



## Market Engineering

### Case Study

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In this Market Engineering tutorial at VGU, you may engineer your own market following the guidelines given in this case study. You will be graded in this Market Engineering course based on your performance in this tutorial. This includes the final presentation and text about your case as well your activity level in and quality of contributions to the discussions during the tutorials.

Please work in groups of maximum three people. Work from groups of more than three will not be considered. Next to this kick-off discussion, there are further discussions on workday evenings: the milestone presentation where you should ask questions and present your first steps (up to step 2.2) within a 10 minute presentation as well as the final presentation. In the 20 minute final presentation, all groups summarize their entire work on this case study. Every group member has to actively participate (i.e. present) in the final presentation. Subsequently there will be a decent discussion period.

Please use the steps outlined in the case as an orientation. You should provide a deeper insight into your solution, where necessary.

You are meant to deliver your presentation slides and a 3 page text about your case latest on Dec 10<sup>th</sup>, 4 pm.

#### **Preliminary dates**

<i>Kick-off:</i>	29.11.2015
<i>Milestone presentation:</i>	03.12.2015    and    09.12.2015
<i>Final presentation:</i>	12./13.12.2015

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*“Enabled by the Internet-Web compound, co-creation of value by consumers has emerged as a major force in the marketplace. In sponsored co-creation, which takes place at the behest of producers, the activities of consumers drive or support the producers’ business models. Autonomous co-creation is a wide range of consumer activities that amount to consumer-side production of value. Thus, individuals and communities have become a significant, and growing, productive force in e-commerce. To recognize co-creation, so broadly understood, as a fundamental area of e-commerce research, it is necessary to attain an integrated research perspective on this greatly varied, yet cohering, domain. The enabling information technology needs to be developed to suit the context.” (Zwass, 2010)*

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## Part I – Market Analysis

You and three fellow students decided to found a start-up company. Since you are a student start-up, you can use a server hosted by the SCC for your infrastructure. Based on your knowledge from the market engineering lecture, you plan to create an online platform where users can trade customized products. Your plan to incorporate the concept of co-creation: users of the platform can not only request products but also offer those products. A main characteristic of the products that shall be traded on your market platform is their customizability. Possible goods traded on your platform could be smart phone covers, mugs, flasks, business cards, envelopes, T-shirts, etc., where customers can request special designs. In order to evaluate your idea, you plan to analyze the existing market:

- Step 1.1: Please analyze the market and its environment. Are there other platforms that coordinate mass-customized products on C2C level? Which environmental factors could impact your market platform?
- Step 1.2: Analyze the platform of one of your potential competitors using the Market Engineering House.

## Part II – Institutional Design

Now that you have analyzed the market, the next step is to figure out, how your market needs to be designed so that it has the required capabilities to benefit from mass customization. Based on the management review “Cracking the Code of Mass Customization” you plan to evaluate the following:

- Step 2.1: Identify target products for your platform. Which kind of products shall be offered by potential vendors? Can you pin down common product attributes that shall be customizable?
- Step 2.2: How can potential vendors integrate the process of customization in your market platform? How can you support the vendors to reduce the burden of choice for the customers?

When you engineer your market platform you have to make multiple fundamental decisions regarding the institutional design. You have learned that trust is an essential feature of online market platforms. Please read the management review “Online Reputation Systems: How to Design One That Does What

You Need” and elaborate suitable features for your platform in order to create trust. Design a mock-up of your reputation system and consider the following steps:

- Step 2.3: What are the key objectives of a reputation system within your market platform?
- Step 2.4: Which user information do you plan to acquire and include in the user profiles?
- Step 2.5: How do you plan to display the profile information?

As part of your institution, you need to design a mechanism that allocates the products and determines the prices the customers have to pay. Next to your lecture materials, please use the management review “When Customers Help Set Prices” in order to derive a pricing strategy and allocation mechanism.

- Step 2.6: Which pricing methods would you consider for your market platform and which would you reject? What are your reasons?
- Step 2.7: Two goals of your platform are allocative efficiency and incentive compatibility. Please design a mechanism for your platform that serves these criteria. What other properties (regarding mechanism design) does your mechanism have?
- Step 2.8: Are there any downsides of your mechanism and how could you face them?

## Part III – Evaluation and Continuous Market Engineering

Before you actually launch your market platform, it is important to examine the expected user behavior, but also to make sure that the technical infrastructure is matching all necessary requirements. Please evaluate the operability as well as the expected outcome of your market platform, considering the following steps:

- Step 3.1: What are the technical requirements your platform has to fulfill during the launch and the subsequent operating phase? How can you ensure that those requirements are met?
- Step 3.2: Can you think of ways to evaluate the functionality of your reputation system before the actual launch of your platform? Can you sketch possible approaches (including experiment design) given the infrastructure of the KD2-Lab (for economic experiments) at KIT?
- Step 3.3: Can you model and analyze user behavior from a game theoretical point of view?
- Step 3.4: How can you measure the system performance within your market platform?

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I hope you will enjoy this tutorial. If you should have any questions or feedback concerning the case study, feel free to contact me ([christof.weinhardt@kit.edu](mailto:christof.weinhardt@kit.edu)).

Good luck!