

Concept description

Mission: Køge Linjen



Abstract

In this project, we've worked on developing a mobile escape room that will give young adults an intense experience through problem solving, social interaction and role play as secret agents. The problem stems from the desire to create an activity that is both engaging and relevant, while challenging participants in terms of time pressure, collaboration and interaction. To structure our process, we drew up a project contract based on the 5 Rs (*Rules, Roles, Framework, Direction and Relationships*). We combined this with agile methods and SCRUM, which ensured a working method with both clear frameworks and flexibility along the way. The project was carried out according to the double diamond model with research, idea development, prototyping and testing as key phases. The concept '*Mission: Køge Linjen*' is a narrative in which participants take on the role of undercover agents who must decode clues and unlock secrets before the train reaches its destination. The project shows how a game can be developed to create excitement, empathy and social interaction, while giving young adults a different and engaging experience.

Description of the technological and digital layer of the solution

What we chose to go with in terms of the technological/digital layer in our escape room was a *Micro:bit* coded to create morse code. The morse code is used as part of one of the puzzles, where you must decode the morse code from the *Micro:bit* to find the next step in the escape room. The purpose of using the *Micro:bit* was to create an interactive element where you had to interpret and translate digital signals into usable clues. This added a layer of complexity and made the solution more engaging and dynamic.

The code used in the *Micro:bit* was developed in Microsoft MakeCode using JavaScript and consists of two functions: ‘*morseKort()*’ and ‘*morseLang()*’, which represent short and long signals in the morse code, respectively. These two functions are combined in a specific order to form the morse code 1885—the year DSB was founded. This year’s an important part of the game’s narrative and is used in one of the puzzles in the escape room. To further increase interactivity, the *Micro:bit* has been programmed to be activated by movement. It doesn’t start automatically, but only when the device is shaken, which makes it necessary to experiment and interact with the technology. Once the morse code has been activated, the signal will be repeated automatically in a loop so that you can listen to it several times and work together to decode it.

A stop function has also been implemented in the code so that the morse code can be deactivated again once the task has been solved. This is done by pressing button A on the *Micro:bit*, which stops the active sequence and resets the device. This gave us better control during both testing and demonstration, ensuring that the technology remained an integrated but controllable part of the experience.

The customer journey

‘*Mission: Køge Linjen*’ is like stepping into an experience that is both familiar and completely new. The customer journey begins, and participants discover the experience through information searches via posters on the screen or recommendations from a friend who describes it as a whole new kind of escape room. This has already captured the participants’ attention and curiosity, as the concept differs from the classic experiences in the premises.

The participants imagine how an ordinary train journey can be transformed into an interactive mission and discuss together whether they should try it. It could be a group of friends or a mix of strangers who end up in the same conversation compartment. In this phase, expectations are built up: Where will it be? Who will participate? And what will the experience be like with others? When the day arrives, the participants meet at Copenhagen Central Station, where they board the train, ready for something unique. The excitement is palpable, as everyone knows that the train journey to Køge will not be an ordinary trip. In one of the specially designed conversation compartments, the participants discover a mysterious suitcase, which immediately disrupts the normal train routine. Normally, people would sit alone behind a screen, but now a sense of community emerges. The first message sets the mission in motion—a suspicious passenger has left behind a suitcase with a USB stick filled with secret information, and the group has only 30 minutes before the train reaches its destination in Køge to find the USB stick.

The experience for the participants is intense and captivating. The movement of the train and the countdown of time make it more exciting, and the close confines of the conversation compartment mean that everyone feels part of the mission, even if they don't know each other beforehand. No one can withdraw from the mission, so they must interact and collaborate with each other. The tasks require imagination, logic and collaboration skills—participants search for hidden numbers with UV light, decode morse code via *Micro:bit* and assemble a jigsaw puzzle about the train journey. Each puzzle provides a part of the code that ultimately opens the box to the USB stick. The aim is to get people to interact, listen to each other and share ideas. Conversation is the most important tool, and this is where the conversation compartment shows its strength. It makes it natural to talk to both strangers and friends and creates a sense of community that's rarely experienced on a train. The highlight comes when the last digits are in place and the lock clicks open. The USB port is saved, and the compartment is filled with joy and relief. It's not just about the mission and the puzzles being solved, but also about having overcome the challenges together, through communication and cooperation. The 30 minutes feel longer because the participants have been present without anything disappearing behind a screen.

The customer journey doesn't end when they reach their destination. The experience lives on. The participants talk about the exciting and fun moments, laugh at the mistakes along the way and remember the pressure when time was almost running out. The strangers, who might never have spoken to each other, suddenly have something in common to share. For friends, it'll be a memory that strengthens their relationship. They share their experiences by recommending it to others or sharing it on social media because it's so unique from everything else. From the participants' point of view, '*Mission: Køge Linjen*' is more than a game. It is a new way of interacting with each other, where a normal train journey from Copenhagen Central Station to Køge becomes a mission filled with excitement, community and conversation. The most unique thing about this is that people—both acquaintances and strangers—start talking to each other in a completely natural way.

The unique thing about this experience is that participants not only encounter a fun challenge but also feel the value of spending time together and talking to each other. It's not just a break, but an experience that makes the train journey memorable.