



## Master Course - Innovation Simulation Game

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### Abstract

*An innovation simulation game was developed in cooperation with HYVE business consultancy. The simulation game supports management decisions along the general stage and gate process of innovation projects. The game begins with the idea and ends in a business model presentation according to the Business Model Canvas by Osterwalder & Pigneur.*

*In order to show students the typical work packages during innovation projects, this playful approach was applied during a two-day seminar. Within the scope of this seminar the following aspects must be executed by students in chronological order:*

- 1. Definition of the respective product or service*
- 2. Description of the product's or service's added value*
- 3. Determination of positioning on the market and of marketing strategy*
- 4. Description of the cost and revenue structure*
- 5. Comprising illustration of the idea including points 1-4 in a Business Model Canvas*

*In the seminar four groups compete with each other while working on four similar business ideas and start-up companies, respectively. Students work on each aspect based on guiding key questions. Finally, students have to pitch each aspect in order to acquire money. The winning group is the one that ultimately acquired the most money.*

*With this method, students learn playfully important stages of innovation projects. On the one hand, they acquire skills in selling their ideas plausibly and on the other hand they are encouraged in critically questioning other business ideas.*

### 1. Introduction

On the basis of the business logic game of HYVE - the innovation company, many innovative ideas are already developed in practice into a complete business model. In most cases, the business model then forms the decision-making foundation in the stage-gate process.

After the success of the business logic game, our department had the idea of conceiving a master's degree course for technical and non-technical students. The basic conditions were that the students can without any previous knowledge, that technical tools are not necessary or are not intended, and that the simulation game can last no longer than two whole days.

### 2. The structure of the simulation game

Basically, the game consists of the elaboration of the following 5 work packages, which also form the core phases within an innovation process:

1. Definition of the respective product or service
2. Description of the product's or service's added value
3. Determination of positioning on the market and of marketing strategy
4. Description of the cost and revenue structure
5. Comprising illustration of the idea including points 1-4 in a Business Model Canvas

The game character results in the fact that the phases are carried out and the respective results are sold in competition with the other groups. Like in practice, the elaboration of a phase requires an investment which must at least be earned back into the financing rounds. The following graphic shows the basic structure and sequences of the game:

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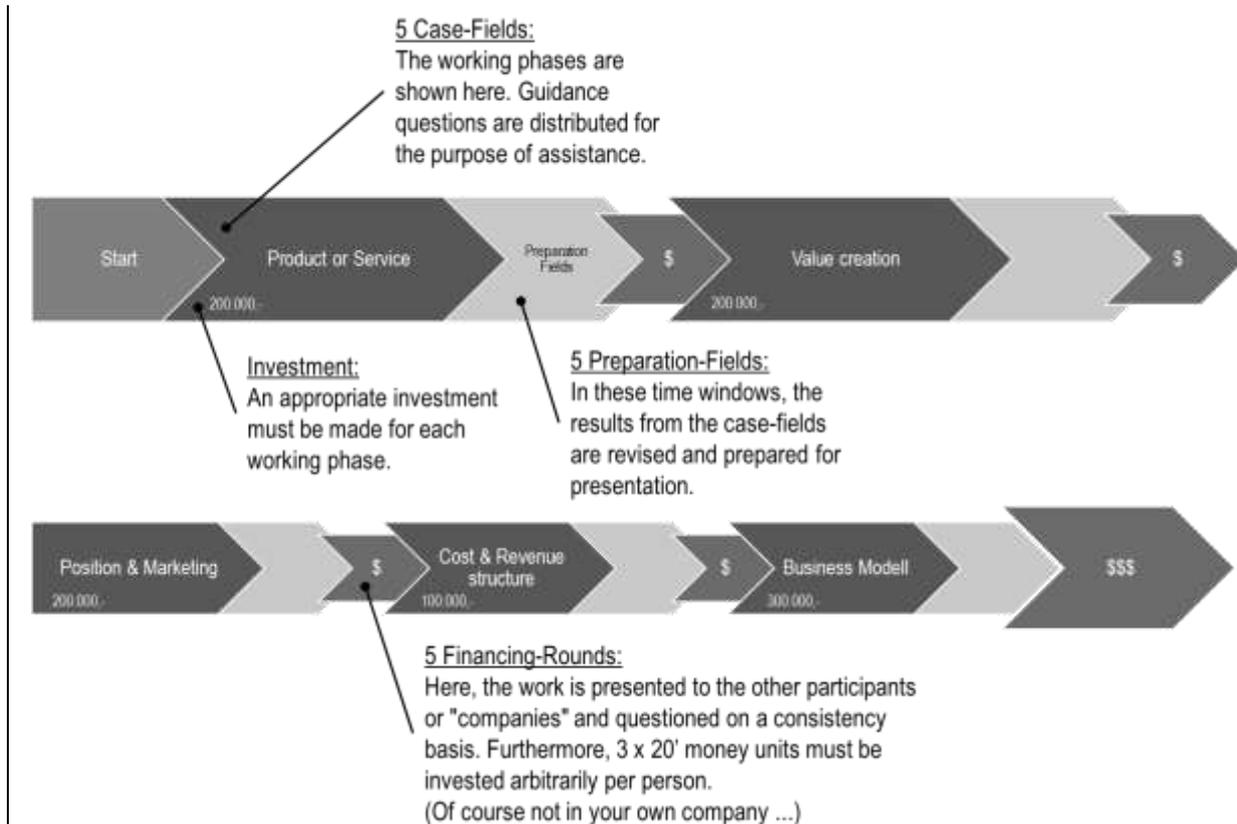


Fig. 1. The phases and their meanings

Time division and compliance are important success factors. The case fields need between 90 and 120 minutes (depending on the complexity and competency of the degree program).

For the preparation fields, 15 minutes are to be planned. The presentations should be deliberately created without the typical tools such as Excel or PowerPoint.

It is very important to comply the predefined time limits during the financing rounds. Based on practical experiences, it has been shown that 7 minutes of presentation and 8 minutes of question-answering-play works perfectly. In order to keep the time limits during the presentations it is suitable to use a countdown or simply an egg timer.

After the presentations, each participant receives 3 x 20' units of money, which must be invested in the implementation of the others' case fields – based on their own judgement. At this point it is important to emphasize that investment decisions should be based on the conclusiveness of the individual case fields and not into the original business idea. This results in different for each group income round by round, which in turn stimulates the ambition to give the best every time. In addition, the outcome of the game is open until the end, because in the last round of funding each person invests the doubled amount of money.

## 2. The nature of business ideas

The basic nature of the business ideas should be predetermined and can be the same or slightly different for all groups. In any case, students must be able to work quickly with the business idea and to have an understanding of what inventory is necessary and how the manufacturing process can work. Well-functioning examples are the following business ideas:

Group 1: Opening of a new ice cream parlor in the center of Graz

Group 2: Opening of a cupcake shop in the center of Graz

Group 3: Opening of a new snack bar in the center of Graz

Group 4: Opening of a health food store in the center of Graz



### 3. Guidance questions

In order to support the case fields in a goal-oriented manner, guiding questions are given to the students before the beginning of the respective phase, which must be answered. As an example in Fig. 2. the central questions for the first case field are shown. However, the central questions have to be adapted to the business idea.

Give your company a name and a logo!

Describe your product & define your service bundle (products / services). What makes your products / services unique from the point of view of the customers? What is your key feature?

Which customer needs / -problems should be solved? Which customer service does your product or service fulfill in this context?

Which target customers are you talking about? What improvements do you achieve in the life / behavior of the customer?

Which properties would the product have to fulfill (Must Haves)? (For example, design, flexibility, regionality, etc.)

Fig. 2. Guiding questions Case-Field 1

### 4. Game rules

As with every game, there are also certain rules and their compliance is observed.

Fines:

- The financing rounds start at a fixed time. In the case of rule violation, fines are payable:
  - 5 minutes = 20' money units
  - 10 minutes = 60' money units
  - 15 minutes = 120' money units
- Private surfing (Facebook, Twitter, WhatsApp, etc.) is prohibited during the working phases. If a person is caught during unannounced surfing, a fine of 80' money units shall be handed over to the bank.

Additional option:

- If you need expert knowledge from competitors, they can be borrowed for a fee. The price for this is negotiated with the respective group.

What was observed repeatedly is that even though the penalties do not seem high, they create incredible discipline among the students.

### 5. Conclusions

- Through this game, the students experience and learn the most important phases in an innovation process. From the idea to the conclusive business model.
- The lack of technical tools helps creativity and the ability to present presentations in a few words and supporting images.
- The "selling" of the individual working phases is a great motivation factor and at the same time give feedback on how well and conclusively students argue.
- The enormous time pressure shows how efficiently students can work under the circumstances and which measures have to be taken in the group to achieve this efficiency.
- The course offers a high level of dynamism and a high fun factor that reflects the spirit of innovation. The students assessed the course with excellent evaluations.
- Learning success is particularly high in understanding the content of the innovation phases.