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# Designing Interactive Museum Experiences : A set recipe for Discussion Triggering Gamification

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**Abstract**

UPDATED—29 June 2016. This research paper is about a game recipe various institutions can use for creating discussion about a topic of the institutions choosing. This recipe has been created by extensive research: interviews and concept tests. After this the recipe was tested and it did create the wanted discussion.

**Author Keywords**

Design; Museums; Media technology; Interaction; Dutch families

**ACM Classification Keywords**

Design, Documentation

#### METHOD USED FOR INTERVIEWS

We chose to do the interviews semi-structured. We used this method to gain as much subjective information as possible. The aim of these interviews was to get to know the why behind the quantitative research that Sound and Vision had already done.

We decided to gain the insights of the interviews with an ethnographic approach. We transcribed the interviews (with main important quotes, not literally because of time limit) and color-coded them according to the themes we were able to identify from the interviews themselves.

Since we only had 11 interviews, we could not generalize the results across the whole Sound and Vision visitor population. But we did have enough data to give some insightful quotes and to also see a tendency amongst visitors.

## **Introduction**

MediaLAB Amsterdam is a creative studio which lets international students work in interdisciplinary teams for partners out of the creative industry. One of these partners is Sound and Vision.

The Netherlands Institute for Sound and Vision is an important audiovisual content holder in Dutch media society. The institute both archives all Dutch audiovisual material and it displays this material in an interactive and child friendly way in its so-called experience. The institute holds over a million hours worth of material.

The institute wants to renew their experience part from 2016 onwards. In order for Sound and Vision to know where to start, this project has been conducted. The goal of this research paper is to define and explain a recipe that can be used by various institutions when they want to use gamification for triggering a discussion. This whole process has been done in an Agile work environment, with six sprints of a duration of three weeks (For more info about SCRUM/Agile: <http://medialabamsterdam.com/program/> ).

This recipe is based on the customer journey by Cruickshank [2011]. This customer journey that we created will make sure a discussion amongst visitors who will play a game in an institution, will happen. This customer journey is a set of rules to maintain, when someone designs a game for interactive museums, who want this game to convey a certain topic and trigger a specific discussion. In this paper we will explain how we created this set of rules as a recipe and how other museums can use this recipe to their advantage.

This paper will start by explaining where we started and got our data, then it will go in to the testing's of different concepts and how these contributed to our end recipe and at last it will give recommendations for other museums on how to use this guide.

## **Framework**

First of all a framework was created based on visitor research. This was done because it was important to know what visitors want and who they are. Out of that information we could create a knowledge base to start with for designing our game recipe. This was our desk research that has been done and it is referred to in this paper as the framework. The framework was important for the recipe because it formed the concept tests which have been done, and in their turn these concept tests formed the ingredients for our recipe. The first step in our framework was doing interviews with Dutch families who were visiting the museum.

### *Interviews*

We have done 11 interviews, with 32 respondents in total. One interview was with just children, six of them were with families and five were with just adults. We chose to have these three categories for two reasons. Firstly, we only had one team member who can speak Dutch. Since we did not want to do the interviews with children involved in English, we made it easier to handle the workload this way. We interviewed the adults in English. Secondly, families are the main focus group Sound and Vision asked us to work with, but from their quantitative research we can see that the average visitor's age is 49. Therefore we approached adults; they are also an important target group. We approached visitors when they came down the stairs at the 'inlogstations' because those visitors had already



concept generating session, the idea came up of having a game which will create awareness for families on how often they give away personal data, the game was also meant for parents to have an educational moment with their children about personal data and the game should help family members to form an own opinion about personal data and how they feel about this subject.

We have done several tests, with different groups of respondents. All the tests can be divided in to three phases. The Monopoly phase (figure 1), the Geese board phase (figure 2) and the end phase (figure 3). All these tests lead to the standardized recipe all kinds of institutions can use for creating games that trigger discussion. The next paragraphs shortly focus on the specific tests.

#### MONOPOLY PHASE

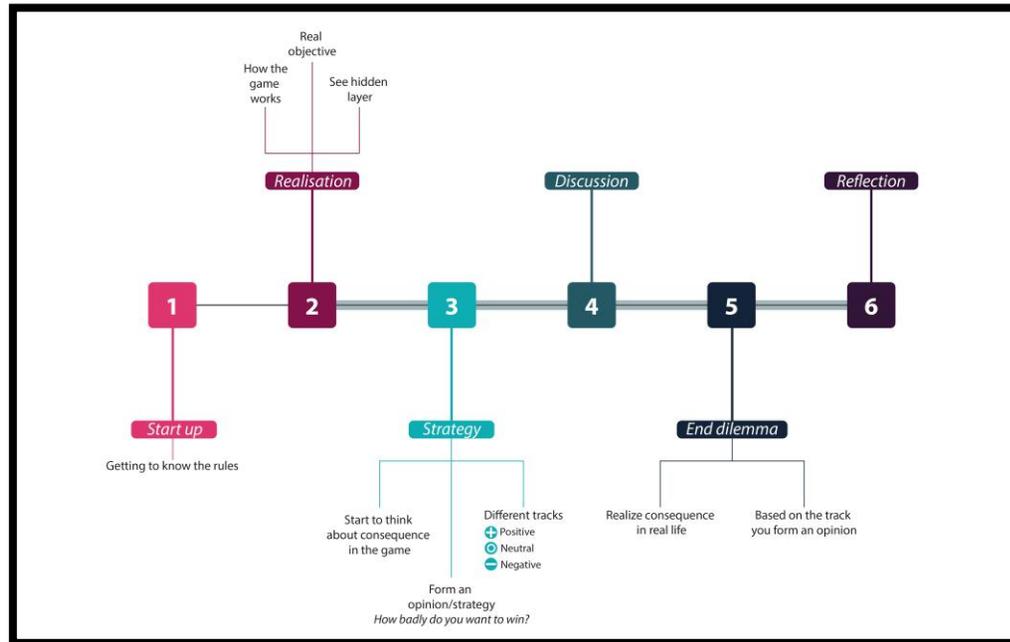
In this phase the board game was inspired on Monopoly (See figure 1 for this version). A board was created with houses and the objective of the game was to buy as much houses as possible, because the winner would be the one with the most property. This was tested with 4 different families. The most important conclusion from these tests was that in two of the tests a conversation started between the players about personal data. This conversation started because the players were shocked by how often the game asked for their data. That they were shocked was an important factor to take into account in our recipe. This lead to the Realisation phase.

#### GEESE BOARD PHASE

Then, after extensive meetings with Sound and Vision and MediaLAB colleagues, we changed our strategy for the board. We found a new inspiration, the old-

fashioned Dutch Geese board game [Spelregels.EU, 1989]. We wanted to make our prototype more fun, so we also added special tiles which had functions like 'skip a turn', 'swap places' and 'get personal data back'. You can see the board design for this in figure 2. This lead to creating the Strategy phase.

## The recipe



The picture above shows the final recipe as it has been used in the final test that was done in order to test its working on respondents. As mentioned before, this recipe is a standardized set of phases a user should go through when an institution wants their users to have a discussion on a topic of their choosing, through gamification. These are the different phases:

### 1: Getting to know the game

In this phase the user will get to know how the game works. This means they learn how the game rules and

the objective of the game work. Basic elements. The user himself does not go through any changes here.

### 2: Realisation

This phase is meant for the user to figure out the deeper meaning or layer to the game. The best approach for this is to shock the user. This can be done by showing them confronting information or questions. The user will start to think about what this game really entails. In [name of game] we have made the realisation phase happen by

having a lot of data tiles in the beginning of the circle, so the visitor gets confronted with a lot of personal questions. This will shock him or her and force the person into thinking about the game twice and determine the real objective. Which in our game is creating awareness about personal data, amongst other things.

### 3: Strategy

This phase will start to help the visitor determine a strategy. In the case of our game, the visitor here will start to develop an opinion, a certain track. This track is either positive towards giving data, negative about

giving personal data or neutral. Because there is always that one visitor who really does not care. This phase will make sure the next phase will happen (Discussion). Users will point towards each other and force their opinions on to another.

#### 4: Discussion

This phase continuously happens between phases 2-6. The users of the game will discuss their different views on the subject with each other, when they go through the other phases. In our game the discussion will focus on personal data, but in other games it can be about various topics. This discussion will help museums get closer to their visitors, especially when they have ways of recording this discussion or gathering the feedback afterwards.

#### 5: End-Dilemma

This phase is needed to ensure discussion will be triggered, as a failsafe if the other phases do not. Here the user should be posed to a dilemma. In our game the visitor gets to choose whether he wants to keep his data safe, but lose the game. Or he can publish all his personal facts and win the game. The other players will help the person in this decision. In this creates discussion, based on the different tracks users have chosen in phase 3: Strategy.

#### 6: Reflection

This is the last phase and it takes place after playing the game. Visitors will go in the experience but they will have a nagging feeling about the game they played and the discussions they had. An option to ensure this

phase will happen is to create some sort of exit button in the gift shop for example. Here visitors can still get back on their decision and this will create reflection. In the version we have made of the game now, this option is missing and it could be an extra when Sound and Vision decides to implement our game in the experience.

#### **Testing the recipe**

The recipe has been tested on different respondents, as mentioned before. This has been done with the end concept version of the first game that used this recipe, DataVrij. The phases are divided on the board as following: (also see figure 3 in sidebar and picture above)

In the first 1-15 tiles there is the realisation phase: in these tiles there are 9 data questions in order to shock the visitor and to make them realize this is no ordinary board game. Then from tile 16-30 is the strategy phase: this is where the visitor gets into the game and starts to think of a strategy. "How much data do I want to give in order to win this game?" In order to make this phase happen, 7 data questions have been added and a secret passage. After that from tile 31-62 it is discussion (also discussion happens in all phases): because the get personal data back, secret passage, change positions and the skip a turn were added here. Tile 63 is where the end dilemma takes place, the winner has to choose if he wants his data to be published and win the game, or lose the game but keep his data safe. Reflection will happen after the game where players should get a chance to still change their mind and will create reflection amongst the players.

The test was done during a presentation on the 22<sup>nd</sup> of June 2016. The game was put on a table and different respondents got to test it. DataVrij was tested during the final presentations at MediaLab. The version of the game that was tested did not have the final interface that was designed for the phones (pawns), it was tested with people of different ages (not families) and was not in the closed and dark space described in chapter 5 of this document. Nevertheless, the game was completely functional which allowed us to make the following conclusions:

- The final dilemma really triggered the reflection about personal data (more than the questions during the game). During the game they were more focussed on winning the game but when they faced the dilemma they recapped and realised all the information that they gave and started thinking about what somebody else could do with it.
- When the winners managed to win the game without giving very personal information, the chance to appear on the high scoreboard was rewarding for them and they seemed excited about it.

### **Conclusion**

From the information that has been given above, it can be concluded that a recipe was created for various institutions to create a discussion about a topic of their choosing with gamification. DataVrij is a good example of our recipe in a practical way. From the test that has been conducted can be concluded that it triggers

discussion and shock amongst users whenever this recipe is used in different contexts.

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