Redesign of the world salt map in the Zoutmuseum

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Since 1985, the former city hall of Delden is home to the Zoutmuseum: a museum aiming to offer visitors information about the many aspects of salt production. However, over the last few years, visitor numbers are decreasing. In 2010 around 9300 visited the Zoutmuseum. By 2016, this number had dropped to around 6300. The board of the museum suspects this has to do with the lack of new and exciting expositions and wishes to modernise the museum, and apply more modern information sharing technology. One of the exhibitions they have in mind is the world salt map: a giant screen on which visitors can discover different aspects of salt all over the world. The board believes that the current user experience of the salt map is not quite satisfying and wishes to improve upon this. The goal of this bachelor assignment therefore, is to design an interactive exhibition that allows visitors to discover different aspects of salt all over the world in a fun way.

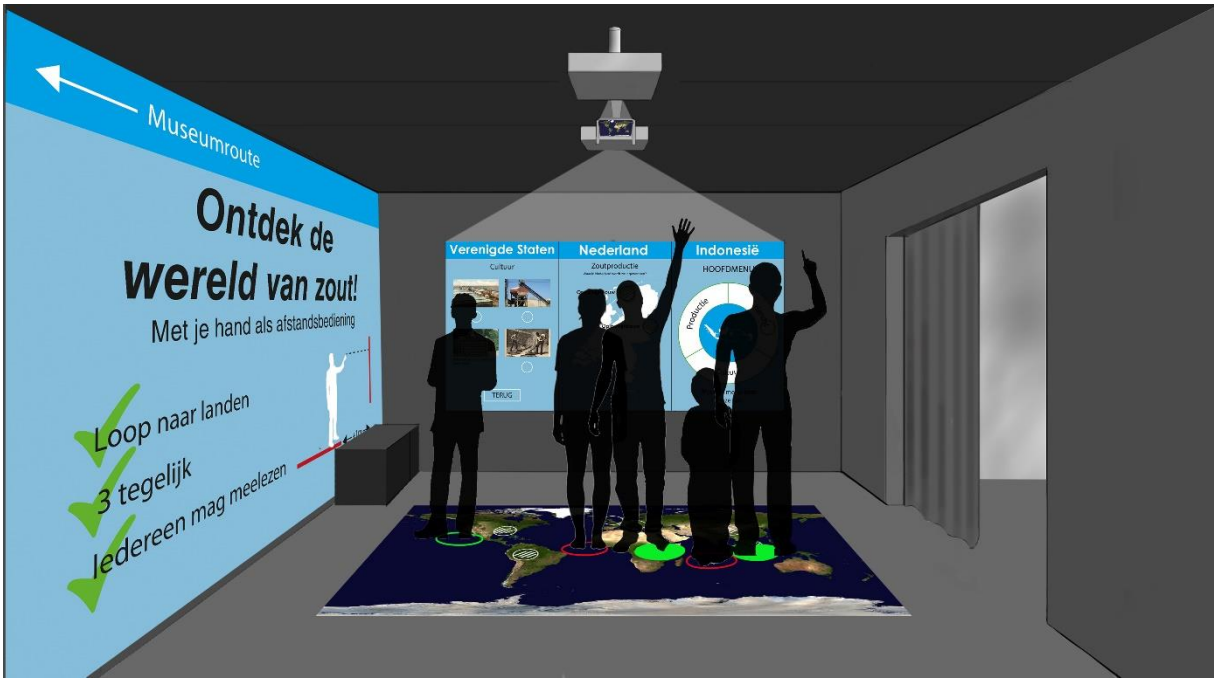
Figuur 1: Huidige wereldzoutkaart

To achieve this, the world salt map, its location in the museum and the stakeholders involved were analysed. Based on this, the strong and weak points of the world salt map were determined. This led to points of attention for the redesign, such as the consideration of the museum route, the ability for multiple people to use it simultaneously and a smooth and

easy-to-learn user interaction. The second part of this analysis consisted of an investigation of the target group. It was found that people visit the Zoutmuseum to have a good time, and not so much out of interest for the subject matter. The board of the museum agreed that the map should also be suitable and entertaining for children and young families. As part of this investigation, several visitors were observed and interviewed, mainly to find with what purpose they use the map and what information they find most interesting. It turned out that most people are looking for information on how salt is won in different countries and background information about the role of salt in the history of these countries. With this in mind, the guidelines to design a system that is easy to learn were established. The information technology to be used should provide clear and proper feedback and great consistency concerning user interaction. (Norman, 1986)

Following these analyses, several ideas were developed. The final choice fell on creating a hybrid between an interactive floor and an interactive wall using two projections. Up to three visitors at a time can visit different countries by walking on an interactive world map projected on the floor. On the interactive wall, they can search, by pointing with their right hand, for all kinds of information on salt in the visited country. This informs people about different aspects of salt in different countries in a unique and active way, corresponding to what families with children find exciting about a museum visit. The interactivity of the wall and floor is made possible with Kinect sensors: sensors that track certain points of the human body, so the system knows where the visitors are pointing at and where they are standing on the floor.

Figuur 2: Eindtekening van het concept voor de nieuwe wereldzoutkaart



The concept was subsequently evaluated during a small user test with a low-end prototype which showed the intended user experience and the way of presenting the information. The test persons were given a few tasks to complete, a questionnaire to fill out, which also included a table to evaluate the concept on a van der Laan scale: a scale from -2 to 2 that shows to what extent a product or service is useful and satisfactory. (van der Laan, 1997) This test showed that almost every task could be done by every test person. The concept also scored 1,25 on the satisfaction scale and 0,9 on the usefulness scale, which indicates that it meets the set goal quite well. It is not only informative, but also excites people. The test persons and the board of the museum liked the approach and agreed the concept has potential for implemention in the museum.

However, the test did result in a few recommendations, particularly concerning the user interface. Before implementing the concept in the museum, it is wise to redesign it at some points. More colour should be added to make it more playful and some data should be presented more clearly as test persons did not always notice it. Also, the multiple user interaction via Kinect sensors requires some further technical feasibility research. The user-test did not give a complete insight to what extent the

interaction feels natural enough. This research is very suitable for a follow-up assignment.