

# Seamless Door-to-Door Lab



\* European Commission (2011), Flightpath 2050: Europe's Vision for Aviation. ISBN 978-92-79-19724-6

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To complete intra-European door-to-door journey within 4 hours (AP2050 - 2050 - Airport project - FP7 - \*):

- connectivity through the critical nodes of the network has to improve
- the time for passenger processes related to air travel should be minimised
- different transport modes should be integrated to deliver seamless inter modality

## Problems identified:

- information updates
- high risk of delays in door-to-airport travel

(airport) will be a complex environment with the passenger at its heart (Preventing the Airport Crisis - Amadeus Consulting \*\*).

- a stress-free experience is the number one priority
- airlines and airports should deliver relevant, time-critical procedural information
- social media was clearly acknowledged as a vital

\* <http://cordis.europa.eu/projects/index.cfm?fuseaction=app.details&REF=100089> \*\* <http://www.amadeus.com>

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## Two perspectives



### a) Intermodal experience

a door-to-door approach in a multi-mode network

- holistic view: travellers are able to transfer seamlessly between transport modes. the airport is just one part of the entire logistical chain
- H2020 Call MG.1.3-2014 Seamless and customer-oriented mobility

a door-to-door approach in a dedicated on-demand transport service (DRT)

- the airport, knowing the time the flight departs well in advance, will take into account its travel time and plan a DRT vehicle to pick up the passengers on time
- H2020 MG.1.7-2014.Support to European aviation research and innovation policy Action 1

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## Two perspectives



- b) Context-aware airports  
improve the passengers' experience, the way they are handled and the way information is shared, used, and handled.  
airports will be embedded with sensors, actuators, and communication capabilities. web-connected objects will be able to transmit and receive information, and adapt and react automatically to changes in the environment.

H2020, topic ICT-1 – 2014: Smart Cyber-Physical Systems Specific Challenge

# Thank you!!

## Some research opportunities:

- use GPS tracking data, social network data, land use patterns and static transportation network data to track passengers from door-to-door to better understand:
  - theoretical optimal door-to-door time
  - current door-to-door time
  - how and where can current door-to-door time be improved
  - passenger mode/route profiling
- transport planning and network optimization
- open data and big data
- Internet-of-Things, embedded and smart devices, M2M communication

## Other Prospective Contributions:

- THALES Italy (<https://www.thalesgroup.com>) - on board
- blueMark (<http://bluemark-innovations.com>) - on board
- NLR (<http://www.nlr.nl>)
- NS Dutch Railways (<http://www.ns.nl/en>)
- Schiphol Group (<http://www.schiphol.nl>)
- TU Delft Aerospace and Urbanism - on board  
(<http://www.lr.tudelft.nl/en/> <http://www.bk.tudelft.nl/en/about-faculty/departments/urbanism/>)



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