

Entrepreneurship for Computer Science

15-390 - Spring 2019

Course Project

This document specifies the different milestones of your project, alongside their allocated grade percentages and due dates. In addition, it provides a template for the fifth milestone, namely, the business plan.

I) Project Milestones:

Milestone (M; for Milestone <i>i</i>)	Description	Grade Percentage	Due Date
M1: Team Formation and Idea	In this milestone, you need to discuss your team from the perspective of the 3Rs model, where you elaborate on the R elationships, R oles and R ewards among the team members. Afterwards, you need to describe your idea in detail (be very clear about the problem that you are trying to solve, its importance, and your approach to solving it).	5%	February 14, 2019
M2: Market Research and Segmentation	In this milestone, you need to conduct primary, secondary, qualitative, and/or quantitative market research studies in an attempt to validate your hypothesis (your problem and solution defined in M1) and justify your selected beachhead market. Before selecting your beachhead market, you need to perform market segmentation and clearly identify your target market segment on your produced segmentation tree.	20%	March 12, 2019
M3: Business Model	In this milestone, you need to design a business model (i.e., a way to monetize your idea) and conduct revenue projections for 7 years. In addition, you need to come up with a reasonable pricing framework for your product/service. Lastly, you need to discuss whether your venture is sustainable and attractive from a microeconomic standpoint via calculating and presenting Lifetime Value of an Acquired Customer (LTV) and Cost of Customer Acquisition (COCA).	15%	March 26, 2019
M4: Prototype	In this milestone, you need to develop a <i>basic</i> prototype of your proposed product/service. You need not write any document about this. The deliverable will be a demo of your prototype.	35%	April 14, 2019
M5: Business Plan	In this milestone, you need to write a full-fledged business plan. Please see below a suggested template for doing so.	25%	April 23, 2019

II) Business Plan Template:

1. **Executive Summary** (1-3 Paragraphs)

- The executive summary acts as a **high-level overview** of your business plan. In particular, it only sheds light over *the main points* of your entire business plan (e.g., what is the problem that you are trying to solve? Why is it important? What is your proposed solution? Etc.,)
- Make sure not to go into much details in this section (in other words, focus very briefly on the “why” and “what”, and not on the “how”).
- When defining the problem that you are trying to tackle, you can include the major finding in your market research (e.g., recent studies show that 55% of people worldwide are concerned about diagnostic errors) that lead you to think that your problem is truly an important one. This will serve as a solid motivation for proposing a solution for this problem.
- Emphasize the uniqueness of your proposed solution so as to intrigue the reader to continue reading your plan.

2. **Background** (1 page)

- Define the problem you are trying to solve very clearly. How did you verify its existence, importance, and urgency? Include summaries of your primary and secondary market research findings. If you conducted a survey, show only the gist of it (e.g., 1 or 2 summary plots).

3. **Proposed Solution** (1-2 pages)

- Explain how your solution will exactly address the problem you defined in Section 2.
- Elaborate on your product/service (or your proposed techniques and features). Is it a website, an app, a full-fledged system, or something else? What is special and/or unique about it? What are the novel features? How does your product achieve what it promises to achieve?
- What are the benefits (or values) that your product/service offers to your customers?
- Who are your competitors (if any)? How does your product/service compare to their products/services?

4. **Implementation Strategy** (1-2 pages)

- Who is your team and why is it the right team to pursue the suggested solution in Section 3?
- What is your implementation strategy? Do you have already a prototype of your product? Have you started your business already? Do you already have some revenue? If so, what is your strategy to grow your business and achieve sustainability?
- Note: Do not get into many specifics. The objective of this section is to help the reader understand where you are in the process of building your company.

5. **Business Model** (1 page)

- Describe your business model very clearly and specify your revenue streams. Why do you think this is the best way to monetize your proposed product?

6. **Beachhead Market** (1 page)

- Identify your potential customers along the demographic (e.g., age, male and/or female, income level, education level, and/or marital status, among others) and psychographic (i.e., people's attributes that cannot be measured like interests, hobbies, and/or fears, etc.) dimensions. Do not write something like "everyone" or "all women" or "all men", etc. You should show a much deeper understanding of your target customers and their consumption behaviors.
- Identify your beachhead market (the geolocation) and justify its selection. What were the criteria that you relied upon to make your selection? What is the TAM of this market?

7. **Financials** (2 pages)

7.1. Revenue Projections

- Conduct and present revenue projections for the coming five years.
- You can also include 1 or 2 critical sensitivity analysis.

7.2. Unit Economics

- Compute your COCA and LTV and discuss why (and if) your business will become profitable in five years.

8. **Marketing Plan** (1 page)

- How will you market your product/service to your target customers? Will you use inbound and/or outbound marketing techniques? If so, what are these techniques and why are they effective for marketing your product? How will you consistently reach your target customers and how would you convert them to actual clients?
- Note: Most first-time entrepreneurs would say "we will promote our business via posting on Facebook and Twitter (for example). We will also hand out flyers and/or business cards". They may say this not because this is the best way to promote their unique business aspects, but simply because they may not know any better. Your marketing plan should be more thoughtful and fits very well the context of your product/service.

9. **Concluding Remarks** (1-2 paragraphs)

- Reiterate the importance of the problem that you are trying to solve (in 1 or 2 sentences)
- Provide a high-level summary of the most important aspects of your *value-creation* (i.e., product/service) and *value-capture* (i.e., business model) proposed solutions.