



# Choosing the right tools today for passenger services tomorrow

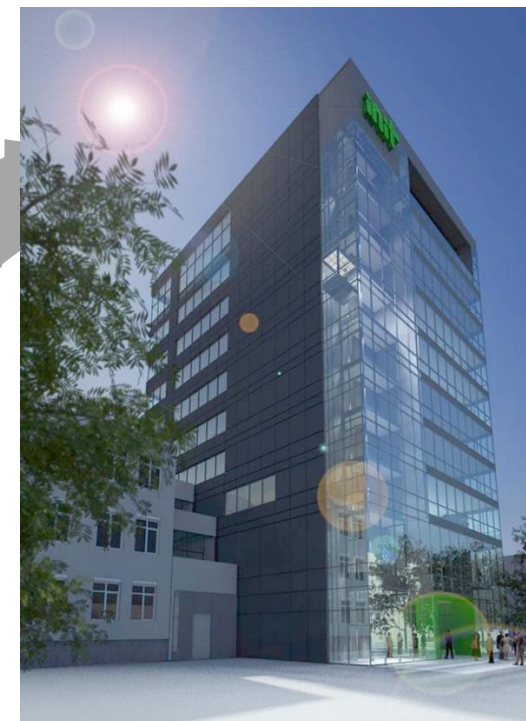
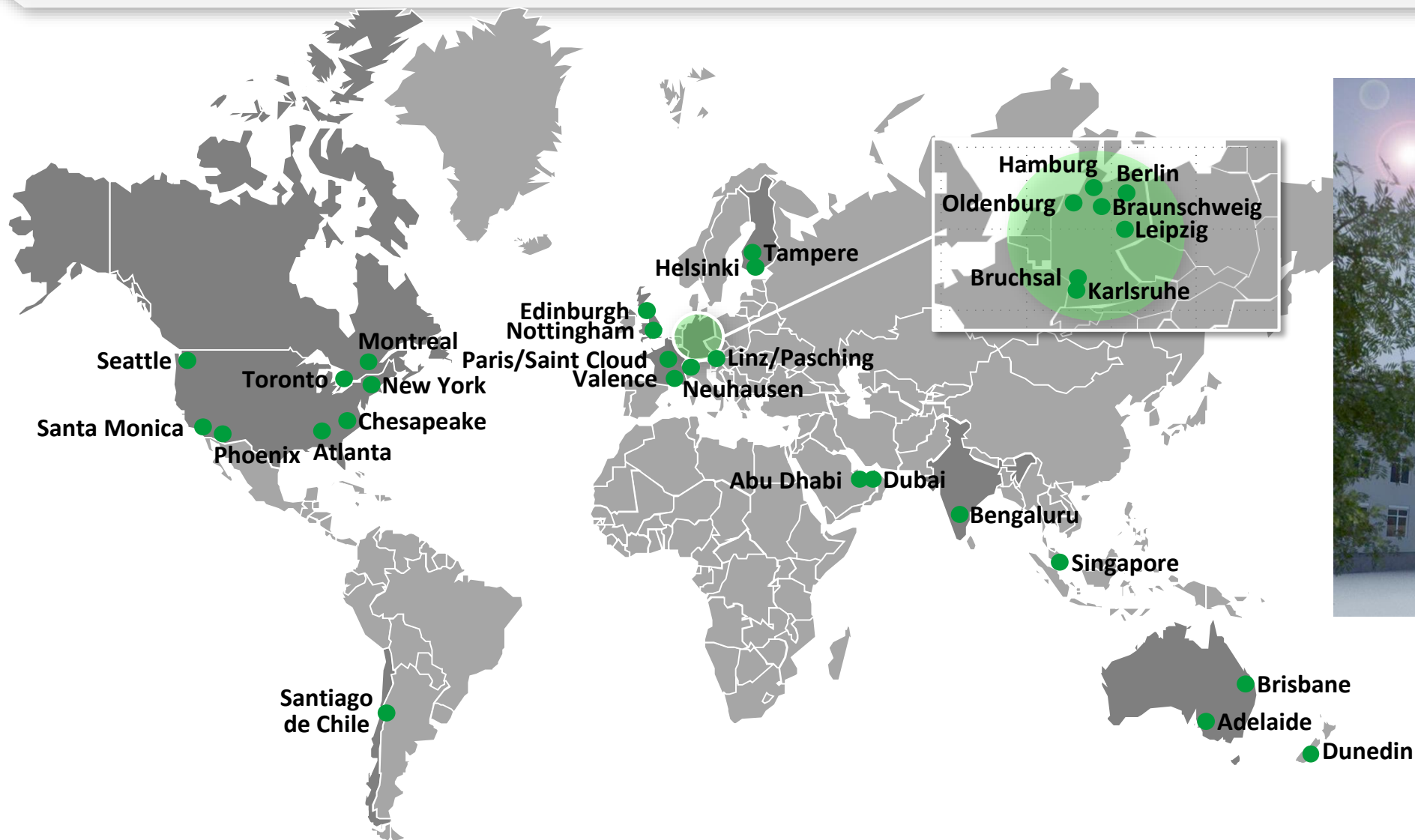
## BIC Conference 2017, Hobart

INIT shaping the future of mobility

**Paul Gwynn**, Managing Director, INIT Asia-Pacific, Singapore  
Chair UITP Cyber Security Working Group

**init**

# Introduction - INIT Group Worldwide



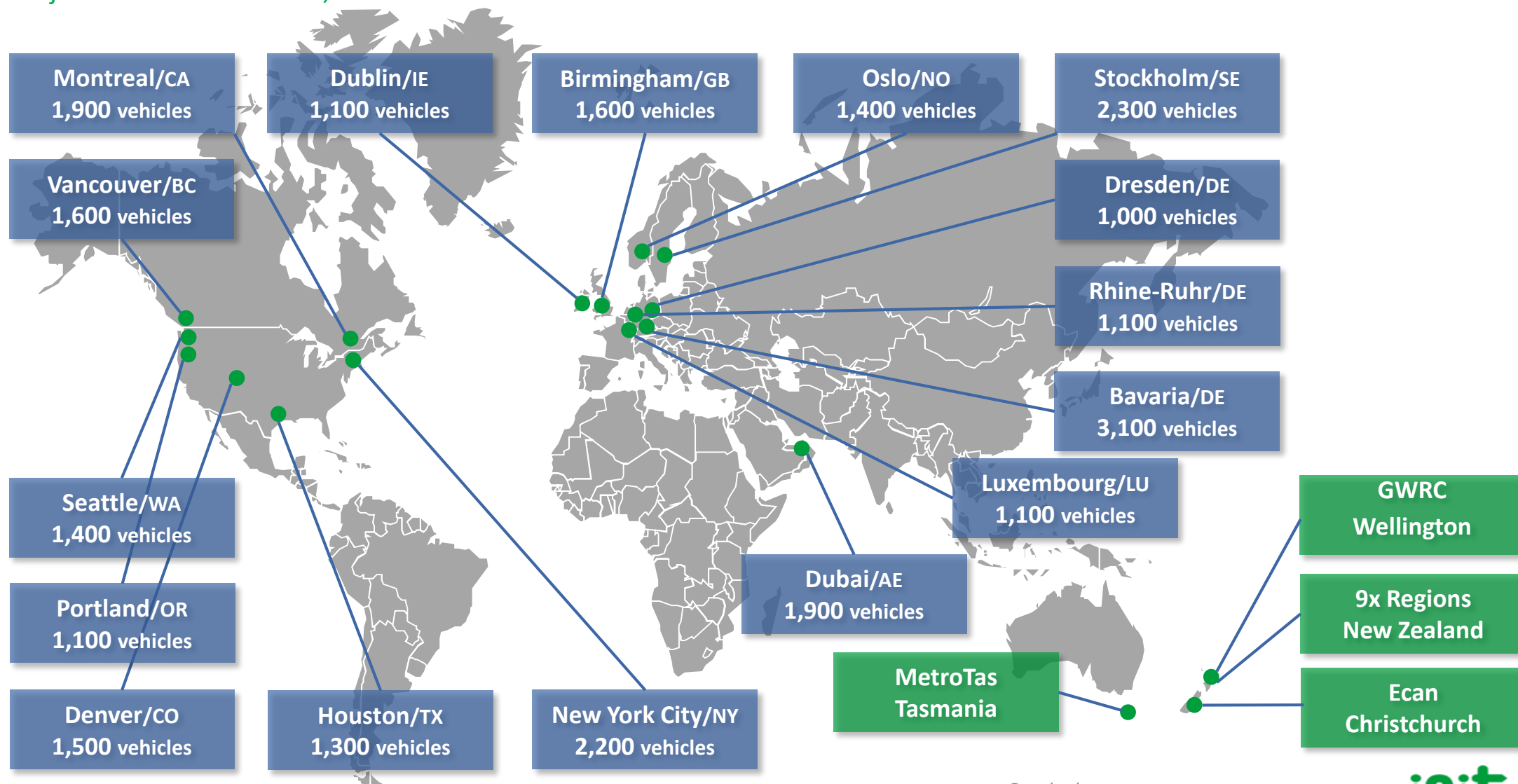
# Introduction – INIT Scope



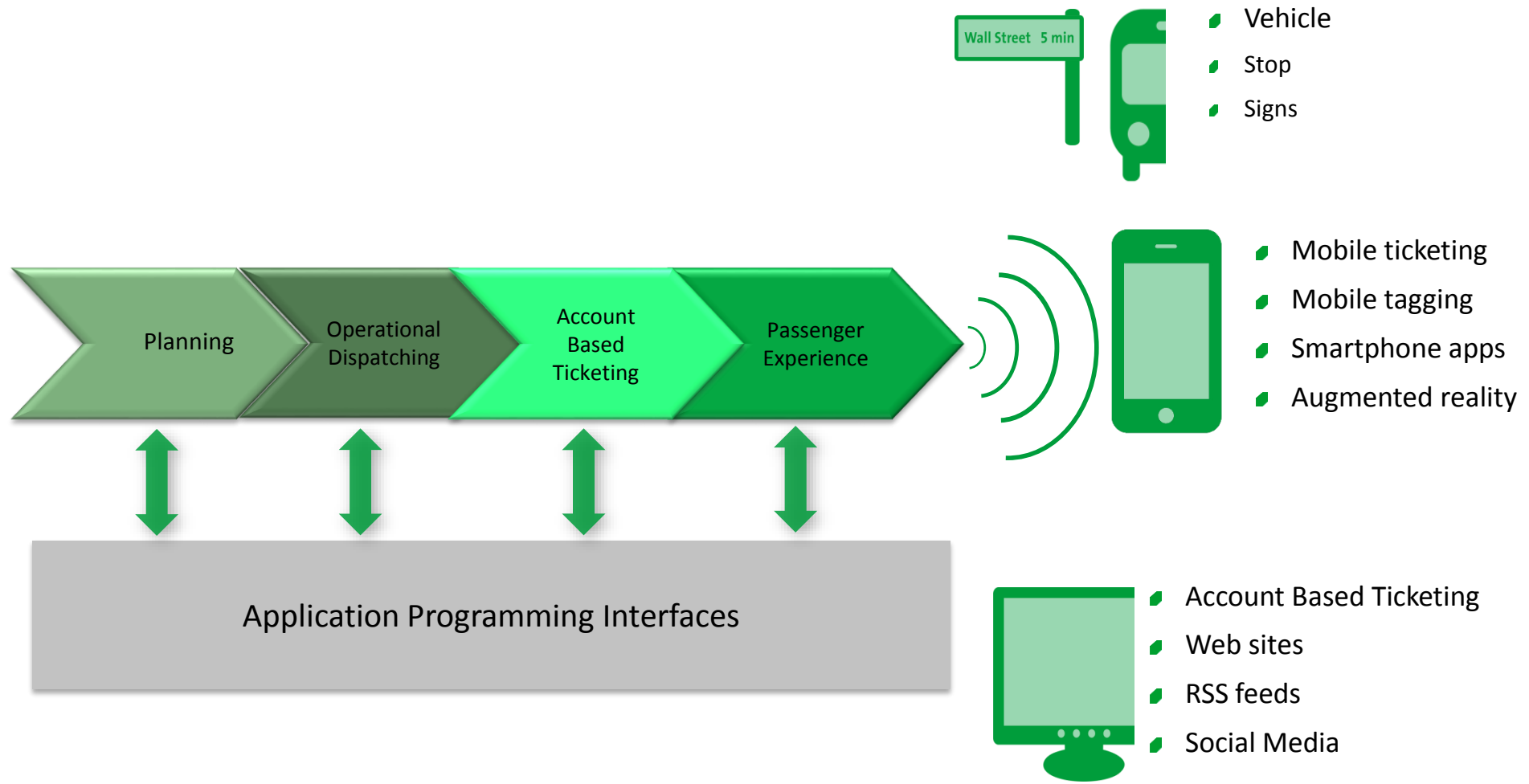
- **Planning & Dispatching (250+)**
- **Fleet Management & RTPI (150+)**
- **Electronic Fare Management (130+)**
- **Analyzing & Optimizing (200+)**
  - Design, Build, Operate & Maintain
  - 700+ professionals
  - 600+ cities deployed worldwide
  - 100% Public Transport
  - Research lead development
  - 34 years experience

# Introduction – INIT Global References

Projects with more than 1,000 vehicles



# The mobility system elements





init

# Aim4it – Research Project

## Personalized assistance for passengers with special needs

- Individual needs of disabled poorly met
- Disabilities varied
  - Needs of visually impaired
  - Needs of the deaf
  - Needs of wheelchair users
- Travel information systems
- Disruption information
- Individualised advice that recognises needs of that individual
- Interface designed for specific need
- Interface uses a translator from natural written text
- Use of sign language
- Use of an Avatars to animate and deliver messages



# Passengers with special needs

## Who has special needs within mobility?

- 15% of people worldwide have a disability
  - Blind
  - Deaf
    - 80% cant read and write
  - Wheelchairs

### How many peoples live with disabilities?

**Worldwide** 15% of the population (WHO 2011)

**In Austria** approx. 1.7 Million (20% of population)

- 1 mio. with reduced mobility
- 0.3 mio. with visual impairments
- 0.2 with mental/neurological impairments
- 0.2 with hearing impairments
- 0.1 with learning difficulties

Source: 20130416 Barrierfreiheit Behindertenanwaltschaft Folie 5  
M. Grundner Mobilitätsagentur Wien

# Passengers with special needs

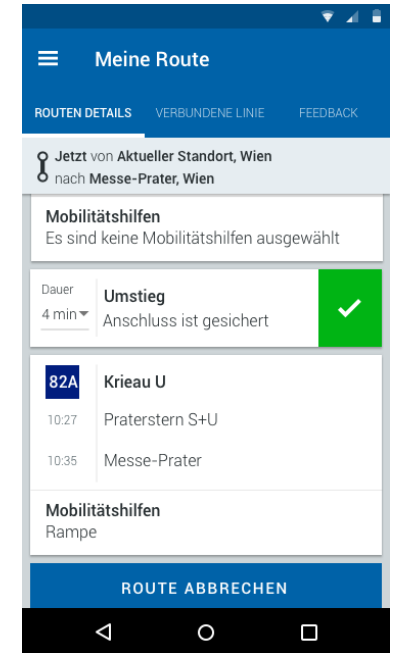
## The aim4it idea

- Identify the requirements from
  - user and service provider perspective
  - special requirements of persons with special needs
- information presented in optical, acoustical and/or tactile form
- information tailored to the requirements of passengers with special needs
  - pre-trip, on-trip and post-trip
- Integration in existing standards

# Passengers with special needs

## pre-trip phase

- trip-planning with mobile app
  - taking into account prolonged interchange duration
  - taking into account barrier-free infrastructure
  - (e.g. elevators)
- based on this trip planning
  - creation of requests for connection protection to ITCS/AVL-Systems
  - creation of requests for driver assistance



# Passengers with special needs

## on-trip phase

- in case of incidents
  - Incident Information (e.g. real-time creation of sign-language-video)
  - automated re-routing and information
  - Information personalised
- direct communication to the driver
  - via interface between mobile phone and vehicle
  - Information personalised



# Passengers with special needs

## ■ post-trip phase

- feedback function integrated in the app
- acquisition and evaluation of customer satisfaction in real-time
- fast and easy evaluation

The screenshot shows a mobile app interface titled "Incident messages" with a back arrow and a "DONE" button. It contains four feedback questions, each with a 5-star rating system. The first question, "Was the information up to date?", has 4 stars selected. The second, "Did you get all information you needed?", has 5 stars selected. The third, "Was the information reliable?", has 3 stars selected. The fourth, "Was the information clearly understandable for you?", has 3 stars selected. The app is running on an Android device, as indicated by the navigation bar at the bottom.

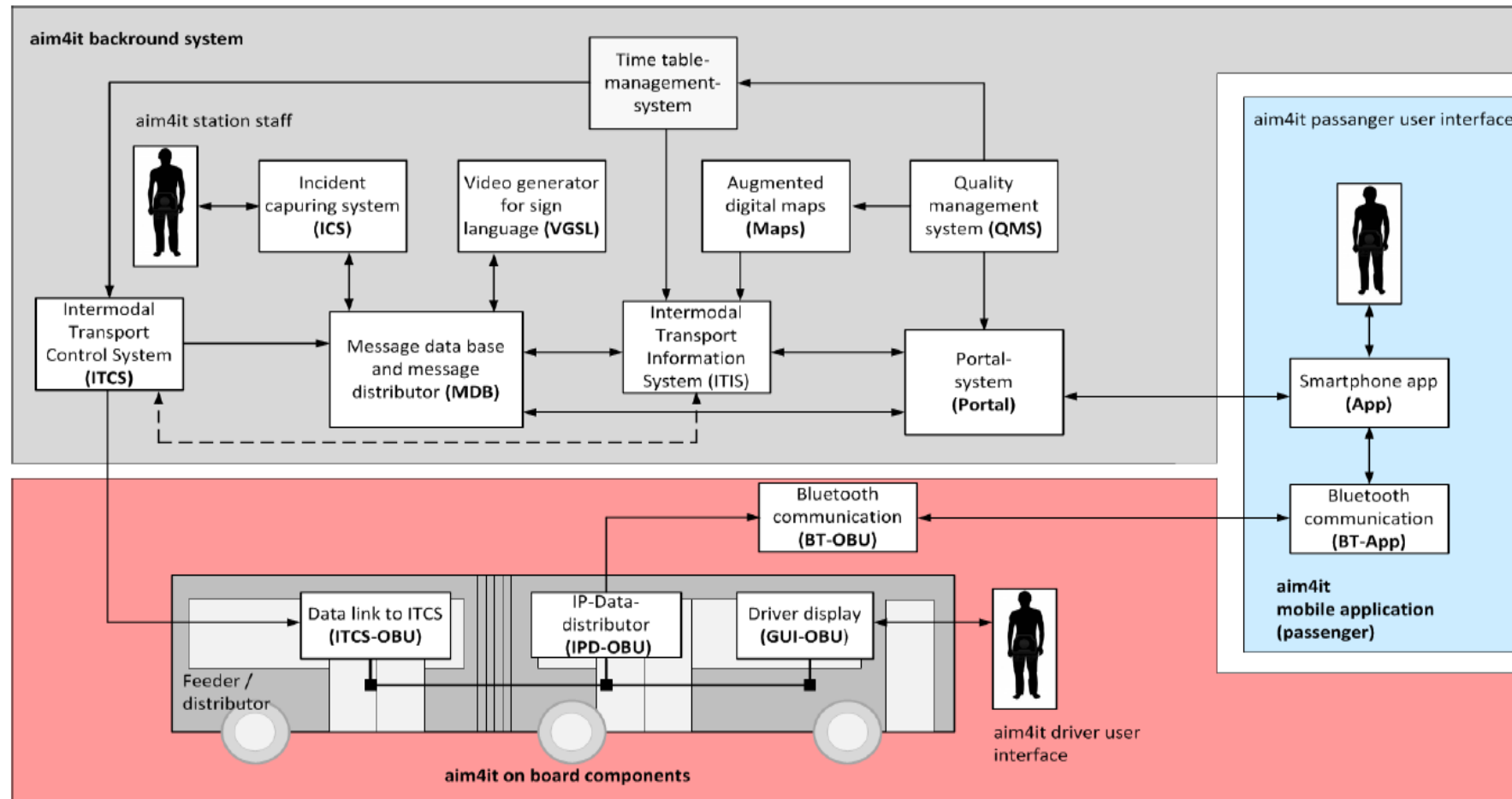
Question	Rating
Was the information up to date?	4 stars
Did you get all information you needed?	5 stars
Was the information reliable?	3 stars
Was the information clearly understandable for you?	3 stars

### Feedback Questions

- Was the information up to date?
- Did you get all information you needed?
- Was the information reliable?
- Was the information clearly understandable for you?

# System Technical Scope

## System architecture





# Flexible, Open & Integrated



Multi-client/operator  
capable

Operators, Authority and  
Passengers all use the  
system simultaneously  
without disturbance

→ The system is  
**flexible**



Add new apps, sales  
channels or other 3<sup>rd</sup>  
parties easily – the open  
API's provide data for  
various different purposes

→ The system is  
**open**



Travel planner, ticketing  
and top-up, mobile/EMV,  
Real Time Passenger  
Information, travel  
information and marketing

→ The system is  
**integrated**



An aerial photograph of a complex multi-level highway interchange. Several lanes of the highway are highlighted with a bright green tint, suggesting a specific lane configuration or traffic flow. The interchange is surrounded by a dense urban landscape with numerous high-rise buildings and skyscrapers in the background. The sky is clear and blue.

Thank you  
for your attention  
[www.init-ka.de](http://www.init-ka.de)