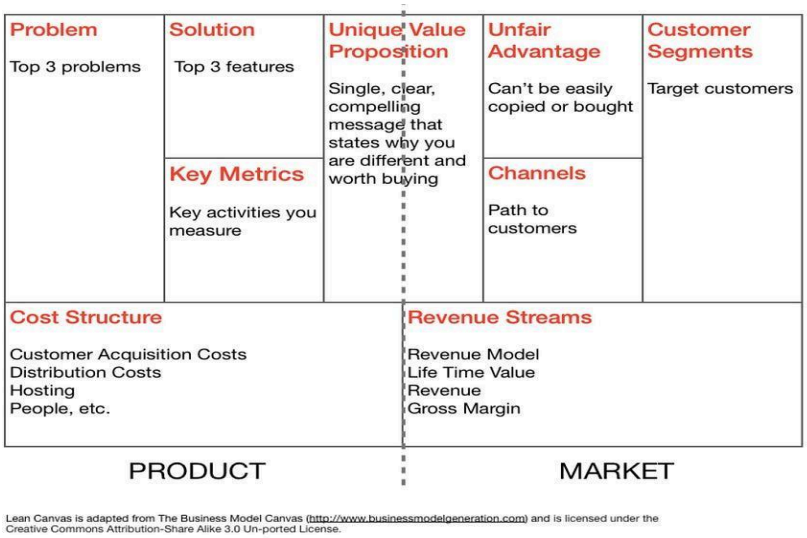


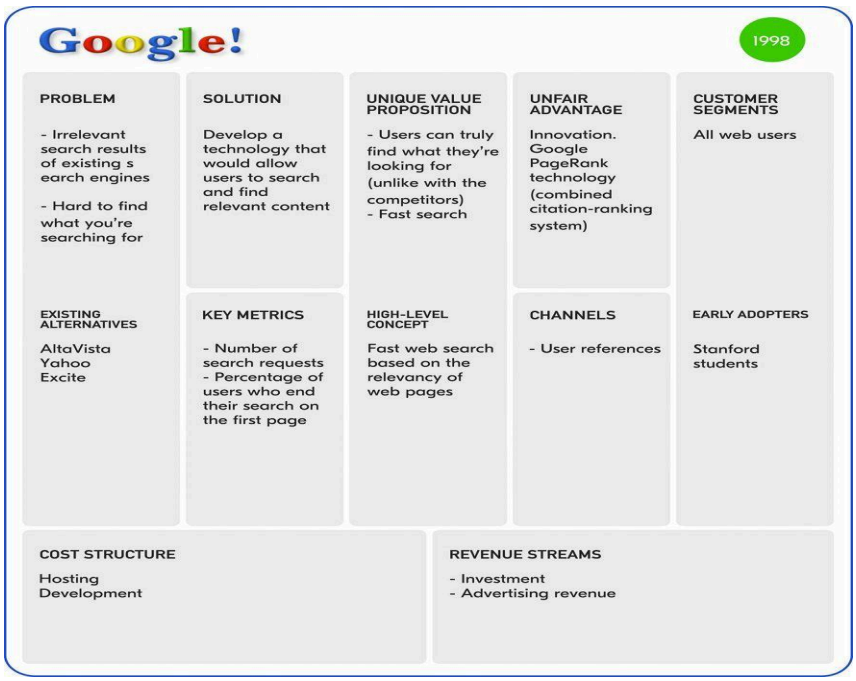
Figure 10 – Structure of Lean Model Canvas

5.3.3 Examples of Lean Model Canvas

Lean Canvas Examples of Multi-Billion Startups. https://railsware.com/blog/5-lean-canvas-examples/

Google

- Year of foundation: 1998
- Venue: Menlo Park, CA
- Original name: Googol
- Founded by: Larry Page and Sergey Brin
- Total funding amount: $36.1 million (last funding in 2000)
- IPO: raised $1.7 billion in 2004



TOPIC 6. PRESENTATIONS OF STARTUP IDEAS

6.1 Presentations by teams of the project business model outline

6.2 Presentation killers: mistakes to avoid

6.3 Questions for self-control

6.4 Sources of information

https://www.strategyzer.com/library/replay-webinar-4-ways-to-present-the-business-model-canvas

6.1 Presentations by teams of the project business model outline

Presenting your business ideas is the first step in getting people to invest in them. If you're going to be pitching investors or trying to sell your startup, it's important that your presentation be clear, professional and interesting enough to keep their attention. Here are five tips for presenting your business ideas with confidence:

Speak slowly and clearly

*Speak slowly and clearly

*Use a presentation to draw attention to your business ideas

*Remember: the audience has no idea what you'll be talking about, so they can't read your mind!

Make your voice match the message

Use a calm, soothing voice. If you're presenting an idea that's exciting or new, your voice may be too dramatic and emotional. A monotone voice can also make the listener feel bored. And if your voice is too loud or mumbles, people won't be able to

hear you clearly. When talking about business ideas, aim for a more relaxed speaking style rather than being overly animated or excitedly animated.

Rehearse, rehearse, rehearse

When it comes to presentations, one of the most important things is practice. You don't want to be fumbling through your presentation on stage when you have an audience watching and waiting for you. That's why we recommend going through a few dry runs in front of either a mirror or someone who can provide feedback.

Practice out loud: Talking through your ideas helps you get used to the flow of what you'll be saying—and enables you to catch any mistakes or awkward phrasing before they happen on stage (or wherever).

Practice with slides: If you're using slides or some other form of visual aid, practice delivering each slide just as well as its content will allow. For example, if there are three bullet points per slide and each needs a two-second pause between them before moving on, take those two seconds every time so that they become automatic when actual showtime arrives. This approach will also ensure that no important information gets buried under dense text blocks by giving yourself time between words and lines during rehearsals so that everything has room to breathe.* Practice with someone who can give feedback: We all know how hard it is sometimes just figuring out whether we've done something right—let alone knowing how much better we could have done it! If possible (and if relevant), find someone who knows more than just a little bit about what it is exactly that makes up this particular kind thingy that goes into making up whatever specific kind thingy goes into making up whatever specific kind thingy...

Be ready for the question-and-answer session

During the Q&A session, you'll be bombarded with questions. That's exactly what you should expect—and hope for! If they don't have any questions, it means you haven't engaged them enough. Don't worry if you don't know all of the answers: as long as you're honest about your own knowledge level and quick to seek advice from others (including your audience), everything will work out just fine.

If there is one thing I've learned during my career as a presenter: people love asking questions during presentations! It's fun for them to hear new information or just interact with others in person. The key here is knowing how many questions are going to come up so that you can prepare accordingly! Because some people will be asking more than others (especially if this is their first time), make sure that everyone gets heard equally by having multiple microphones available at different heights so everyone can get closer when needed."

Use a presentation to draw attention to your business ideas

One of the smartest ways to get your business started is by using a presentation to communicate your ideas. A well-made presentation can help you create buzz around

your new company, attract investors and customers, and even sell other people on joining your startup team.

In order to successfully present a business idea, you should use visual aids like slideshows or videos. You'll also want to think about how long each slide should be so that it doesn't go on too long—experts recommend keeping them short at around 15 seconds each so that viewers don't lose interest or get bored.

If you want people who are interested in learning more about what your business does or how it works, consider creating presentations that explain it in detail for them; this way they'll have something tangible from which they can draw conclusions about whether or not they're interested enough in investing themselves into working with companies just like yours

Takeaway:

To wrap up, here are five tips to help you present your business ideas in the best light:

Be prepared for questions and criticisms. You will likely be asked to defend your idea. If you are able to come back with a good answer, your audience may be swayed into thinking that it's actually pretty good! Also make sure that you have a plan B in case things don't go well.

Use a presentation as an opportunity to showcase your ideas for improving innovation within an organization. Your audience members may not be familiar with the issues surrounding innovation and creativity, so it’s helpful if you explain these concepts before sharing any of your ideas or examples from past projects.

Keep it simple by asking the question “How might we...?” This is often more compelling than stating specific solutions upfront because people can then imagine themselves contributing their own innovations instead of just accepting what has been presented as fact (which can feel like a lecture).

Conclusion

At the end of the day, presenting your business ideas is more about how you do it and less about what you say. The trick is to find ways to make your audience interested in what you’re saying, and that could mean anything from telling them a story or giving them a visual aid like an infographic. If all else fails, remember that preparation is key—you’ll always be better off knowing what you want to say before standing up at a podium than winging it!

6.5 Presentation killers: mistakes to avoid

The best presenters and speakers continually hone their skills and test out new material. Regardless of how much presenting experience you have, don’t assume you have nothing new to learn. But don’t strive for perfection either. Instead, identify a few

issues that you could improve upon and work on those first – starting with whatever will have the biggest impact on your presentations.

Most common presentation mistakes

- Inappropriate structure.
- Low-quality slides.
- Ignoring your audience.
- Being too wordy.
- Not preparing enough.
- Avoiding eye contact.

TOPIC 7. TEAM DYNAMICS

7.1 Stages of Team Development

In general team dynamics describes the behavioral relationships between the members of a working team during the time. The dynamic between them includes how they interact, communicate and cooperate. Of course, work circumstances change over time, and so does the situation in the team. Team dynamics describe how coworkers collaborate to complete projects and tasks. These dynamics might include how they communicate with each other or what roles they each fulfill on the team. Learn about successful team dynamics and how you can improve team cohesion in your workplace.

During the development of a startup, each team goes through the following stages (according to Bruce Tuckman):

- forming (forming);
- conflict (storming);
- stabilization (norming);
- performance (performing).

Psychologist Bruce Tuckman came up with the memorable phrase "forming, storming, norming, and performing" in his 1965 paper, "Developmental Sequence in Small Groups." It describes the path that teams follow on their way to high performance. Later, in 1975 he added a fifth stage, "adjourning" (also known as "mourning") to mark the end of a team's journey (fig. 6.2 and 6.3).

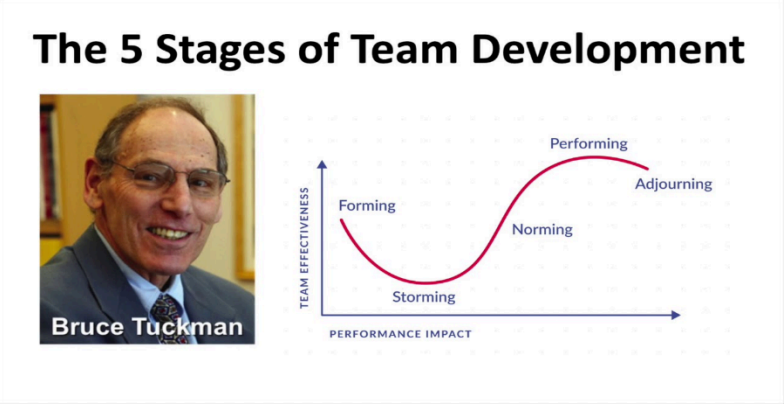


Figure 7.2 – 5 Stages of Team Development

You can also watch a short video about it: What is The Tuckman Model - Tuckman Team Development Model? https://www.youtube.com/watch?v=-nlMJcTAz_g

7.2 Life Cycle of Member Roles

Teams are dynamic systems in constant change. They grow together and eventually come apart. People join teams and others leave. These dynamic changes and transforms the very nature of the group. Those who are in leadership positions may ascend (move up) or descend (move down) the leadership hierarchy as the needs of the group, and other circumstances, change over time.

Team socialization involves how the team members interact with one another and form relationships.

Just as teams go through a life cycle when they form and eventually adjourn, so the group members fulfill different roles during this life cycle. These roles, proposed by Richard Moreland and John Levine (1982), are summarized in fig. 6.6 and table 6.1.

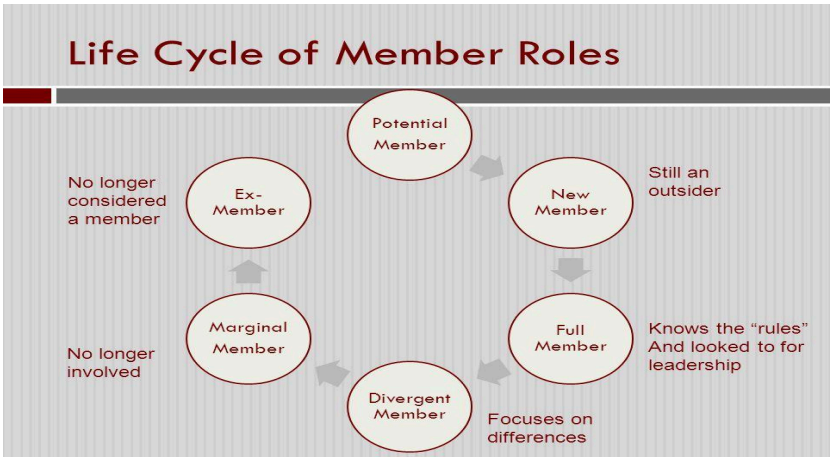


Figure 7.6 – Life cycle of member role

Table 7.1 – Life Cycle of Member Roles

1. Potential member	Curiosity and interest
2. New member	Joined the group but still an outsider, and unknown
3. Full member	Knows the "rules" and is looked to for leadership
4. Divergent member	Focuses on differences
5. Marginal member	No longer involved
6. Ex-Member	No longer considered a member

7.3 Group Member Roles

Group roles are specific assignments or functions that individual members of a team oversee as part of their duties. The number of group roles within a team depends on the team's size and purpose. Organizations rely on many team roles to complete projects successfully, and some of these roles align with specific categories. The primary types of beneficial team roles include:

Task roles: People in task roles keep the group focused on reaching the goal by completing specific assignments.

Procedural roles: Team members in procedural roles manage the information and communication shared in the group.

Social-emotional roles: Also known as building and maintenance roles, social-emotional roles involve maintaining harmony within the group and fostering interpersonal relationships among members.

Below is a list of possible team roles↓

FUNCTIONAL ROLES OF GROUP MEMBERS

Task Roles:

1. Initiator/Contributor. Contributes ideas and suggestions; proposes solutions and decisions; proposes new ideas or states old ideas in a novel fashion.
2. Information Seeker. Asks for clarification of comments in terms of their factual adequacy; asks for information or facts relevant to the problem; suggests information is needed before making decisions.
3. Information Giver. Offers facts or generalizations that may relate to the group's task.
4. Opinion Seeker. Asks for clarification of opinions made by other members of the group and asks how people in the group feel.
5. Opinion Giver. States beliefs or opinions having to do with suggestions made; indicates what the group's attitude should be.

6. Elaborator/Clarifier. Elaborates ideas and other contributions; offers rationales for suggestions; tries to deduce how an idea or suggestion would work if adopted by the group.

7. Coordinator. Clarifies the relationships among information, opinions, and ideas or suggests an integration of the information, opinions, and ideas of subgroups.

8. Diagnostician. Indicates what the problems are.

9. Orienter/Summarizer. Summarizes what has taken place; points out departures from agreed-on goals; tries to bring the group back to the central issues; raises questions about the direction in which the group is heading.

10. Energizer. Prods the group to action.

11. Procedure Developer. Handles routine tasks such as seating arrangements, obtaining equipment, and handing out pertinent (relevant) papers.

12. Secretary. Keeps notes on the group's progress.

13. Evaluator/Critic. Constructively analyzes the group's accomplishments according to some set of standards; checks to see that consensus has been reached.

Social/Maintenance Roles:

1. Supporter/Encourager. Praises, agrees with, and accepts the contributions of others; offers warmth, solidarity, and recognition.

2. Harmonizer. Reconciles disagreements; mediates differences; reduces tensions by giving group members a chance to explore their differences.

3. Tension Reliever. Jokes or in some other way reduces the formality of the situation; relaxes the group members.

4. Conciliator. Offers new options when his or her own ideas are involved in a conflict; disciplines to admit errors so as to maintain group cohesion.

5. Gatekeeper. Keeps communication channels open; encourages and facilitates interaction from those members who are usually silent.

6. Feeling Expresser. Makes explicit the feelings, moods, and relationships in the group; shares own feelings with others.

7. Follower. Goes along with the movement of the group passively, accepting the ideas of others sometimes serving as an audience.

Dysfunctional Roles

1. Blocker. Interferes with progress by rejecting ideas or taking a negative stand on any and all issues; refuses to cooperate.

2. Aggressor. Struggles for status by deflating the status of others; boasts; criticizes.

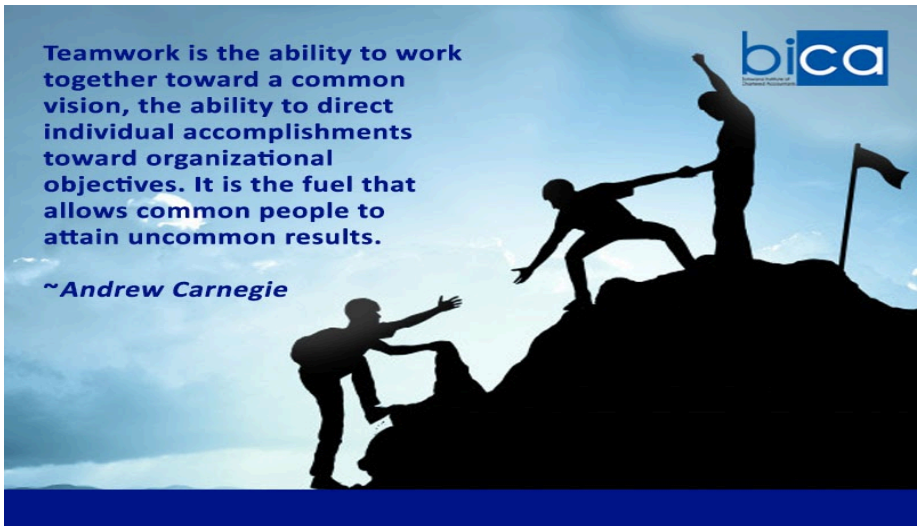
3. Deserter. Withdraws in some way; remains indifferent, aloof, and sometimes formal; daydreams; wanders from the subject; engages in irrelevant side conversations.

4. Dominator. Interrupts and embarks on long monologues; is authoritative; tries to monopolize the group's time.

5. Recognition Seeker. Attempts to gain attention in an exaggerated manner; usually boasts about past accomplishments; relates irrelevant personal experiences, usually in an attempt to gain sympathy.

6. Playboy. Displays a lack of involvement in the group through inappropriate humor, horseplay, or cynicism.

Although sometimes the positive and negative roles of team members may not be so obvious. For example, if someone in your group always makes everyone laugh, that can be a distinct asset when the news is less than positive. At times when you have to get work done, however, the class clown may become a distraction. Notions of positive and negative will often depend on the context when discussing groups.



***** One of the captains of industry of 19th century America, **Andrew Carnegie** helped build the formidable American steel industry, a process that turned a poor young man into the richest man in the world. Andrew Carnegie (1835 – 1919) was Scottish-American industrialist and philanthropist. Carnegie led the expansion of the American steel industry in the late 19th century and became one of the richest Americans in history.

TOPIC 8. MARKET ASSESSMENT. ANALYSIS OF COMPETITORS. THE BASICS OF MARKETING FOR STARTUPS

8.1 Concept of market volume. Market assessment methods
8.2 Methods of competitor analysis. Unfair competitive advantages
8.3 Marketing strategy for a startup

8.4 Questions for self-control
8.5 Sources of information

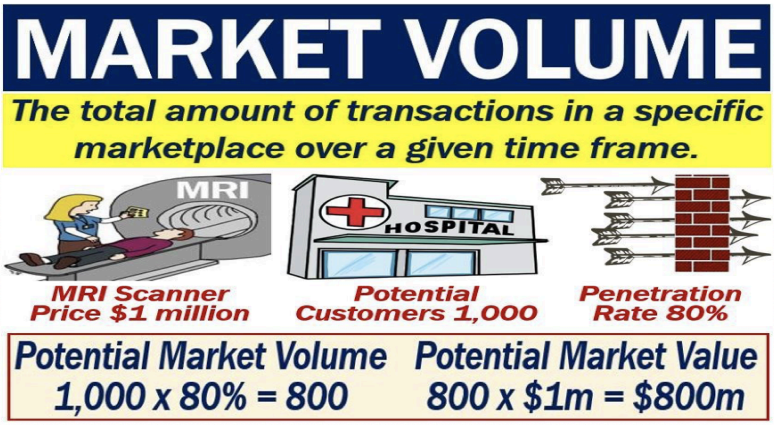
8.1 Concept of market volume. Market assessment methods

Market volume refers to the total amount of transactions that traders conducted in a specific market. We calculate the total volume of transactions over a specific period such as a day, month, quarter, or year. The count of total volume comprises each transaction between sellers and buyers, i.e., traders.

In the world of stock exchanges, the **stock market volume** is the total number of shares that people traded each day. We also call this the '**trading volume**.'

Stock markets are places where people buy and sell company shares. The New York Stock Exchange and the London Stock Exchange, for example, are famous stock markets.

Given that for each purchaser there is a seller, trading volume in a stock market, for example, equals half the number of shares transacted. In other words, if John sells 1,000 shares to Mary, and Mary purchases 1,000 shares from John, market volume is 1,000.



A company can always benefit from knowing more about the market they operate in. One effective way to learn more about a market is to conduct a market analysis. There are many different methods of market analysis to choose from, which means there are several ways for businesses to perform a market analysis on the aspects of a market they want to gain information about. In this article, we define market analysis and explore seven methods of market analysis.

8.2 Methods of competitor analysis. Unfair competitive advantages

Competitor analysis is a vital skill for any business that wants to gain an edge in the market. It helps you identify your strengths and weaknesses, as well as the opportunities and threats posed by your rivals. But how do you conduct a competitor analysis effectively? What tools and methods can you use to gather and analyze relevant data? In this article, we will explore some of the best practices and examples of competitor analysis, and how you can apply them to your own business.

What's the difference between a good business and a great business?

A good business solves a painful problem in a convenient way for customers. But

a great business achieves this and more thanks to the unfair advantage that makes it difficult for competitors to challenge them over time.

While the term *unfair competitive advantage* may be used in other contexts, it is specifically used to define what smart entrepreneurs, venture capitalists, and startup consultants look for as a key ingredient in the formation of a new venture.

So just what is a competitive advantage? A competitive advantage is the set of conditions and attributes that allows a business to offer its consumers greater value than its competitors. The greater value is provided either by selling products at a lower price or by providing greater benefits and service. For the customer, this justifies paying a higher price than the competitors are charging. The conditions and attributes that provide the competitive advantage ensure that the business can outperform its competitors by generating more sales or by achieving superior margins than its competitors.

8.3 Marketing strategy for a startup

With all the work that goes into starting a business, there's little time to think about marketing strategies that prove successful and are feasible for a startup's teams to execute.

Starting a business is not easy but marketing it is even hard, especially in this digital era. The competition for customers is high. Thus, you must adopt smart startup marketing strategies to distinguish yourself from the rest and acquire new customers.

When financial resources are tight, start-ups face challenges that can hinder their growth and success. Let's explore these obstacles:

- **The Hiring Hustle**: Building a dream team becomes daunting when start-ups can't offer hefty salaries and flashy perks.
- **Marketing Mayhem**: Limited budgets mean start-ups can't roll out extravagant marketing campaigns like their deep-pocketed counterparts.
- **Scaling Struggles:** Limited resources can impede start-ups from expanding their operations and building a solid infrastructure.
- **Cash Flow Conundrums:** Managing cash flow becomes a precarious balancing act for start-ups with limited budgets, impacting their financial stability and growth potential.

So, how can startups navigate these challenges and emerge victorious to see unparalleled growth?

Enter strategic marketing — a game-changing solution that has the potential to level the playing field for startups.

By embracing smart and targeted marketing strategies, startups can unleash their true potential and pave their way to success.

Let's delve into five essential startup marketing strategies that can empower startups to overcome their budget constraints.

5 Essential Startup Marketing Strategies

1. Define Your Audience
2. Website Optimization and Content Marketing
3. Bring Social Media to Your Disposal
4. Email Marketing
5. Create a Referral Program for Early Adopters

TOPIC 10. MANAGEMENT OF INVESTMENT SUPPORT FOR STARTUP PROJECT

9.1 Overview of the venture market. Types of investors and investments.
9.2 Finance in a startup. Legal aspects of investments
9.3 Questions for self-control
9.4 Sources of information

9.1 Overview of the venture market. Types of investors and investments.

The Venture Capital Market is growing as a result of several significant factors. First and foremost, the industry has experienced a transformation as a result of swift technological advances that have made it feasible to develop new products and services. Additionally, demand has grown as a result of shifting consumer choices and growing Venture Capital awareness among consumers. Government regulations and supportive policies have also promoted industrial expansion and investment. Through clever alliances and collaborations within the industry, access to new Markets and customers has also been facilitated. The Venture Capital Market is being propelled to new heights by a combination of these factors, and the outlook is encouraging for future growth.

Overview of the venture market. Types of investors and investments. Stages and rounds of investment. Finance in a startup. Legal aspects of investments. Conditions, distribution of shares, contracts, options. Case analysis of various investment deals.

Obtaining startup funding for your company is not easy task, but it's not impossible to secure funding for your company growth. There are constant announcements and daily hype surrounding startups getting funding. And with all the news about the rise in the types of investors, there are many new ways for companies to find funding.

For many entrepreneurs who are entering into the business for the first time, expect to spend about 4 to 6 months to raise the necessary startup funds. The main

reason behind this is that not everyone knows everything about funding off the bat, and the different types of investors and startup funding.

Most startup owners depend on investors for funding in their new business. It doesn't matter if the company is introducing a new product, conducting an upgrade on equipment, or expanding operations, the investor's capital can offer tremendous support for the company.

There are various types of investors in the market, and in order to figure out the right one to help you with funding your company, you need to be aware of all the different types.

This may even end up coming from you, injecting funds into your own business as an investor.

Even though there are many stories about people who fund their own startups by utilizing bootstrapping and putting all their earnings and wealth into a business, this approach is many-a-times too difficult and unrealistic for many starting off. It is normal for budding startups to seek the help of investors that would help them give a proper base to their project and plan.

There are four main kinds of investors for startups which include:

- Personal Investors
- Angel Investors
- Venture Capitalist
- Others (Peer-to-Peer lending)

Generally, the capital from these types of investors is utilized by the company to upgrade supplies and equipment, expand operations, or introduce a new product. Nevertheless, every situation is different, which is why companies should always take precautions before contacting an investor.

TOPIC 10. STARTUP PRESENTATION. PITCH DECK

10.1 Basic principles of startup presentation.
10.2 Basics and techniques of public speaking. Pitching training.
10.3 Questions for self-control
10.4 Sources of information

You've identified an underserved need and validated your startup idea. Now it's time to talk about your business to potential investors. Yet, how do you effectively communicate your idea's promise and possible impact on the market?

If you have decided to develop a new project and have communicated with at least some investors, then you have probably come across the term ***pitch***, which has been actively used by startups. Pitch is a short presentation that tells about your startup in less than 10 minutes (or even maybe 1 min!). Presentation to a large audience or to one potential client, partner, investor is equally important for your project. *Pitch is a short, structured presentation of a project to potential investors. There are too many startups and ideas, and investors have too little time. Pitch is a way to quickly establish contact*

and interest in your project. The story (pitch about your startup) should be as clear, structured and vivid as possible. It must hook investors so that they then come back with questions and suggestions.

Startups borrowed this word «pitch» from baseball terminology. In baseball, «pitch» is a delivery of the ball made by a player of the defending team. The point is to serve the ball so that the opposing batsman misses the ball and a teammate catches the ball. This requires a complex strategy and extraordinary communication skills. The outcome of the game largely depends on the pitch of the pitcher.

A series of short speeches by participants - pitching or *pitch sessions* - has become a typical competition format for startups (as well as young filmmakers).

Finding partners and obtaining funding (money) are key challenges for many budding entrepreneurs. To prove your uniqueness, you need more than just a great idea and a stylish presentation. You need to overcome your fear of public speaking and prove that you can be relied on.

Investors are constantly getting acquainted with dozens and hundreds of projects, and the typical format for presenting a startup today is:

1) *Pitch;*
2) *Pitch deck*.

Pitch - an oral presentation for a few minutes, the very speech that you will rehearse at the mirror and calibrate in seconds.

Accompanying it, and sometimes working on its own, is a Pitch Deck, the visual part of your presentation, slides with a short overview of everything you want to say.

Three types of pitches are distinguished by duration:

- *Elevator pitch* (1 minute) - the shortest presentation of the project that can be done during a trip with an investor in an elevator. There is only enough time for three blocks: the problem, the solution and the prospect of monetizing the project.
- *Idea pitch* (3 minutes) consists of project name, problem, solution, market size, business model, team, conclusion and contacts.
- *Funding pitch* (7-10 minutes) includes all blocks from the idea pitch plus a description of competitors, plans, information about what has already been done and how much money is needed.

A *pitch deck* is a presentation that concisely presents the problem, the solution, and the company's path to success. This presentation is typically done at business events in an effort get investment capital. A pitch deck outline is the standard document used by startups to present their case to investors; it's a brief deck comprised of about 10 to 20 slides.

The structure of the pitch deck is shown in Figure 2.

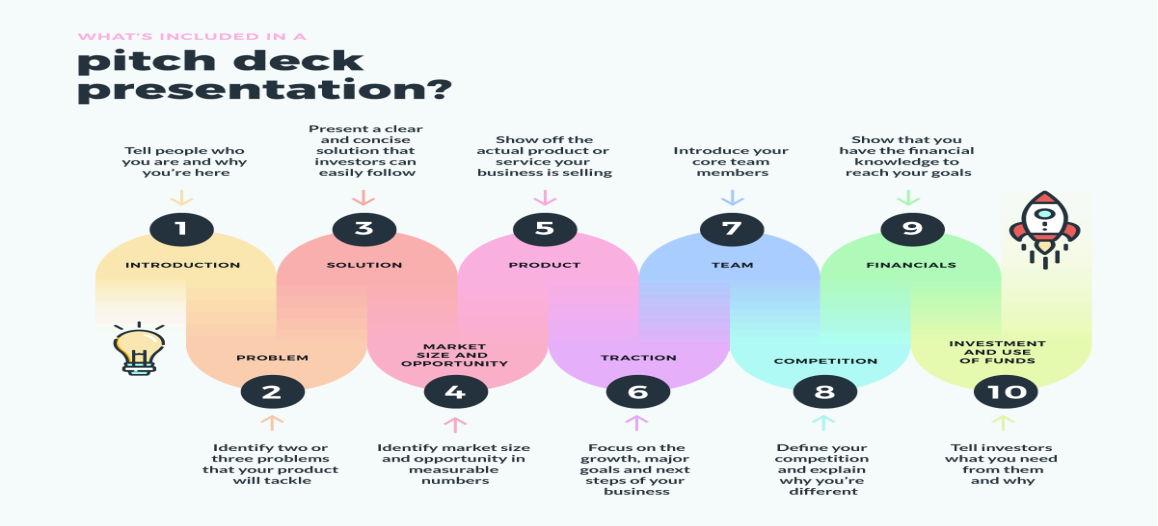
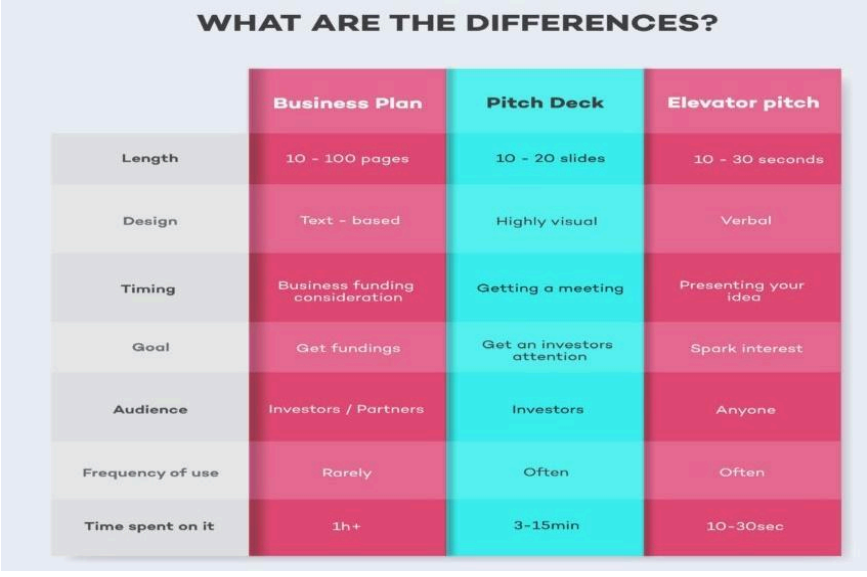


Figure 2 – The structure of the pitch deck

With how competitive and complex the process to raise money is, it's not an exaggeration to say that a pitch deck can make or break your company: when done correctly, pitch decks can really go the whole nine yards.

In this context, we will also mention the concept of a business plan. A business plan is a document that defines in detail a company's objectives and how it plans to achieve its goals. A business plan lays out a written road map for the firm from marketing, financial, and operational standpoints.

A business plan is a long, detailed document that is usually created in Word, while a presentation (pitch desk) is usually 10 to 20 pages long and is often created in PowerPoint, but it is a much more visual document that is completely designed to sell the business to potential investors or creditors, or anyone else who reads it. First, you present them with a pitch, then a pitch deck, and only then, if they are interested in you, a business plan. Differences at the figure 3.



	Business Plan	Pitch Deck	Elevator pitch
Length	10 - 100 pages	10 - 20 slides	10 - 30 seconds
Design	Text - based	Highly visual	Verbal
Timing	Business funding consideration	Getting a meeting	Presenting your idea
Goal	Get fundings	Get an investors attention	Spark interest
Audience	Investors / Partners	Investors	Anyone
Frequency of use	Rarely	Often	Often
Time spent on it	1h+	3-15min	10-30sec

Figure 3 – Differences between business plan, pitch deck and pith.

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