



Quality of Life for the Elderly

**Helping to break down isolation of the elderly**

Angela Spence, MIZAR Automazione



OASIS is a Large Scale Integrated Project co-financed by the European Commission (7th Research Framework Programme – ICT and Ageing)

**POLIS Conference – 25 November 2010, Dresden**



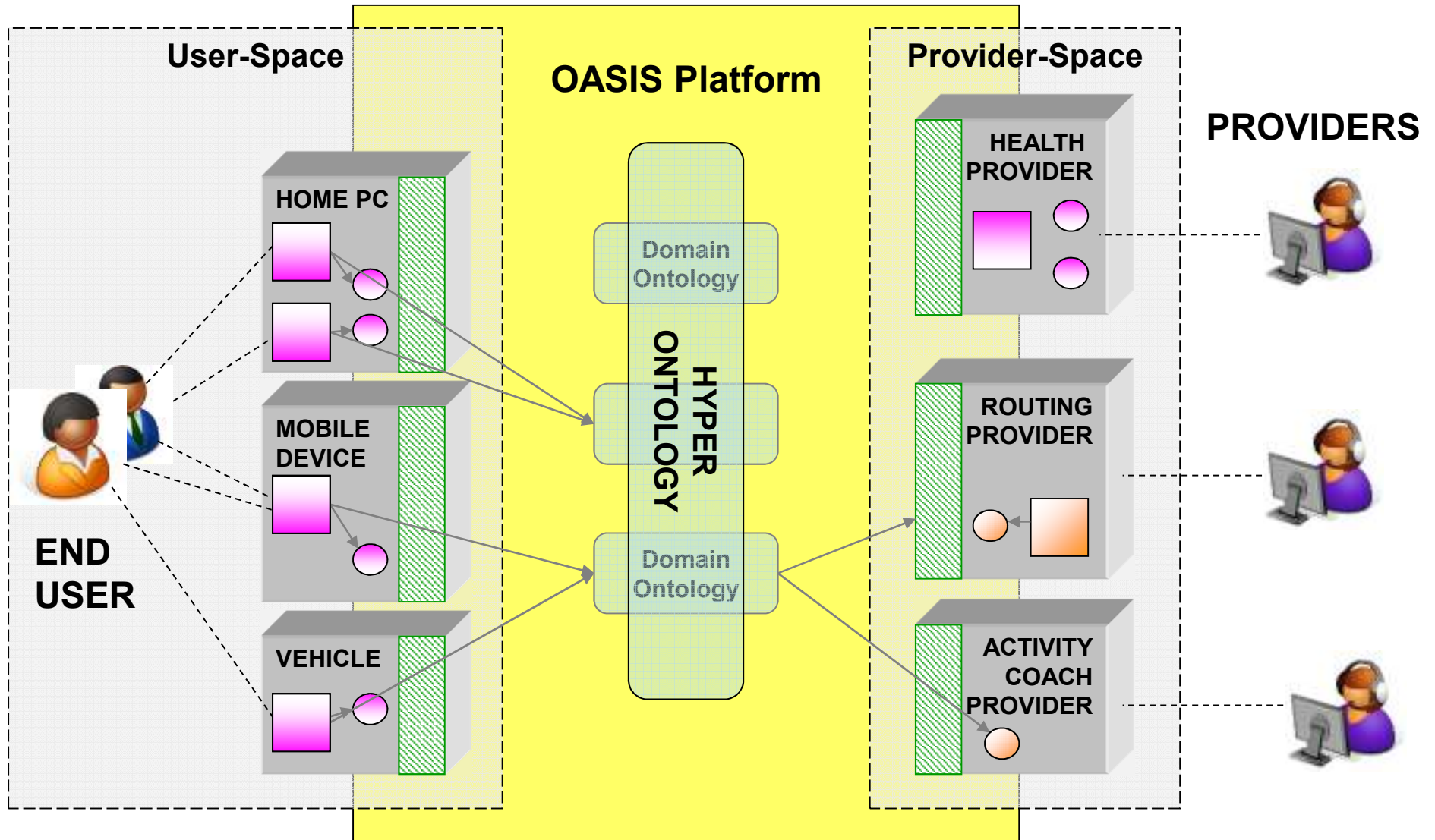
## AIM OF PROJECT

**To create a platform which allows a range of 'elderly friendly' tools and services to share data and function in an integrated way**

- Help the elderly remain independent
- Ensure integration in mainstream society
- Maintain good health
- Facilitate social contacts

**KEY NEED: MOBILITY**

# OASIS ARCHITECTURE



## LEGEND

- End-User-Application
- Local Service
- Provider-Application
- Remote Service
- OASIS Middleware



## BENEFITS

- **Interconnection of services**
  - sharing of information between systems: in the same or different domains
  - more information available
  - best service for end user identified
- **Common User Profile**
- **Services available through different devices**







### OASIS Services:

- Nutritional advisor
- Domotics
- Brain trainer
- Environmental control
- Transport service
- Health monitor



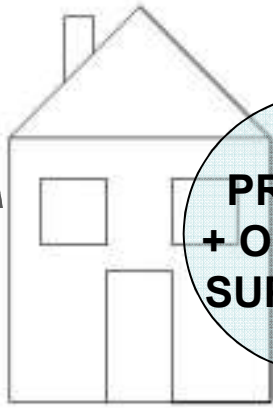
**TRANSPORT  
SERVICES**



# TRANSPORT SERVICES



TRAVEL  
PLANNING



PRE-TRIP  
+ ON-TRIP  
SUPPORT

Car-based and public transport, plus on-demand services for daily life, tourism, work & leisure

PRIVATE  
CAR



PUBLIC  
TRANSPORT



ROUTING &  
GUIDANCE



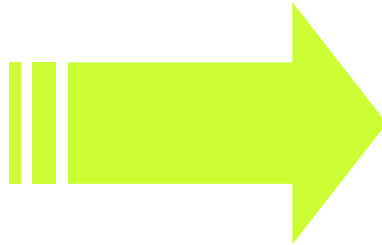
WALKING



## WHO ARE THE USERS?

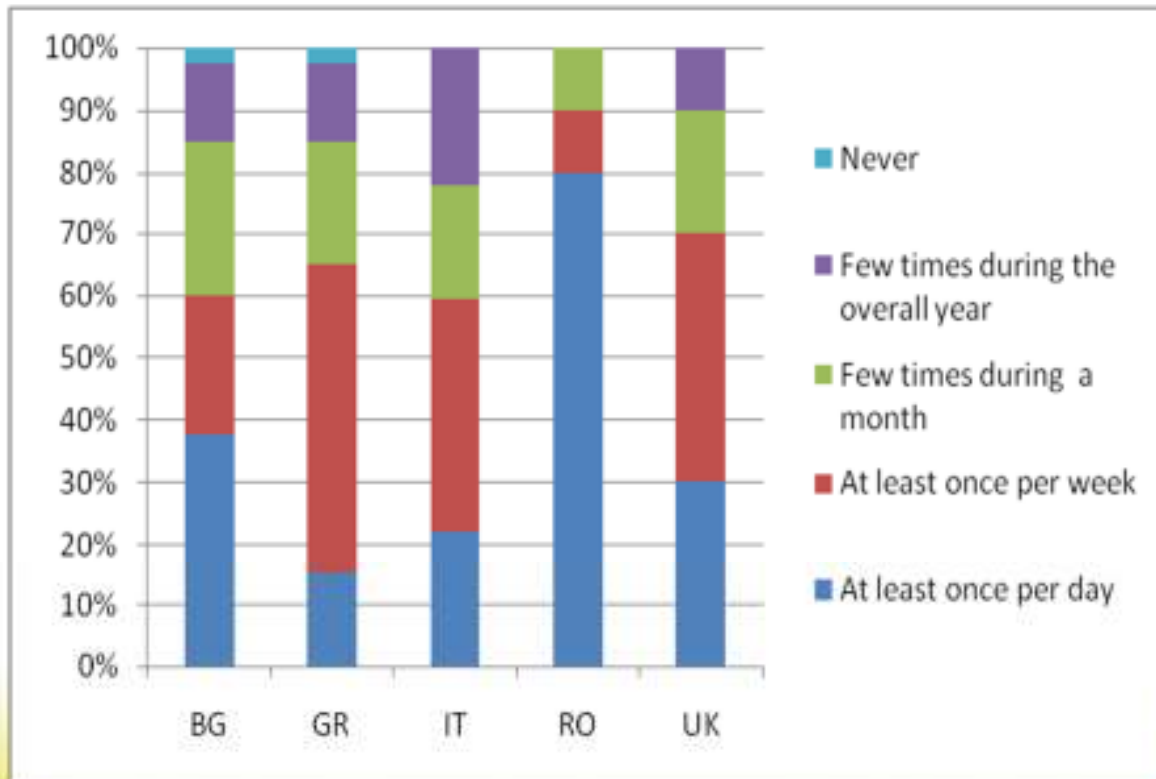


People with different levels of fitness,  
physical and cognitive abilities





## INTERVIEWS: 5 COUNTRIES



### SOME RESULTS:

- Stress caused by heavy and fast traffic: hence increasing reliance on PT.
- Problems with trips to non-familiar places and coping with unexpected problems, e.g. delays
- Physical access and steps difficult: tend to avoid multimodal trips



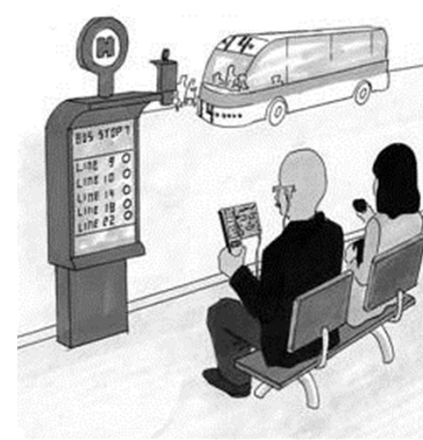


## AIMS OF MOBILITY SERVICES

- Offer personalised and seamless guidance for elderly travellers.
- Recommend destinations, modes and routes according to needs and preferences and support them in their journey.



Make it easy to get detailed information before a trip



Ensure travellers are supported (and relaxed) during the trip!



## PLANNING A TRIP



Car route calculation:

2

- avoid complex intersections
- avoid roads > 3 lanes
- avoid tunnels
- prefer scenic route

1

Antonia requests route from her hotel to a museum in Florence.







3

Bus from car park to stop near destination.



Bus route calculation:

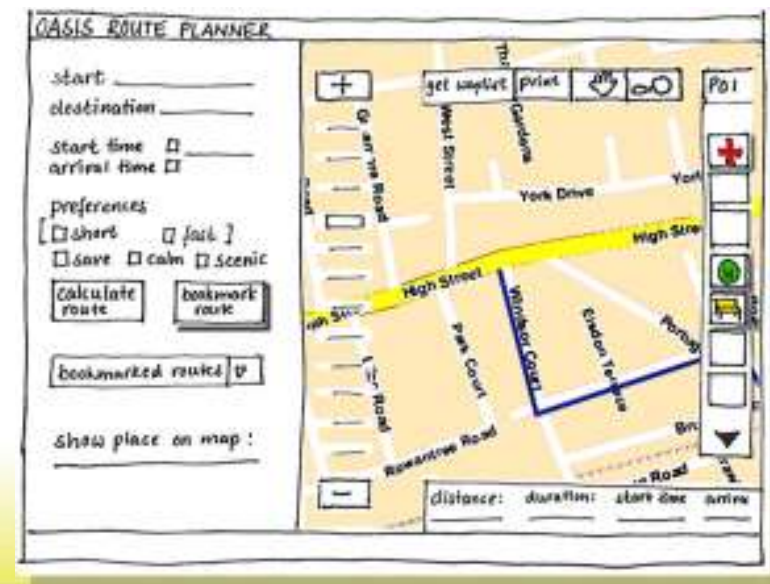
- vehicle access level
- walking distance
- minimum number of changes

4

On foot to final destination.

Pedestrian routing:

- prefer wide pavements
- indicates crossings
- prefer good street lighting
- avoid steps & steep slopes

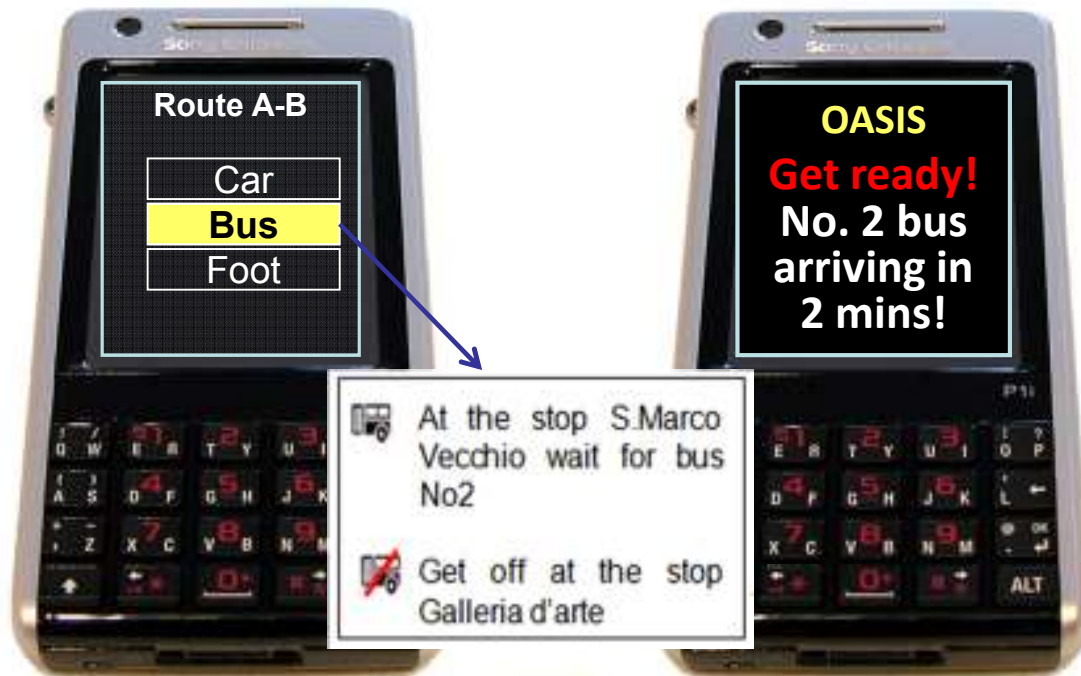




## PERSONAL PT ASSISTANT



- 5 Saved routes can be 'called up' by PDA



MIZAR Public Transport Trip Planner in collaboration with PTV car and pedestrian routing and support from ATAF





CRF demonstrator, in collaboration with PTV and UNI-PI



## VEHICLE ONBOARD SYSTEM



HMI integrating:

- Voice Recognition
- Text-to Speech
- Steering Wheel Buttons
- Touch-screen on PDA

HMI layout changes according to the User profile

HMI modality changes dynamically according to driving task

Safe, limited interaction when the vehicle is moving



## OASIS PILOT SITES

- Florence\*
- Thessaloniki\*
- Milan
- Kaiserslautern
- Newcastle
- Plovdiv

\* Mobility services







For further information on the project:

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