

MAIN REPORT

Dynamic Travel Information on Train Platforms

1. Overview

Rush hour at the train station: Where will the train stop? Where can I find an empty seat? Where can I board with my bike? In this age of rising passenger numbers and increasing frequency of incoming and outgoing trains, the passenger on the platform is under pressure. ProRail and Netherlands Railways (NS), the main public transport providers in the Netherlands, wanted to improve the transfer process on platforms: more comfortable, faster and safer. Agencies STBY and Edenspiekermann worked on innovative service concepts that contribute to a better transfer process - both from the perspective of the passenger experience and the business goals.

In this project, two new service elements were developed to improve the critical moment of getting in and out of the train. By providing travelers with real-time details about the train they are waiting for, they gain control and can better position themselves on the platform before the arrival of the train. The first service element, a 350 meter LED display on the train platform, gives passengers access to up-to-date information about the train that is arriving: where will the train stop in relation to the platform? Where will the doors be? What is the composition of the train (where are the 2nd, 1st and bike carriages)? And how busy is it at this moment in the different train carriages? The other service element, a plugin to the regular train-planning app, also provides travelers with information about the composition of the train and the availability of seats in the different carriages.

2. Process

The design is the result of an intensive discovery and co-creation process where Edenspiekermann, STBY, ProRail and Netherlands Railways (NS Reizigers), including travelers, worked closely together during the whole process, each contributing from their specific expertise and role.

In the initial design research we collected customer insights on train journeys. Passengers were asked to share their daily experiences in dedicated diaries and interviews. In co-creation workshops with them we defined their main problems and worked together on possible improvements.

Based on these customer insights, several possible solutions were developed to improve the transfer process: from communicating platforms, to mobile travel assistants, to new communication concepts preparing passengers for incoming trains. Looking at your phone is not always the best way to navigate through physical space. Standing in front of a sign can sometimes feel more natural or intuitive. This is why a combination of the extended app and the platform screen was chosen for the implementation test.

We evaluated and improved the selected concepts in workshops with all relevant stakeholders: communications managers, platform managers, real estate, travel information etc. Rough ideas became more feasible and connections to other projects were discovered.

In a 3-month test period the use and viability of the new service was validated in a live setting on a train line across The Netherlands (between Zwolle and Roosendaal). During the pilot, 11 trains on that line were equipped with infrared sensors that measured the level of occupancy of the train carriages. Travelers could have access to this information by downloading the app on their smartphones and by consulting the LED screen which was installed on the platform of one of the Netherlands' main stations, 's-Hertogenbosch.

During the pilot, we used a mix of quantitative and qualitative research methods to evaluate the use and satisfaction of travelers with the new app and the LED display. Over 700 train travelers shared regular feedback through online questionnaires. This data allowed us to analyse the use of the new services and the effect on traveler's satisfaction. This was needed in order to build a business case for a future roll-out of the services. Illustrating this data with the personal- use stories from the qualitative research made it possible to enrich the results of the quantitative data and allowed for an engaging way to communicate them.

"It is spectacular to see how strongly the visualisations work. This is a powerful way to point out the essence of the project. Really amazing." Mirjam Meier, Netherlands Railways (NS)

3. Benefits

A lot happens when a train arrives at a platform: travelers wanting to board are looking for the entrance to their required carriage (2nd class, 1st class, wheelchair access, or bike storage), and they are trying to get towards these doors quickly in order to have a place to sit. At the same time, other travelers are stepping off the train. These conflicting journeys create a mêlée of people walking on the platform, causing frustration among travelers.

We jointly worked on this innovative service concept that contributes to a better transfer process. Both from the perspective of the passenger experience and of the business goals: less crowded situations at the train doors; less dangerous situations; shorter waiting times; more comfort and overview for passengers; more efficient use of the platform, and shorter dispatch times for the trains.

This project helped Netherlands Railways (NS) and ProRail to respond to existing pain points and new opportunities, and effectively act on them. The combination of a physical solution with digital information provision is an integration that will be more and more important in the future. The project also shows how subsequent stages in the projects built up to a more systemic transformation of the service providers and an innovative final result for the train travelers.

4. Effects

The 3-month live pilot test was a success. The travelers clearly adopted and embraced the new services. Within a week, more than 1500 people applied to participate in the pilot with the app. Moreover, most (i.e. 70%) of the selected participants indicated that during the pilot they had been using the services for 'all or most' of their travels.

"I really like the LED screen. It feels my travel information is complete now: I'm well prepared for my trip. It's great that you make this possible!" From a participant in the pilot.

"I'm very satisfied with this pilot. I hope it will be implemented in some way to increase traveling comfort." From a participant in the pilot.

Moreover, the service providers NS and ProRail experienced great benefits from the new services, as the accumulated data, as provided through the sensors, can be used to more efficiently plan the deployment of train equipment.

The results of the pilot study are currently being used to investigate possibilities for a national rollout, providing a happy end to the 2-year long service design process.

Service Design projects do not tend to magically transform the service offering and way of working of client organisations in one big push. Rather, the process often involves a long trajectory of small steps that contribute to a substantial transformation. In this project, we learned again that one of the biggest values we as service design agencies can offer is to be committed to these challenging long-term transformation projects, and to support our clients during their journeys of gradual change. For this journey, we need to be as empathic with the organisations of the service provider as we are with the end users of the services.

This project shows therefore that close collaboration and a carefully staged service design process can lead to innovative services and are crucial for finding the best solutions for complex logistical challenges in the age of a transition to a more sustainable society.

The application of the LED screen has attracted quite some attention from the press and public. It won various national and international prizes, among them: D&AD Black Pencil Award, Sign Design Award, Rotterdam Design Award, and German Design Award. However, we feel that the overall and more holistic service design approach to the project is the underlying basis of its success. That is why we are submitting it for the Service Design Awards.