



HANDBOOK

FOR STUDENTS ENTREPRENEURIAL MINDSET

FOR ACADEMICS AND NON-ACADEMICS SCIENTIFIC ENTREPRENEURSHIP

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INTRODUCTION

The handbook for students and academics and non-academics on entrepreneurship mindset and science entrepreneurship is the result of the work of the partners in the project entitled 'Entrepreneur' (Entrepreneurial Preparation for Notable and Engaging Universities), funded as part of the second call for proposals of the EIT HEI Initiative.



This handbook is divided into 2 chapters:

1 CHAPTER For students: Entrepreneurship Mindset

2 CHAPTER For Academics and Non-Academics: Science Entrepreneurship

1 CHAPTER For Students: Entrepreneurship Mindset is discussed within 5 training modules, which allows to develop students skills and competences necessary to become active entrepreneurs and be able to compete and turn ideas into business opportunities and into reality.

2 CHAPTER For Academics and Non-Academics: Science Entrepreneurship is discussed within 5 training modules, which allows to develop academics and non-academics staff skills and competences necessary to be able turn ideas into business and reality.

Entrepreneur is a project which aims to support European universities in becoming more entrepreneurial and innovative. By fostering transversal competences of the future along with an entrepreneurial mindset, the consortium of Entrepreneur will secure a new generation of student and academic entrepreneurs and innovators. The project will bring radical change by creating student-centred, non-elitist, open and inclusive universities based on collaboration between higher education institutions, public and private sectors, and citizens. The ultimate aim is to strengthen the integration within and between innovation ecosystems.

The consortium consists of eight partners:

1. Uniwersytet Śląski w Katowicach, Poland
2. Vytauto Didžiojo Universitetas, Lithuania
3. Universidad De Castilla – La Mancha, Spain
4. GrantXpert Consulting Ltd, Cyprus
5. Teaching Factory Competence Center, Greece
6. Mälardalen University, Sweden
7. Vrije Universiteit Brussel, Belgium
8. Lviv University of Trade and Economics, Ukraine



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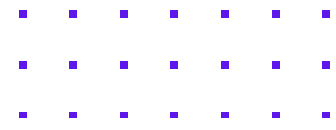
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Recommendations



#1

To the reader



- To begin with, you are invited to take a look at the expert advice on what to look out for to improve the competencies of a researcher entrepreneur.
- Second, a review of the recommended literature, active links and familiarisation with the whole ecosystem and the participants involved in the commercialisation process.
- Finally, practical exercises to consolidate your knowledge and reassess your research through the perspective of science commercialisation.

#2

for lecturers working with this
publication



- First of all, define your target group in as much detail as possible - PhD students, young researchers, academics, experienced researchers and so on.
- Second, please note that entrepreneurship is a relatively young phenomenon, so there is a lot of new knowledge. Each topic is designed as an introduction, so it can be expanded in a targeted way according to the experience of each lecturer.
- Third, practical tips and practical exercises. It is appropriate to guide the audience for self-development, and additional information for self-assembly.
- Finally, the templates provided in the publication can be used or created according to the target group using the canva.com software.



1 CHAPTER

FOR STUDENTS ENTREPRENEURIAL MINDSET

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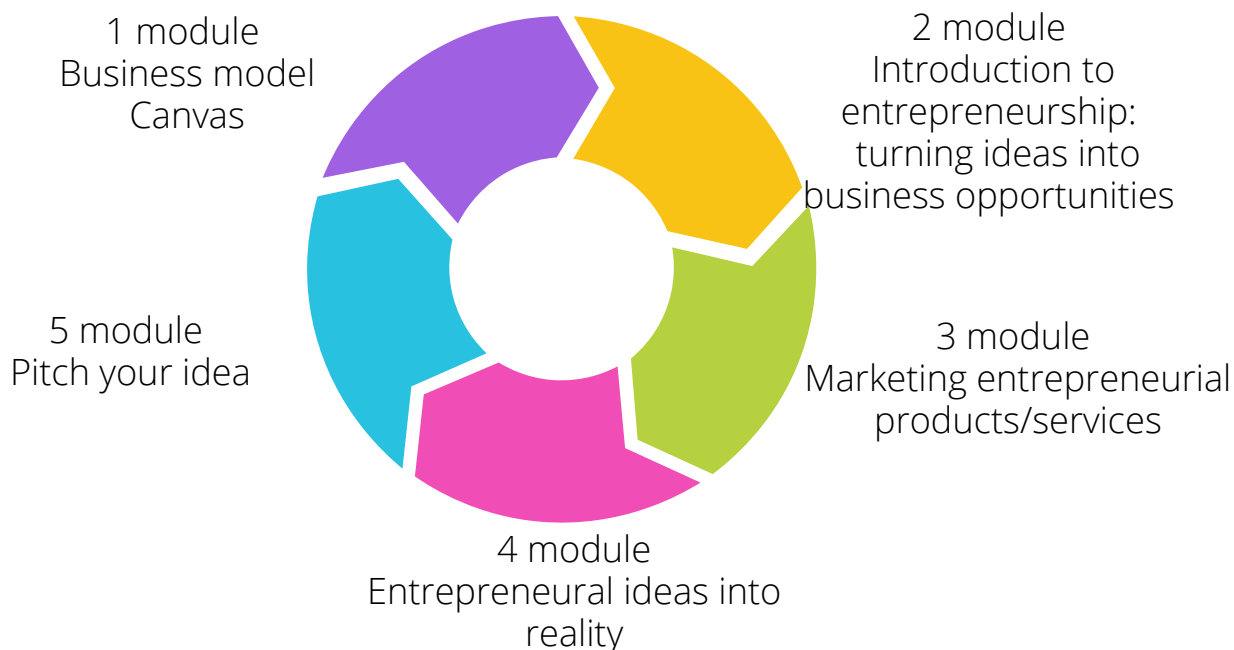
INTRODUCTION

In today's innovation economy, where needs and opportunities are evolving faster and more fluidly than ever before, students and young entrepreneurs need a mindset that equips them to recognize opportunities, take initiative, be aware of business and marketing tools, stay innovative in the face of challenges. An entrepreneurial mindset is a set of skills that enable students to identify and make the most of opportunities and succeed in a variety of settings. Research shows that an entrepreneurial mindset is valued by employers, boosts educational attainment and performance, and is crucial for creating new businesses.



The chapter 1 Entrepreneurship Mindset is dedicated to develop students entrepreneurship mindset, presented 5 training modules introduce students to entrepreneurial theoretical and practical concepts, providing them with tools to assess and reflect upon their entrepreneurial mindset.

The chapter 1 Entrepreneurship Mindset is dedicated to develop students entrepreneurship mindset through 5 training modules, that are suggested below:



The structure for all 5 modules include: theoretical content of the topic, visual graphics and pictures, cases and assignments to deepen gained knowledge and make the learning more practice based.

Module 1 Business model Canvas

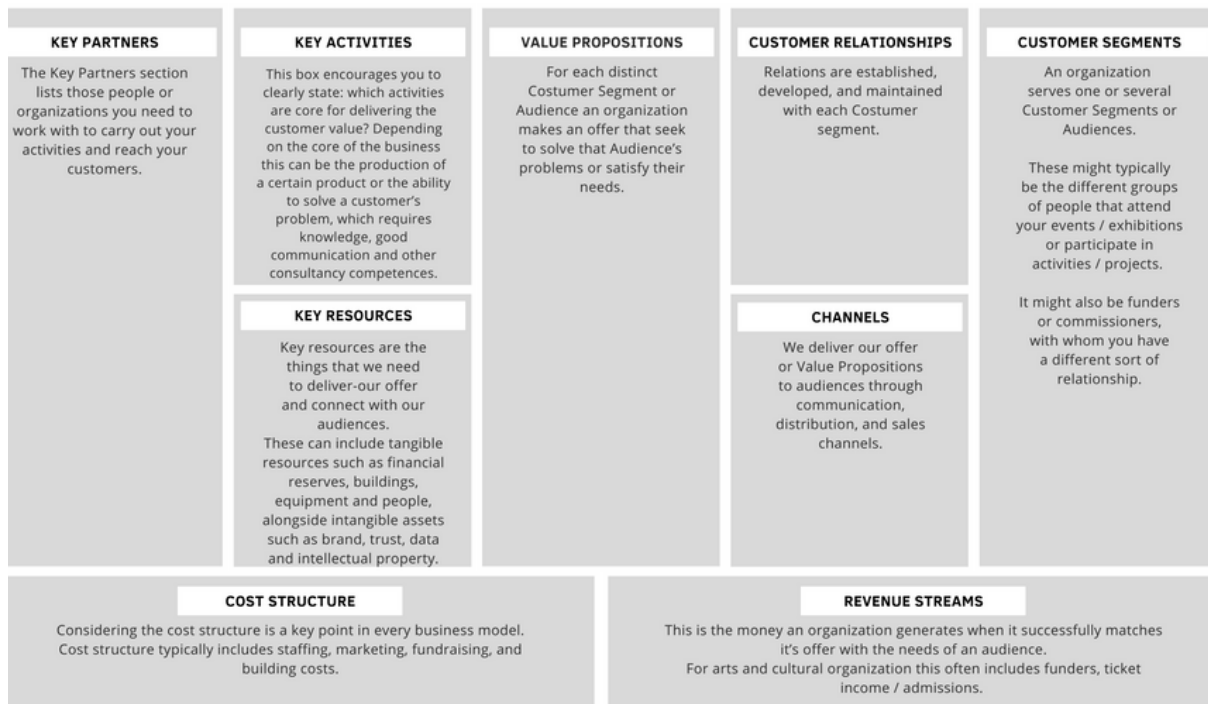
Purpose - The aim of this module is to discuss the traditional Model Canvas, it's role on a Business Plan and its importance on the viability, growth, and sustainability of a business.

Skills and competences - To be introduced to the Business Model Canvas that has been developed for the needs of this course. To make students able to design a BMC that can be vital to the contemporary market.

Introduction to Business Model Canvas. What is it? Why is this important?

Osterwalder and Pigneur created The Business Model Canvas as a shared language for describing, visualising, assessing and changing business models. BMC is a poster like presentation, consists of 9 blocks: activities, partners, resources, value proposition, customers, customer channels, customer relationships, costs and revenue. By using the BMC you as a entrepreneur will be able to think about the elements of your Business Model in a more systematic and playful way. Business model describes the rationale of how an organisation creates, delivers and captures value. The canvas was co-created by 470 people in 45 countries, across a diverse mix of industries and sectors, and is used by many successful companies such as IBM and Ericsson. The Business Model Canvas is a visual framework for describing the different elements of how a business works. It illustrates what the business does, for and with whom, the resources it needs to do that and how money flows in and out of the business. It can be used to design new models or to analyse current models.

THE BUSINESS MODEL CANVAS



Business model Canvas



For each of the nine elements, it is important not just to list all the things you currently do. Think about the things which are essential to make the model work. This introduction will explain what each of the nine components might describe in an arts and cultural context.

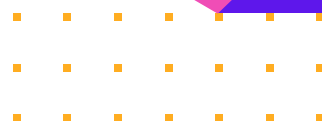
The 9 components of the canvas are:

- 1) Customer Segments** (analysis of the different kinds of customers and classification of them according to their different needs and characteristics)
- 2) Channels** (establishment of the best way to deliver the value proposition, in terms of speed, efficiency and cost effectiveness)
- 3) Customer Relationships** (identification of the kind of relationship which is best to establish with the different customers' segments)
- 4) Revenue Streams** (design of the way to make income from each customer segment)
- 5) Key Activities** (concise description of what executes the Value Proposition)
- 6) Key Resources** (determination of what everything needed to create the described value for the customers)
- 7) Partners** (establishment of the needed partners to develop the non-key activities)
- 8) Cost Structure** (description of the monetary consequences of the whole business model)
- 9) Value proposition**

Value Proposition. When we discuss Business Model Canvas elements, we should start analysing Value Proposition as a natural starting point. This section of the canvas should capture what you provide to people that they value. It might also be something that wouldn't happen without you there to facilitate it - such as the vibrancy you bring to the market or innovation in different forms. There are always several elements to your Value Proposition, offered to different Customer Segments. Good Value Propositions address specific customers' 'pains' or problems and offer them 'gains' by meeting a need. It has a good fit in practice with the profile of potential customers.

The Value Proposition has a relationship to what you or your organisations might traditionally describe under mission, vision and offer. The key difference is that it's looked at from the point of view of people who benefit rather than your own perspective. If you struggle to define your Value Proposition ask yourself 'what difference do we make and to whom?'

Business model Canvas



Customer Segments. The last part of that question brings you to your 'Customer Segments'. Each business targets a certain group of potential customers. You as entrepreneurs should look for people who might actually need your product, for which the product has high value, so they are prepared to pay for it. This can be a small group of people (a niche) or it can be almost everyone (a mass market). The Value Proposition must meet clients' needs. Knowing what they want from you and what you want to give can be important to having long-term relationships with such 'customers'.

- Every organisation aims to meet some people's need
- Customers who share a need that they can face make a segment
- Businesses work in matching value propositions to customer segments
- Business model must determine both
- All the customers segments can be classified in different groups

There are different customers' segments, but we can mention these:

1. Mass Market
2. Niche Market
3. Segmented
4. Diversify.
5. Multi-Sided Platform/Market Knowing what they want from you and what you want to give can be important to having long-term relationships with such 'customers'.

Key Partners. The Key Partners section lists those people or organisations you need to work with to carry out your activities and reach your customers. These might be people with whom you work in formal or informal alliances, collaborations, partnerships or joint ventures. They might also be people you could categorise as suppliers. Sometimes Key Partners can provide things you don't have within your Key Resources such as workshop spaces. Sometimes they can perform Key Activities that you don't do yourselves such as distributing books you publish. It's useful to think about what role Key Partners play in the fundamentals of your business, as well as the 'added value' partners often bring. Be clear where you can structure them into your business model and where doing so might bring risks. Often it is more effective not to do everything on your own. You will want to enter into relationships with people or organisations who can contribute to producing your value at a lower cost than you can do it on your own. Therefore it makes sense to enter into strategic partnerships with non-competing businesses or service providers. Think about who would help you to produce your value most effectively and most efficiently! Forming partnerships requires the combination of certain aspects: right Partnership Agreements, defining Expectations, impact on your clients: must be profitable for clients, win-win situation: They both must get profit, selecting partnerships: To save time and money.

Business model Canvas



Key Activities. In some ways this is one of the most obvious parts of the canvas. What do you need to do to deliver your Value Proposition, to develop the Customer Relationships you want and to bring in Revenue Streams? If you're assessing a current business model and a Key Activity doesn't especially connect to those areas you may need to adjust your model. What is the activity doing for you? If it doesn't deliver value, customers or revenue then why are you doing it? What does it bring that you might be missing from your value proposition? Could you stop doing it or do it differently in a way that does deliver value or income? This box encourages you to clearly state: which activities are core for delivering the customer value? Depending on the core of the business this can be the production of a certain product or the ability to solve a customer's problem, which requires knowledge, good communication and other consultancy competences.

These main activities must be classified in one of the following groups:

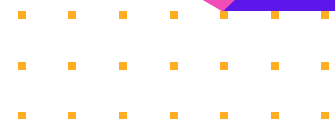
1. Production.- Designing, creating and delivering a physical good
2. Problem-solving.- The main activity is to solve others' problems
3. Platform/network.- It is related to that platform and to network in general.

Customer Relationships. This aspect describes the kind of relationships customers want or expect with you and the type of relationships you want to make with them. This often relates to the values of your organisation as well as to how you see your organisation working in practice. If, for example, your values include collaboration and equality you might want to establish relationships based on co-creation, listening and community input. If your model requires a lean staff and a digital platform, you might encourage a more 'selfserve' relationship with customers. One key question for cultural organisations is the extent to which different Customer Segments can influence what you do and how you do it. There is no right or wrong answer but the answer can vary from organisation to organisation. How will be the relationships with your customers? Will they be face to face? Will it be automated? Will your products be customizable, so you have to interact with the customers a lot? How will you retain your customers? How will you encourage them to buy more from you? All this needs to be planned, revised and thought about regularly.

There are six main different kinds of relationships business-customer:

1. Personal Assistance - A business representative (BR) assists customers
2. Dedicated Personal Assistance - BR for special set of customers (Family Banker)
3. Self Service - Customers choose and take what they want
4. Automated Services - Offer based on clients' previous preferences (Amazon)
5. Communities - Coordinated group of people helps business with offer
6. Co-creation - The customers help in setting up the business' offer (Lego)

Business model Canvas



Key Resources. This section describes what you need to have and maintain to deliver your Value Proposition, Customer Relationships and Revenue Streams. These can include tangible resources such as financial reserves, buildings, equipment and people, alongside intangible assets such as brand, trust, data and intellectual property. If there are resources you need in an ideal world but can't get immediately can your Key Partners supply these? Do you really need all things you list here or could others provide them? Obviously making things or providing services and delivering them to the customer requires the means. Key resources are those which are indispensable for getting started. Which physical, human and financial resources do you need?

There are mainly four kinds of key resources:

1. Physical resources (equipment, small assets, building)
2. Intellectual resources (brands, patents, IP)
3. Human resources (staff, contacts)
4. Financial resources.

Channels. In this section you should think about and summarise the ways you will reach your Customer Segments. Word of mouth, advertising and social media are all common Channels. There may also be other ways that are important to you such as community or business networks. How will you maintain contact with customers if an ongoing relationship is important, as it might be with funders for instance? It's worth capturing how you'll approach this so you can see the implications on Key Resources and staff costs. Channel is what the company uses for delivering value to its customers. It is also used to liaise with customers in order to get their feedback.

You have to answer these questions:

- How will you interact with your customers?
- How will you get their attention?
- How will you distribute your product?
- How will you provide after sales services?

These factors are called your channels. The effectiveness and efficiency of these channels can be very important for your profitability. There are three different phases: marketing, sales, distribution.

Channels can be classified according to either its ownership or its nature. They must combine speed, efficiency and cost effectiveness.

Business model Canvas

Cost Structure. Although the Business Model Canvas is excellent at illustrating how business is not all about the money, knowing what it will cost to carry out your Key Activities and develop your resources, partnerships and customer relationships is vital. What do you need to pay for and what will it cost to deliver your Value Proposition via the Key Resources and Activities? It's a useful check when moving from Business Model Canvas to Business Plan to be sure you know how much each thing noted on the canvas costs financially and what it brings in. It is useful to cluster types of costs so you can see the proportions spent on staffing, programme, fundraising and other common areas. There may be times you need to be lean in the Cost Structure, and others when actually increasing costs to focus on value creation is more appropriate. Key Activities, partnerships and resources all translate to costs. Any business has to keep costs in mind and monitored. Which you cannot do without? Which can be lowered? Where would it be unwise to be stingy? The business models can be differentiated also by cost structure. Do they aim at the lowest possible cost or do they aim to provide a world class or even unique value, no matter what the cost? Is cost fixed or scaled along the mass of production. Ideally, can you sell more without proportionally increasing the cost? Considering the cost structure is a key point in every business model.

Business models can be differentiated also by cost structure. You should consider these: Cost-Driven: Minimising costs; Value-Driven: Trying to give their customers the best value; Fixed Costs: Expenses don't depend on the level of business production; Variable Costs: Depend on the volume of the company production; Economies of Scale: Cost per unit lowers when the production increases; Economies of Scope: Offer of other "connected" products.

Revenue Streams. How will you make sure that the money gets into your pocket in time, so that you can meet your obligations? There are different models, from onetime payment to monthly small payments and renting the product. All have their advantages and disadvantages that need to be considered. You can also assess the importance of each element of cost by seeing how it delivers revenue income. What activities do you do that bring in different revenue streams? Income from particular customers may be worth noting if they represent a significant proportion of overall income. You will need to pay particular attention to what you need to do to maintain that income and assess how secure it is in the future. One main consideration is the pricing itself: does the price target and the mode of payment fit my customer target group?

There are 7 ways a company makes income from each customer segment: Asset Sale - Transferring the ownership of a physical good; Lending/Leasing/Renting - Selling exclusive right to an asset for a time (Xerox); Subscription Fees - Charging a service that is permanently offered; Usage Fee - Charging the use of a particular service; Licensing - Charging the use of protected intellectual Property; Brokerage Fees - Charging intermediation seller-buyer; Advertising - Charging fees for helping others in advertising.

Business model Canvas

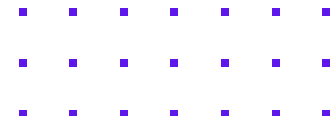
Recommendations. It can be worth assessing your Business Model Canvas from time to time to see how it is evolving. Sometimes Customer Segments or Key Activities change over a period of time, almost without conscious strategic decision. This might be the result of changes in the market or in staffing. There may be opportunities to make more of this or to react more consciously if you feel less positive about the implications. Sometimes stepping back to look at your model can highlight something that you'd not noticed - be it threat or opportunity, strength or weakness. This puts you in a better position to respond. It may help you understand and communicate your value better to those who need what you offer or can help. The Business Model Canvas is not so much a prescriptive recipe for success as a portrait of your organisation. Considering how you might take control of that picture will help you keep designing what you do and how you do it. A wealth of information on the methodology, templates (incl. a creative commons licence high resolution Canvas and links to numerous presentations can be found at the website of the founders of the methodology: <https://strategyzer.com/>

Please keep in mind what simplified questions you should answer while developing your own Business Model Canvas:

Sample questions

Key Partners Who are our key partners? Who are our key suppliers? What activities do our partners perform? What do we give them?	Key Activities What are our key activities? What does our value proposition require? Revenue streams?	Value Propositions What customer needs are we satisfying? What value do we deliver to our customers? What customer problem do we solve?	Customer Relationships How will we get, keep, and grow customers? Why will they like us?	Customer Segments For whom are we creating value? Who are our most important customers? How would you describe them?
	Key Resources What resources are required? Financial? A physical location?		Channels How do our customers want to be reached? What will work best?	
Cost Structure What are the important and critical expenses? Fixed? Variable? What resources are most expensive? What activities are most expensive?			Revenue Streams How do we make money? How much will we make? How are we setting prices? Will our customers pay for our value? What are they paying now?	

Assignments



1 assignments

Briefly describe your business idea (5 sentences).

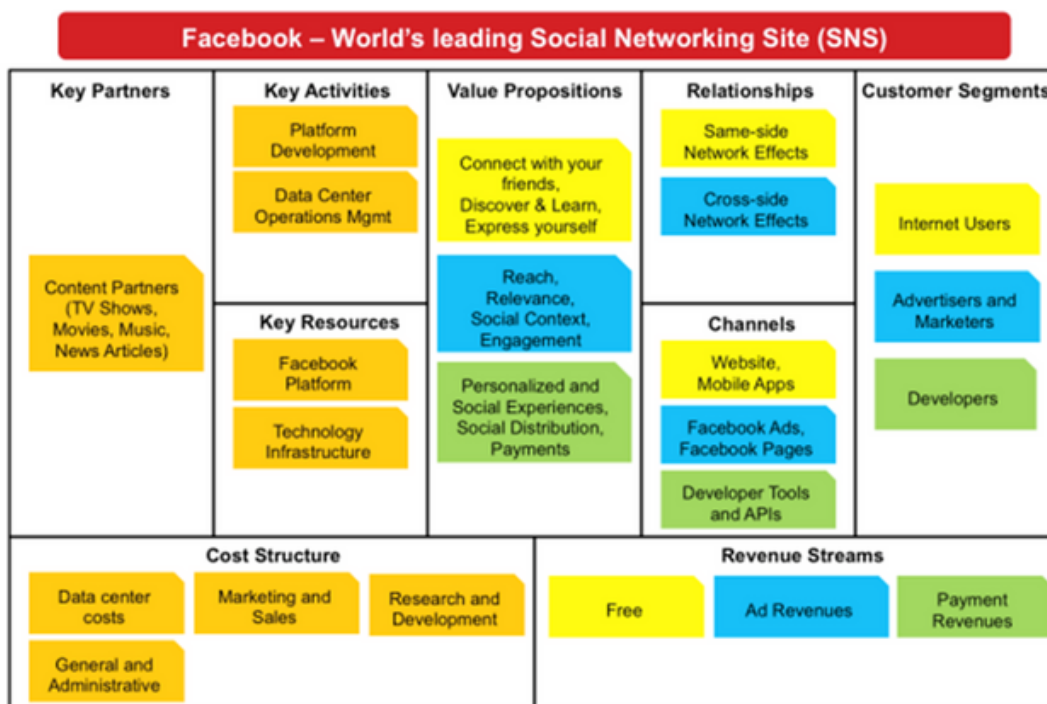
Which components of Business Model Canvas best describes your proposed business model?

2 assignments

Analyse the case of Facebook business model canvas and write down 3 improvement suggestions:

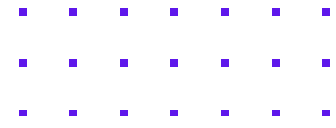
1_____ 2_____ 3_____

CASE: FACEBOOK BUSINESS MODEL CANVAS



www.businessmodelgeneration.com

Assignments



3 assignments

Work on your business idea and fill the Business Model Canvas table with your business idea. Use the format below:

THE BUSINESS MODEL CANVAS

<p>KEY PARTNERS</p> <p>Who are your key partners? Who are your key suppliers? Which key resources are we acquiring from them? Types of Partnerships -Strategic alliances -Coopetition -Joint ventures -Buyer-supplier relationship.</p>	<p>KEY ACTIVITIES</p> <p>What key activities your value proposition requires? Your distribution channels? Customer relationship? Revenue streams? Categories -production - Problem-solving - Platform/ Network</p>	<p>VALUE PROPOSITIONS</p> <p>what values do you deliver to the customer? Which one of your customer's problems are you trying to solve? What products and services are we offering to your customer segments? Which customer needs are you satisfying?</p>	<p>CUSTOMER RELATIONSHIPS</p> <p>What type of relationships do your customers expect to establish and maintain with them? Which ones have you established? How costly are they? -Personal assistance -Dedicated personal assistance -Self-service -Automated services</p>	<p>CUSTOMER SEGMENTS</p> <p>For whom are you creating value? Who are most important customers? Customer Segment Types -Mass market -niche market -Segmented -Diversified -Multi-sided platform</p>
<p>KEY RESOURCES</p> <p>What key resources do our value propositions require? Types of Resources -Human -Physical -Intellectual -Financial</p>		<p>CHANNELS</p> <p>Through which channels do your customers want to be reached? How are we reaching them now? Which ones work best and are cost-efficient? Types of channels -Owned channels -Partner channels</p>		
<p>COST STRUCTURE</p> <p>What are the most important costs inherent in your business model? Which key resources and activities are most expensive? Is your business more cost-driven or value-driven?</p>			<p>REVENUE STREAMS</p> <p>For what value your customers are willing to pay? For what they currently pay? How are they currently paying? How much does each revenue stream contribute to your overall revenues? Types of Revenue Streams: Asset sales; Usage fee; Subscription fee; Lending/leasing/renting; Licensing; Brokerage fees; Advertising</p>	

#1

Questions for the discussion?

1. What do you think is the most difficult part of filling out a business canvas in Canva?
2. What do you think uniqueness is?
3. How do you think or calculate the funds needed for the business?
4. What do you think are the difficulties encountered in starting a business?
5. Do you now have an idea that you would like to implement?

#2

Useful links

- <https://www.alexandercowan.com/business-model-canvas-templates/>
- <https://strategyzer.com/>
- <https://www.tandfonline.com/doi/pdf/10.1080/19420676.2018.1541011>
- <https://www.sciencedirect.com/science/article/abs/pii/S0959652616307442?via%3Dihub>
- <https://research.usq.edu.au/download/6db1d3bb25817fe70ee1f0ddd757c51cf92b8ba58963283b67d3d93d33cdbc458384/CBMC-Social-Enterprise-Journal-Paper%20final.pdf>

#3

Become a co-author

This handbook is unique in that we invite everyone to co-author it. If you are an expert and work in the field of entrepreneurship, if you want to share useful information with the readers, if you are a creator of unique tasks and believe that you can contribute to entrepreneurship in one way or another, we invite you to share your information and we will add a new chapter to the handbook that you have created.

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