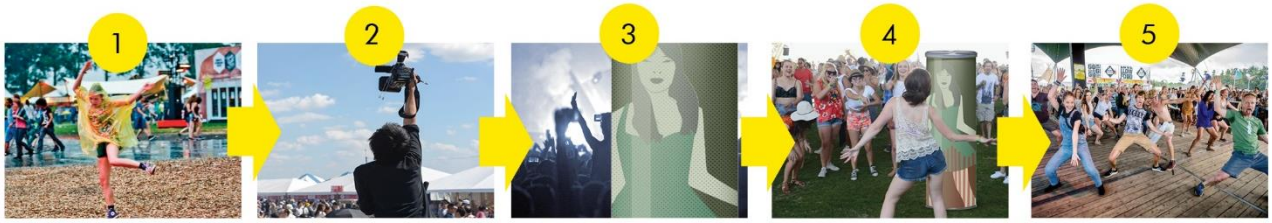
Abstract

This thesis describes the design process to enhance the music festival experience for hearing-impaired people. This assignment was set up to make *the MOJO backstage* exhibition at Museum Prinsenhof Delft inclusive for hearing-impaired people. First, context mapping research with hearing-impaired and hearing festival visitors shows that inclusiveness at festivals is less present for hearing-impaired. To include hearing-impaired, the focus is to minimize the language barrier and create an independent and equal interaction. Combining the mapping information with desktop research and a sensitizing experiment, resulted in socio-cultural dimension diagrams (Hofstede, 2018) which compare hearing and deaf cultures. Differences conclude that deaf culture is more together, emotionally expressive and contextual. With music experience being one of the main reasons for people to visit festivals, for hearing impaired this is experienced through vibrations, live performances and dancing audiences during a music festival. In current products and theories music characteristics are often literally translated to structures of the tactile and/or visual sense, because they are capable to change over time and have a wide variety. Unfortunately, most of these abstract theories and products are not able to convey the same emotional response as people who hear songs via sound. Therefore, a test with hearing people was performed to find similarities in emotional response to music of hearing and hearing-impaired people. Hearing people were asked to elaborate on Justlin and Vastfall's (2008) emotional responses to music. Similarities between the answers given in this test and interviews with hearing-impaired, were found within two of the categories; emotional contagion and rhythmic entrainment. During interviews and observations at several festivals, using current solutions like the Lofelt bracelet and signdance shows. It was discovered that rhythmic entrainment is experienced by hearing-impaired people by feeling bass through vibrations of speakers or floors. Emotional contagion is experienced by dance moves and facial expression of a crowd or performers on stage. The goal of this study is to design a product that uses visual dance and vibrations of the bass as means to create an inclusive interaction between hearing-impaired and hearing festival visitors. This is done by an interactive dance game that is played during a live concert.



The game is played by mimicking dance moves on the beat, while the beat is felt by vibrations of the bass. A concept test concluded that the game is inclusive because it was played just as well by hearing as hearing-impaired people. Also, bystanders joined the dance game without being an actual participant. This effect is expected to be even bigger in the festival context. Hearing-impaired people mention to feel more independent and confident at a festival when using a product like this. It would be interesting to develop a portable (smartphone) version to be independent of a location. Further research could be done to develop the character into a fully automated (sign) dance character which would make hearing-impaired fully independent of their peers at every location in time.