Course Description

Lean Product Development

Contents

Big Idea

In the last decade many skilled people in the IT Business moved away from a safe job at a big cooperate company and started their own business with nothing more than a great idea. Transforming this idea into a great product is a huge challenge. People often picture the tremendous success of companies like Facebook or Twitter, but the reality is different, nine out of ten startups fail.

This course will teach the participants the state of the art methods, techniques and tools, that successful entrepreneur use today to maximize their chances of building the right product for the right people. Building products as fast as possible and minimizing the "time to market" are crucial things if you wanna succeed in these days.

Today even large companies build small startup teams and use these technics to improve their development speed and increase their innovativeness level.

Intended Learning Outcomes

After participation in the course, the students

- know the basic principles of how to develop a successful startup
- be able of choosing the appropriate tools to evaluate a business idea
- know the key concepts of the lean startup process

- be able to describe the most important points of a startup idea on an single piece of paper (Business Model Canvas)
- be able of formulating hypotheses about a business model and know how to validate them
- can judge the lean product methods on their usefulness for a certain situation
- be able to critically discuss the limitations of the taught methods

Structure of the Course

Fundamentals

The course starts with a brief history of lean production. How it was developed in the automotive industry and how its principles can be transformed into the world of startups. Therefor the term startup is defined and different types are introduced.

Customer development

This part of the course covers the customer development process[1], that is the foundation for most management methods and technics used in the modern startup environment. The nine deadly sins of the product development model are introduced and the customer development manifesto[2] will be discussed.

The lean startup methodology

The lean startup methodology by Eric Ries[3] combines the knowledge from Customer Development with agile development methods to describe a process of developing a startup from an idea to a successfull business.

In this part the "build-measure-learn" loop will be introduced and ways to minimize the total time per iteration are discussed. There will be a detailed description on the value and the growth hypothesis, since they are the two crucials for a startup. Different measuring methods are introduced to answer the most important question for any startup: Pivot or persevere?

At the end of this part "validated learning" as the most important unit of progress for a startup is introduced a long with the concept of "innovation accounting".

Tools and Methods

This part concentrates on practical tools and methods that one can use to optimize his workflows in a lean environment[4].

As a very common concept the business model canvas by Alexander Osterwander & Yves Pigneur[5] is introduced and the nine parts of it are discussed in detail. The usage of this concept will be set into relation to the first two topics. In this part evaluation methods like A/B testing and agile development methods will also be discussed.

Didactic Concept, Schedule and Assignments

The course is mainly built upon online workshops. They take place on three evenings as synchronous events with a duration of three hours each. These workshops start with a brief introduction into a topic by the lecturer and are followed by a phase of group work in teams of 3-4 students, where they deepen their knowledge and apply this knowledge onto a case study. In the end of each workshop the groups present their results and get an assignment to work on until the next workshop.

Introductory lecture on site

The introductory meeting deals with organizational course details and the fundamentals of the course together with a short introduction into the lean startup process[6].

After this the group building process starts in a Startup Weekend like style[7], every course member will be encouraged to upfront to bring a potencial startup idea. The lecturer will add a few real world ideas from the recent past, so that the students have a variaty of ideas to choose from. First there is a voting for the most popular ideas and after that the students form teams around this ideas.

As a preparation for the first online workshop the teams are motivated to think about the exact problem they trying to solve and the target group[8] they have in mind.

1st Workshop (Business Plan vs. Business Model)

In the first online session the lecturer will describe the differences between an Business Plan and a Business Model[9] and give an introduction into the Business Model Canvas. After that the teams will work in virtual breakout rooms to fill out a canvas for their startup idea[10]. As a preparation for the next workshop the students need to "get out of the building" and try to validate their hypotheses with real potential customers.

2nd Workshop

The second online session will cover the most important parts of the lean startup method by Eric Ries and the students will work again in virtual breakout rooms adapting the core concepts to their startup idea. For the next workshop the students have to create "something real" in the direction of a MVP[11] to validate there hypothesis.

3rd Workshop

In the last online session the lecturer will talk about practical tools and methods that a startup team can use to develop, measure and improve the MVP. The students will again work in virtual breakout rooms on adapting the best fitting methods to their project.

Wrap-up session

This on site workshop is dedicated to present the results and most important the process of each team. After the presentations there will be time to clarify open questions and give feedback.

Examination

The examination will be based on the work book, in which the teams collect their artefacts and document their decisions.

References

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