

# PASSENGER TERMINAL WORLD

MARCH 2018



## What Nextt?

Experts analyze the future according to IATA and ACI's New Experience in Travel and Technologies (NEXTT) project

**PARKING**  
How to maximize revenue as car pooling and autonomous vehicles hit private car ownership

**INTERVIEW**  
ACI World's new chair, Bongani Maseko, talks African aviation and the development of open skies

**INVESTMENT**  
Key advice for airports embarking on an airline-led terminal investment project



# time savers

For the past three years, 12 multi-industry partners have been combining their expertise to reduce door-to-door journey times for air travel by 60 minutes. *PTW* reports on the four key results

■ Every airport wants to provide the best possible passenger experience, whether that's improving baggage check-in, reducing the time spent queuing at security, or providing plenty of comfortable seating in the departure lounge. But it isn't always easy to find new, innovative ways to address these problems that actually work.

Cue Personalised Airport Systems for Seamless Mobility and Experience (PASSME), a €4.6m (US\$5.7m) EU-funded initiative tasked with reducing door-to-door airport travel time by one hour at European airports. Launched in June 2015, the initiative will come to an end on May 31 this year and the results are now being shared with the industry in the hope that they will be adopted widely.

Visitors to Passenger Terminal Conference on March 20-22 will be able to hear more in-depth analysis, but for now here's an overview of the project's breakthroughs, where they've been applied, and how they signal the start of more convenient air travel.



## BREAKTHROUGH 1 Passenger demand forecast system

■ On trial at Amsterdam Airport Schiphol on March 14, 2017, PASSME's passenger demand forecast system has been developed to help airports allocate staff in areas where passenger traffic is likely to be high so that they can reduce wait times and improve services.

"The system uses the information collected by a smartphone app (see Breakthrough 4) on passenger location and flow, and allows the airport to identify areas where queues are likely to build up," explains Sizzo Santema, professor of business marketing and supply management at Delft University of Technology and PASSME scientific coordinator. "Staff members in the airport can then open up more security lanes or check-in desks to reduce wait times. It's connected to the airport management system and provides accurate crowd monitoring in real time. The only hardware you need is the passengers' personal devices and the existing monitoring systems in the terminal, such as CCTV, wi-fi and beacons."

Airports already possess many of the systems that can be used to help them predict passenger flows through the terminal, but the challenge is getting them to work with other partners such as airlines, police and retailers to use that data effectively.

"Understanding how your passengers move through the airport can also help you improve on-time aircraft departure rates," says Santema. "With passengers arriving at the gate on time thanks to fewer queues at check-in and security, they can board on time and airlines are less likely to miss their slot."

Understanding passenger flow is also important for airport revenues. F&B and retail spending accounts for 33% of airports' non-aeronautical revenue, according to the 2017 *ACI Economics Report*, so it is vital passengers move quickly and happily into the departure lounge with enough time to spend money in shops and restaurants before their flights.

### What is PASSME?

The PASSME consortium is composed of 12 partners from seven European countries across the fields of aviation, transportation, academia, design, technology and communications. The project's coordinator is the Department of Industrial Design at Delft University of Technology. The aim of the project is to deliver 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.



MAIN IMAGE:  
Passengers traveling through the renewed Holland Boulevard at Amsterdam Airport Schiphol

don't miss...  
**Passenger Terminal Conference 2018**  
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Don't miss Sizzo Santema, professor of business marketing and supply management at Delft University of Technology and scientific coordinator of PASSME, present 'The PASSME breakthroughs illuminated - how the industry can benefit' at the 2018 **Passenger Terminal Conference** on Tuesday, March 20, 3:45pm.

[PassengerTerminal-expo.com](http://PassengerTerminal-expo.com)





**ABOVE:** An end-to-end baggage-transportation service could mean passengers will no longer have to wait for their luggage at baggage reclaim

**BREAKTHROUGH 2**  
**Luggage flows**



You don't even have to check in when you get to the hotel because **your luggage does it for you**



**ABOVE:** PostNL's luggage-transfer service to and from Schiphol and Eindhoven airports is available for suitcases and bags up to 23kg

■ Transporting luggage to the airport, checking it in (either at a manned desk or using a self-service kiosk) and then waiting for it at the baggage carousel in the arrival airport all adds to the stress of air travel. As part of its aim to make the airport journey quicker and less stressful, PASSME developed an end-to-end baggage-transportation service.

"We experimented with handling baggage from home to the destination, which saves almost an hour on total journey time and improves the experience as there's no hassle for the passenger. Partners of the PASSME consortium used the service while traveling to consortium meetings and used it for other business flights," Santema says. "The cost is similar to checking baggage on a low-cost European airline, but the convenience is far higher."

To use the service, travelers go to an independent service provider's website (such as a courier or postal operator) and book the luggage transportation service. This means the revenues go to that provider, rather than the airport or airline. The luggage is then collected from the agreed location and the next time

the passenger sees their bag is when they arrive at their accommodation. The courier transports the bags using its own methods – the bag doesn't travel with the passenger on the aircraft – which means that the costs for the service provider can be kept low as no new processes need to be put in place; it's the same as delivering a parcel. According to Santema, some hotels even offer baggage handling as an ancillary service: "You don't even have to check in when you get to the hotel because your luggage does it for you."

The baggage-handling service isn't available in all areas of the globe yet, but Santema is hopeful it will expand. "We've proved that it works, saves time and enhances the passenger experience, so now we just need to find commercial partners to bring the system to its full commercial value. We'll be presenting more information on the baggage-flow system at Passenger Terminal Conference to raise awareness," he says.

PostNL offers a variation on PASSME's baggage service to passengers traveling to Schiphol and Eindhoven airports by train. The service, which was launched in the summer of 2017, charges €17.50 (US\$21.75) for the first bag and €7.50 (US\$9.32) for subsequent items. The service collects bags up to three days before departure, drops them at the airport for passengers to check in, and then delivers them back to the customer's home after their holiday.





**BREAKTHROUGH 3**

Redesigned passenger-centric airport and aircraft interiors



**ABOVE:** Rendering of the Experience Lounge at Hamburg Airport

■ It's not just processes that affect passengers' stress levels; the design and layout of the airport terminal can also help or hinder their journey. PASSME has been involved in designing and trialling a number of airport and aircraft layouts to explore which provide the most benefits to passengers. "Rearranging the interior parts of airports and aircraft to provide different seating or to make the boarding process faster and more convenient has been a key part of the project," explains Santema. "We're experimenting with wider aisles in aircraft to make it easier to pass – the seats will be smaller – and we've also installed group couches and a new Experience Lounge at Hamburg Airport."

According to PASSME, airports can improve the comfort of passengers by using curved shapes, natural materials and natural colors in their terminals. Multimedia content is also found to have a positive effect when used at the boarding gate, while changes to seating can enhance the passenger experience. "Most of the time seating is based on the individual passenger rather than on families or groups, and airports should

be looking to change this to improve experience. We've installed group couches at Schiphol and Hamburg, and the feedback from passengers has been very positive," says Santema.

"We are also experimenting with the way gate seating is positioned – it is usually oriented toward the windows, but we want them to be oriented toward the boarding gate so that passengers are sitting comfortably waiting to board rather than having to move when their gate is called."

Passing through security is also a stressful event, and airports can alleviate this by redesigning their security areas. At Schiphol, for example, the security area was centralized to make it aesthetically relaxing and easier for passengers to navigate.

PASSME has also trialled security screening using two lanes – one for passengers and one for an airport cart, where travelers can store luggage and personal items. "We measured passenger experience in real time during this trial and found that it reduced stress levels," Santema comments.

With the user's approval, we're also able to monitor heart rate and temperature

**BREAKTHROUGH 4**

Personalized device and smartphone application



**RIGHT:** Personalized information can be provided to passengers on a smart device using the PASSME application

■ Temperature and heart rate are two great indicators of stress, and PASSME has been working on a way for airports to measure this in their passengers in a bid to make the journey smoother and stress-free. PASSME has developed an application that will let the passenger know the time of flight departure, the walking time to their gate, the location of F&B outlets and concessions, and will guide them to the correct boarding gate.

"With the user's approval, we're also able to monitor heart rate and temperature, and gauge a passenger's stress level. Then we can use that data to inform other elements such as the passenger demand forecast system to reduce queues," Santema says.

While the app has been tested only on PASSME staff, it is hoped that airlines and airports may integrate features into their own applications to create a better travel experience. "Similar wayfinding apps do currently exist," explains Santema, "but ours is enhanced by the stress-level monitoring and personal passenger information included."