Personalised Airport Systems for Seamless Mobility and Experience

Sprawozdania

Informacje na temat projektu

PASSME

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Periodic Reporting for period 2 - PASSME (Personalised Airport Systems for Seamless Mobility and Experience)

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Podsumowanie kontekstu i ogólnych celów projektu ⌄

PASSME delivered industry-driven, passenger-centric novel solutions for passengers, airports and airlines to address the anticipated increase in demand for commercial flights in Europe by 2050 (Flightpath 2050). Through these innovative solutions, PASSME reached its goal to reduce

(unwanted) travel time by 60 minutes and increase the experience of passengers. PASSME integrated the information between all stakeholders and transformed airport and aircraft operations and interiors to make the passenger journey more time efficient, seamless, robust and accessible. The significant breakthrough solutions were:
1. a real-time passenger-centric system for managing passenger flows that use input from the airport and passenger to provide predictive analytics on passenger flows 20-30 minutes ahead of time;
2. a passenger independent system for managing luggage flows that reduce the time in arrival/departure airports by at least 30 minutes and increases the control passengers have over their luggage;
3. radically redesigned passenger-centric airport and airplane processes and facilities that enable highly personalised and less stressful experience through key touch points (check-in and boarding);
4. a personalised device and smartphone application that measures physiological/psychological state and links with airport/airline services to provide relevant and timely information to support the passenger in decision-making.

In PASSME, the research institutes (TUD, UNott, ICCS, TUHH, NLR, DLR), interior design partners (Alma, Optimares) and communication experts (CARR) worked closely together with industry partners Amsterdam Airport Schiphol, Hamburg Airport and KLM airlines. Partners used an user-centred design and evaluation methodology (called Design Thinking) to ensure the success of the solutions and that benefits will be shared with passengers, airlines and airports to have the necessary impact on the airport processes in the air transport system. Linking with the Airport Council International Europe (a selection of the 450 airports) and airport service SMEs as well as other (external) industrial parties in research and implementation guaranteed that the results are disseminated and exploited across EU industries.

Prace wykonane od początku projektu do końca okresu sprawozdawczego oraz najważniejsze dotychczasowe rezultaty ⌄

PASSME's starting point were the first two objectives of the EU flight path 2050 report. These two objectives are:
1. enabling European citizens to make informed mobility choices and
2. to complete their journey, on average, door-to-door, within 4 hours (with all constraints attached).

Derived from this, PASSME was committed to shorten the home to destination travel time with 60 minutes and to increase the passenger experience at the same time (through informed decisions).

The PASSME project has realised these goals through the next four so called breakthroughs:
1. the real-time passenger-centric system for managing passenger flows contributed for up to 10 minutes reduction of unwanted waiting time and improved the information to passenger and airport system;
2. the passenger independent system for managing luggage flows enabled the reduction of unwanted waiting time by 33 minutes and increased the control passengers have over their luggage thus contributing to their journey experience;

3. radically redesigned passenger-centric airport and airplane processes and facilities contributed with 13 minutes to the reduction of unwanted waiting time and enabled highly personalised and less stressful experience during the airport part of the passenger journey
4. a personalised device and smartphone contributed 10 minutes to the reduction of unwanted waiting time and increased passenger experience through better guidance through the airport processes.

These results have been exploited through the industry partners in the PASSME project. These partners took on the Breakthrough results on a non-exclusive basis. There is no IP on the outcomes of the PASSME project. The industrial partners did continue to exploit the results beyond May 2018 (final project date). Especially in the Luggage domain (Breakthrough 2 and partly in breakthrough 3) also external, market parties picked up the results and did thus contribute to the commercialisation and exploitation of the PASSME results. Also these industrial parties (and new ones) kept on exploiting the results after the closing of the PASSME project in May 2018.
Dissemination has been done through media, conferences, publications and presentations to aviation and non-aviation audiences.

Innowacyjność oraz oczekiwany potencjalny wpływ (w tym dotychczasowe znaczenie społeczno-gospodarcze i szersze implikacje społeczne projektu) ⌄

The results of PASSME show that separation of passengers and their luggage disrupt the conventions of the current aviation conventions. These results of PASSME have a strong reducing effect on the on airport time and a positive effect on the experience of passengers (Breakthrough 2). Next to that, PASSME developed ICT tools that enable airports to predict passenger flows 20-30 minutes ahead of time through the use of predictive analytics. These ICT tools also provide the passenger with timely and decision oriented information, based on their location and psychological state (like stress). This enables the passenger to take informed decisions.

On the airport and aircraft interior aspects of the passenger flow, PASSME developed a new lounge that facilitates faster boarding and increases passenger experience. It makes waiting at the gate more fun ! The so called 'shrinkable seats' uses the time space effect to widen the isle in the aircraft while boarding and deboarding, and increases passengers comfort while flying. These seats have been developed during the PASSME project. Other disruptive developments have been:
- Group facilities in the airport to separate groups form individuals in the process, thus contributing to the reduction of the average unwanted waiting time and increasing the experience of both groups and individuals.
- Home based scanning system for hand luggage in order to ensure passengers' luggage is guaranteed on board
- Reservation system for hand luggage, including new interface with the passenger (based on lights in the overhead bins)

All these PASSME operational results have been picked up by the industry and have been introduced in practice (like the lounge in Hamburg Airport and the group facilities at Schiphol) or will be

introduced in the years after 2018.

The socio-economic impact of PASSME is the effect on shortening the unwanted waiting time of passengers while they are on the airport. This has an experience effect for the passengers (within PASSME scope) and an increasing capacity effect on airports (outside PASSME scope).

The wider societal implications of PASSME are that particularly the luggage developments introduce new parties to the service landscape for passengers. Next to that the environment impact of travelling will change, due to a larger differentiaton in modalities for passengers and luggage. The estimation of these environmental impact was out of scope of PASSME.
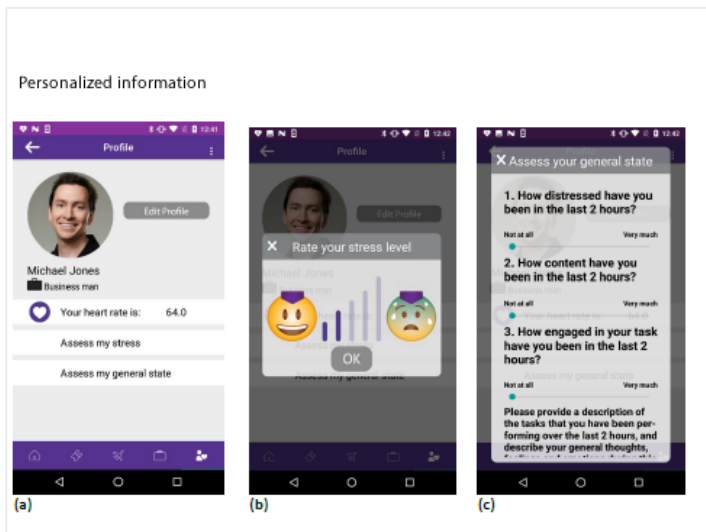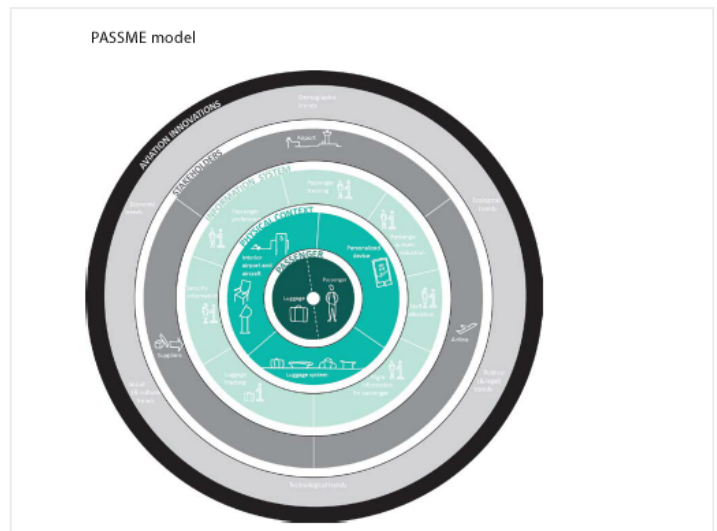

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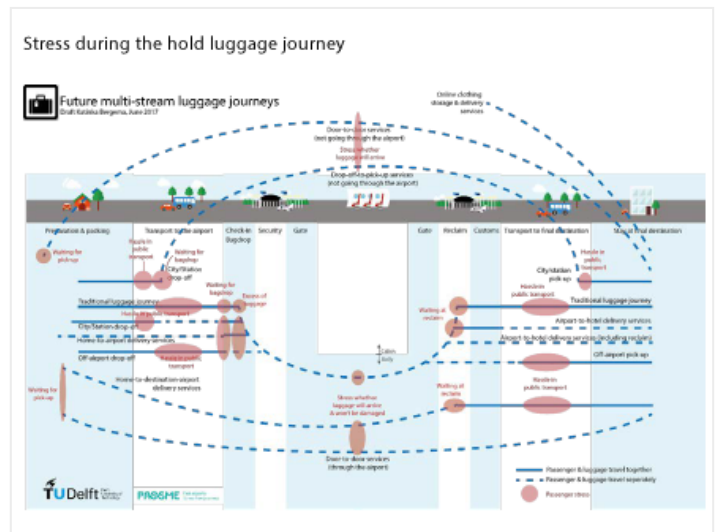
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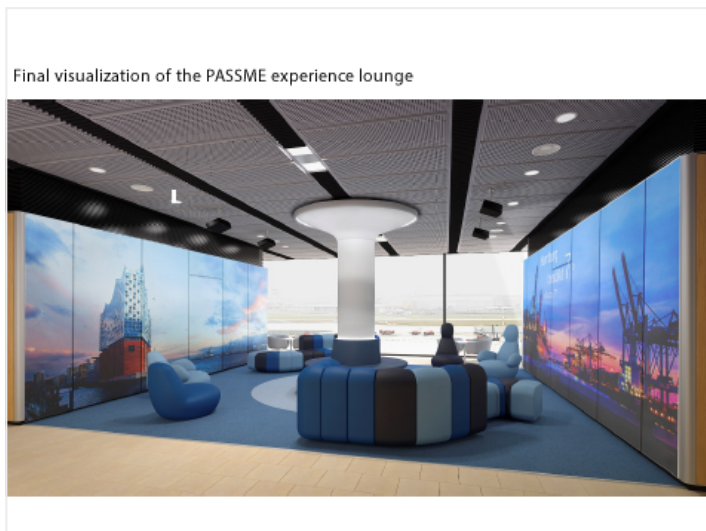
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passme-model.png

passme-seat-concept.png

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