Fitting Adaptive Real-time Technology to the Population Geography and Regional Resources Across the European Union

AAL Forum 2014

Session A1 Reaching out new markets

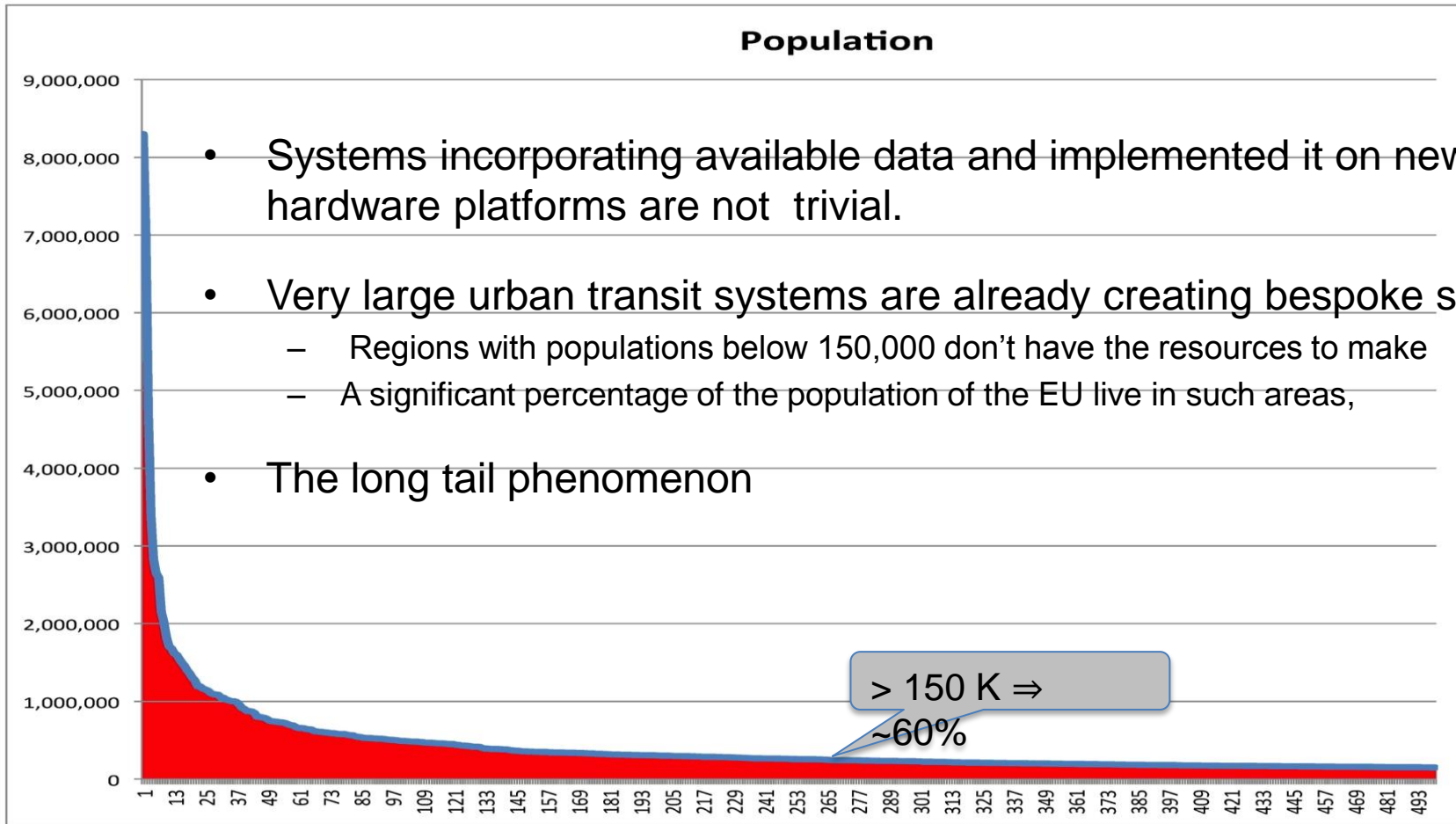**A1-2**

Stefan Carmien
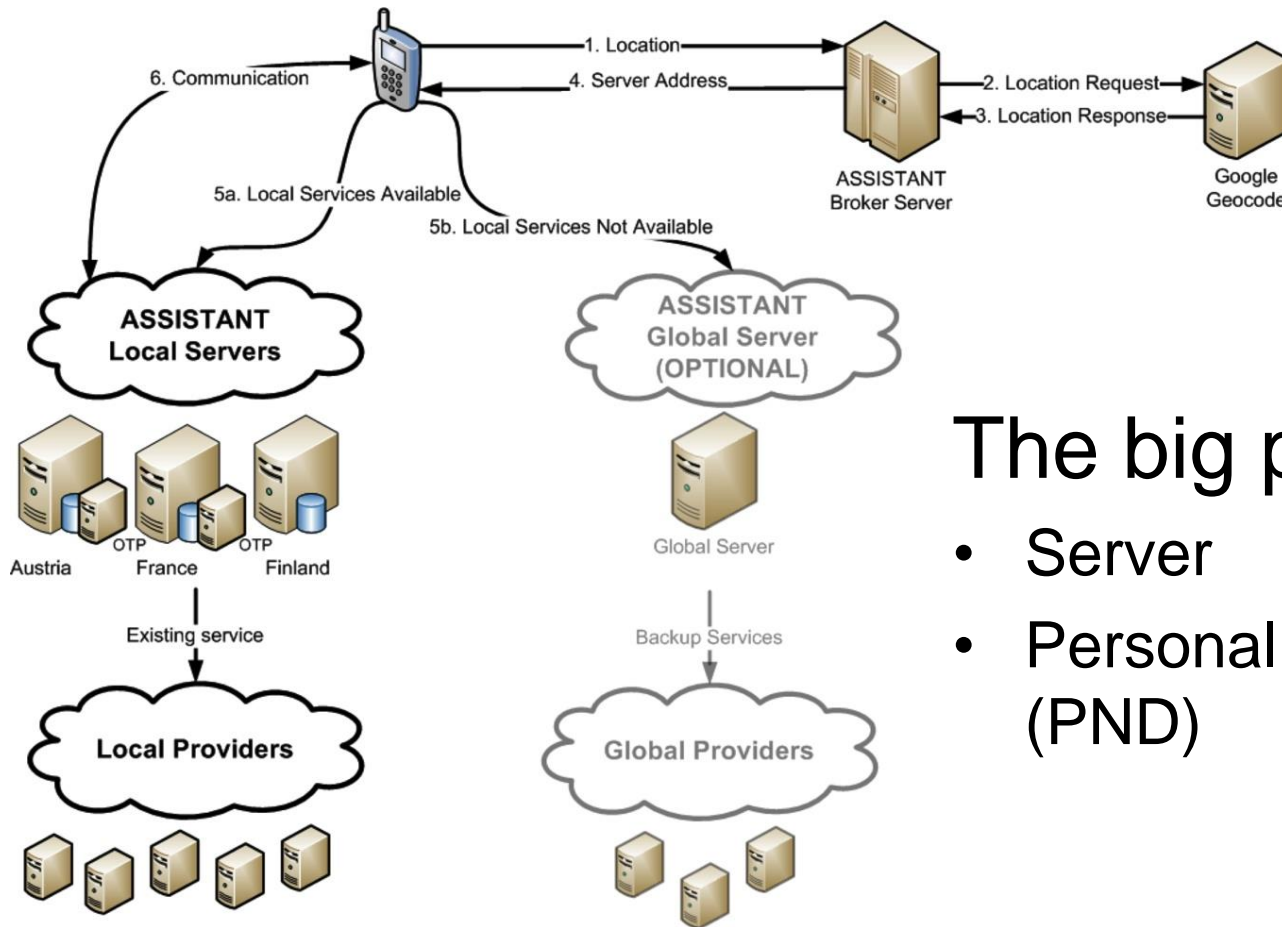*Tecnalia, Spain*
10 September 2014

Elders and Public transport

- Ageing well $\Rightarrow$ Independence $\Rightarrow$ mobility (and $\Leftarrow$ too)

- Smaller public transport agencies do not have the resources to create custom transportation support systems

- Current IT environment includes the availability of real-time location data as well as common file structures for storage of telemetric data
  - Widespread mobile data connectivity
  - Ever cheaper smartphones with a plethora of sensors and powerful processors
  - Real time location data and publicly available route and schedule information

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Big City / Small City

Population

- Systems incorporating available data and implemented it on new hardware platforms are not trivial.

- Very large urban transit systems are already creating bespoke systems
  - Regions with populations below 150,000 don't have the resources to make
  - A significant percentage of the population of the EU live in such areas,

- The long tail phenomenon

> 150 K ⇒ ~60%

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How to do this?

The big picture:

- Server

- Personal Navigation Device (PND)

More Detail

Loose coupling allows proper localization
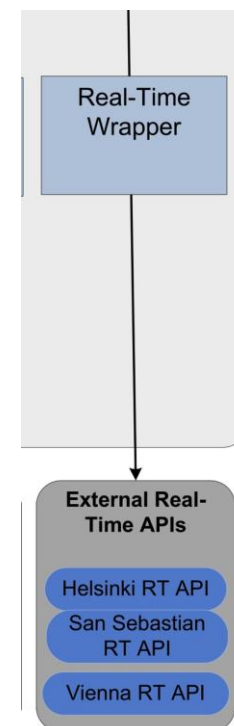
– Language
– Data
– Plans
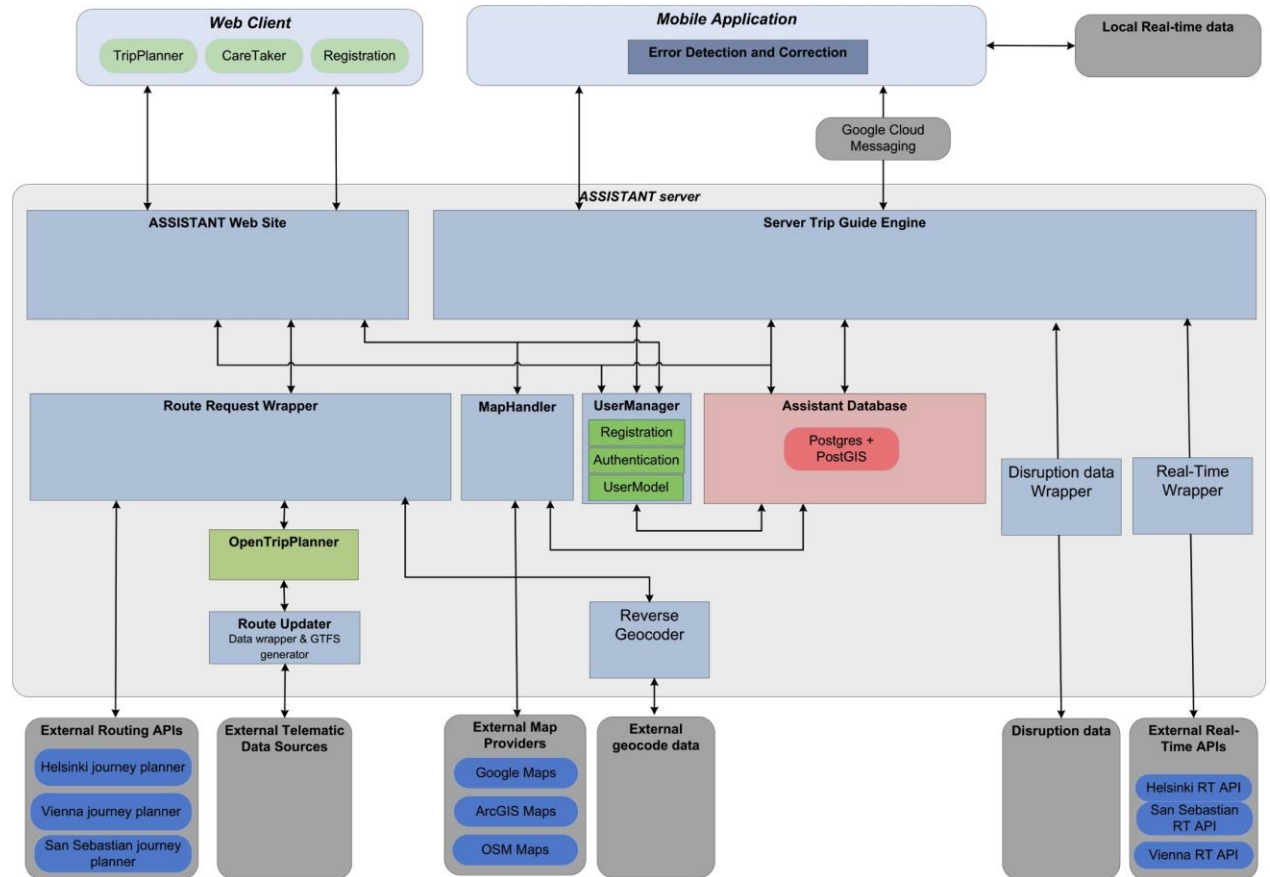
Regional Implementation
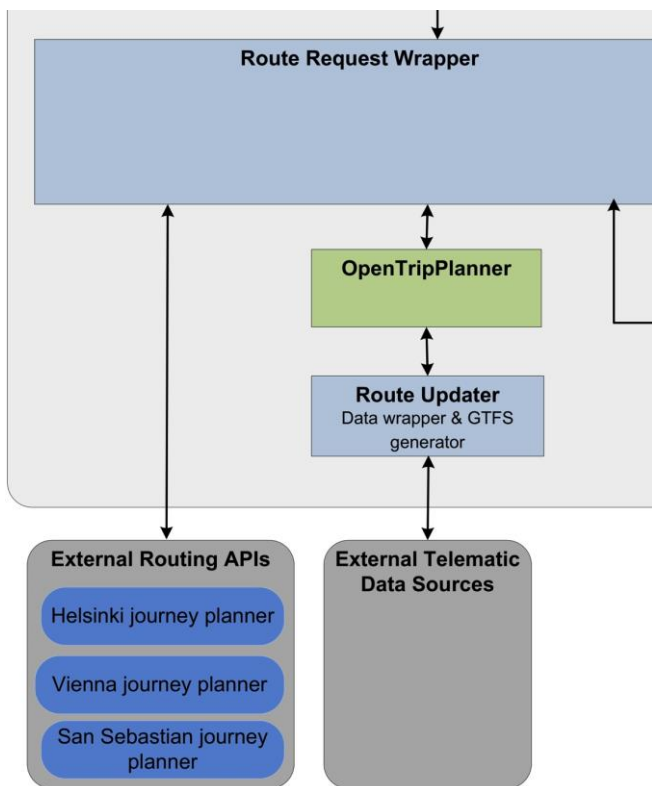
- Plans
  - Schedules
  - Routes
  - Stops
- Events
  - Real-time data

Two approaches: API & OTP

Helsinki API -

http://developer.reittiopas.fi/pages/en/home.php
http://developer.reittiopas.fi/pages/en/http-get-interface-version-2.php#route
http://api.reittiopas.fi/hsl/prod/?request=route&user=assistant&pass=3ld3rc4r3
&format=xml&psg_out=4326&epsg_in=4326&from=24.950054410130715%
2C60.18282725412065&to=24.941256764562475%2C60.16707531793251
&detail=normal

API – large systems
- Reflect Changes

OTP – smaller areas
- Standards based

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TECNALIA RESEARCH & INNOVATION

OPENTRIPPLANNER (OTP), GOOGLE TRANSIT FEED SPECIFICATION (GTFS) AND DBUS

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December 2^{ed}, 2013
ASSISTANT AAL project

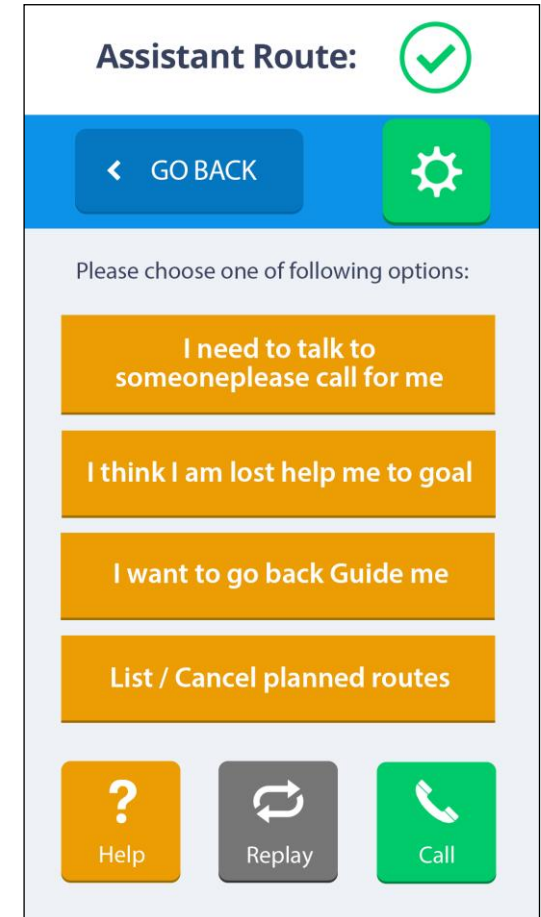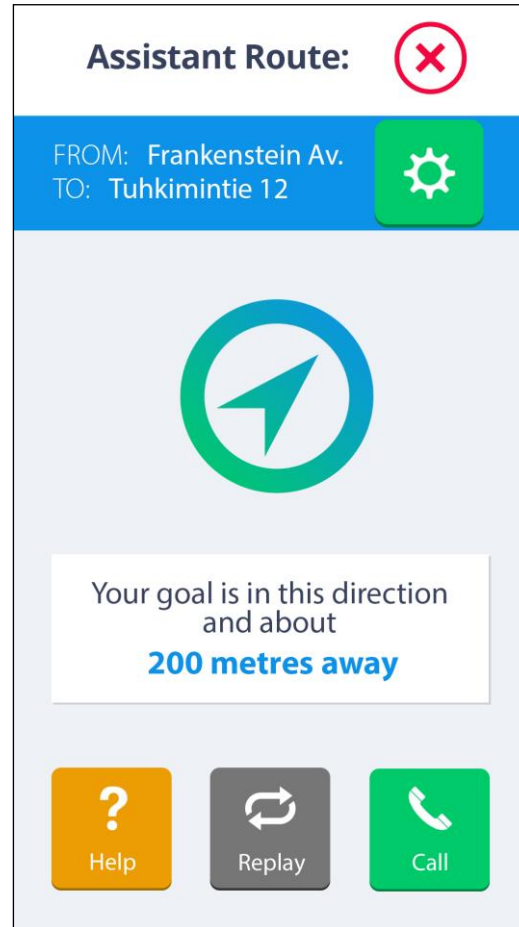San Sebastián install manual

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ASSISTANT on the PND

- PND on Smartphone

- Senior friendly GUI
  - And transparent synchronization

- The 5 R's
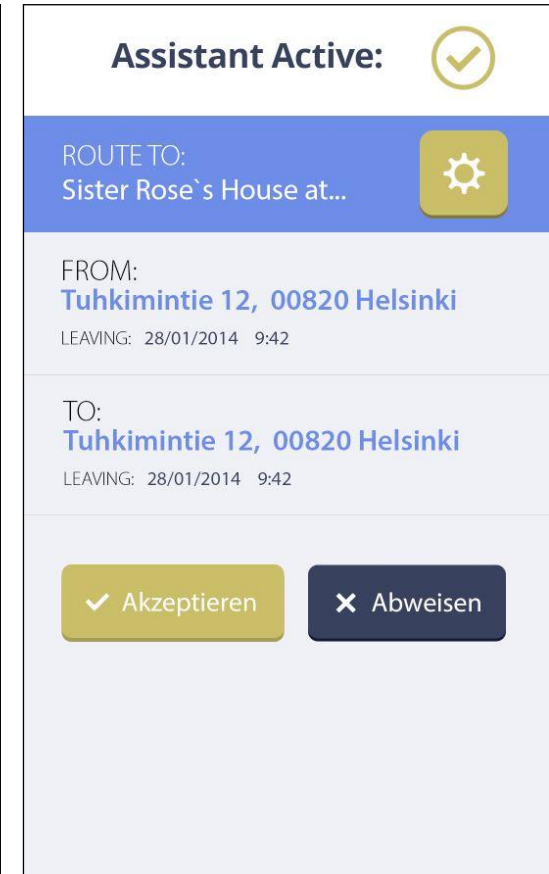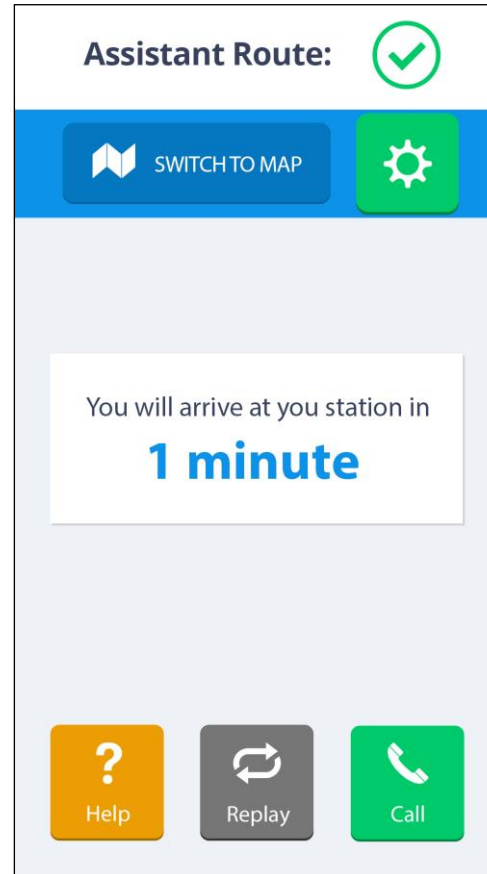
More PND user interface

- Last KM

- User Preferences

Web based route planning

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Thanks

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