

Rail PASS

(Promise Aware Service System)

The project as at November 15st, 2011

The system

Appendix

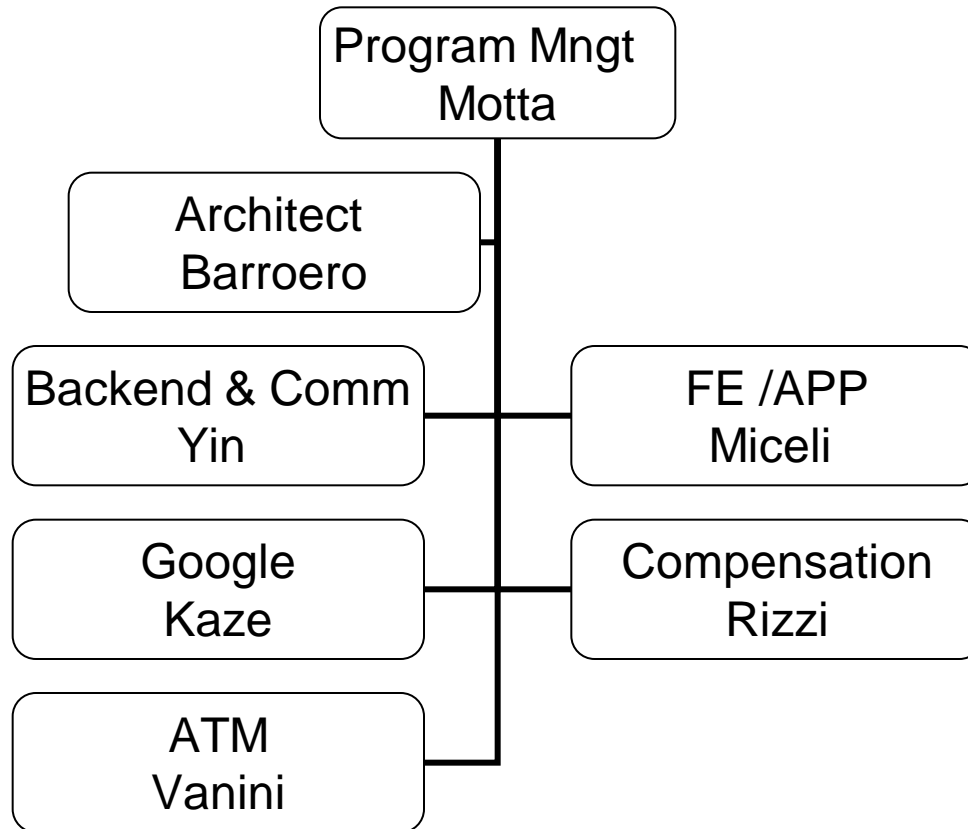
Rail PASS: the project as at November 15st, 2011

Objectives
Work plan phase
Work team
Issues for today meeting

Project objectives

- Target:
 - Users: Passengers and citizens
 - Service providers:
 - Transport authorities and lines
 - Municipalities
 - Telecommunication corporations
- Purpose: demonstrate feasibility and benefits of service systems
 - Stakeholder oriented
 - Performance aware
- Objectives:
 - Develop a working demo (on Android platform)
 - Cooperation with research bodies to develop research
 - Cooperation with public bodies for validation
 - Public Presentations (e.g. SMAU)
 - Papers on research projects
 - Public Research Funding

Project phase: Work team & work packages



Rail PASS: the system

Reference scenario
System architecture
Mockup / demo
Conclusions

**Reference
Scenario**

**System
Architecture**

Mockup

Conclusions

Reference Scenario

The railways case study

Current practices

To-be

The expected outcome

The railways case study

Reference Scenario

- Mr Motta lives in Pavia, a small city in Northern Italy, and wants to go to Florence, where his relatives live in a small village not served by public transportation.
- Now, there are no direct connections from Pavia to Florence. Thus, Motta shall take the bus to the train station, then a local train to Milan, and, finally, a fast train from Milan to Florence.
- Motta books the fast train and alerts relatives.
- However, things do not happen as planned. Because of traffic jam, the bus is late, but the local train to Milan is late too.
- Motta is happy, but when the local train arrives to Milan the fast train has already left. Motta has to go to the ticket counter and change his ticket. Relatives in Florence pick up Motta one hour late and have to pay additional parking.

System Architecture

Mockup

Conclusions

Current practices

**Reference
Scenario**

- On site broadcasting systems
 - Station display boards
 - Station loudspeaker announcements
 - On train announcement system

**System
Architecture**

- Web and mobile systems
 - Prontotreno: sw for advanced mobile terminals
 - Trenitalia WAP: Mobile channel of Trenitalia website
 - Viaggiatreno: web application for delay monitoring
 - Portal
 - Call center

Mockup

Conclusions

- Staff: ticketing counters, controller, customer care

Critical points

Reference Scenario

NO information on service variables

- Delays
- Train platforms
- Connections
- Service aspects

NO Information conveyed to the stakeholders

- NO alerts to relatives
- No alerts to operators linked to the service nets
- NO rescheduling

System Architecture

Mockup

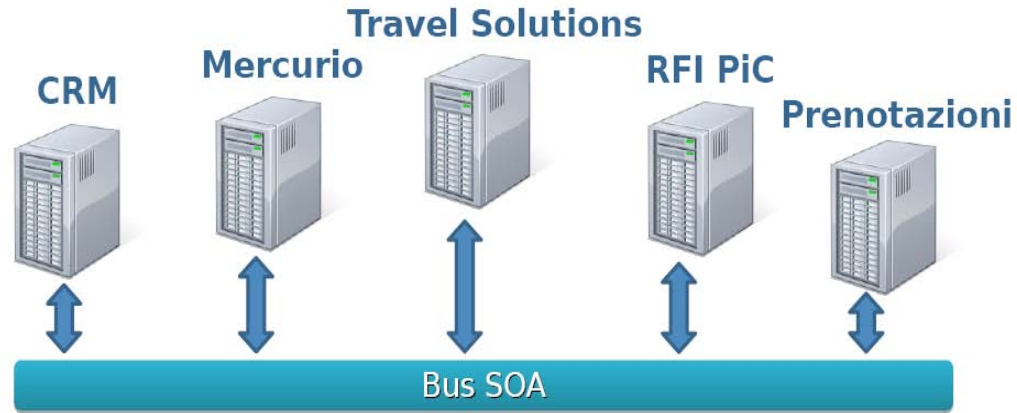
Conclusions

However all information already exists in current systems

Need to develop an integration and coordination system

To-be : real time service information

Reference Scenario
System Architecture
Mockup
Conclusions



- Information on services can be extracted from existing systems e.g.
 - Mercurio: real time collection of train delays
 - PiC (Circulation Integrated Platform) : routing of trains
 - Travel Solutions: software application to plan travels
 - CRM
 - Reservations: Train Reservation Systems
- In Ferrovie these systems interface an Enterprise Bus

To-be: the stakeholder oriented system

Tr.2184 PV Arrival: 9.27
Platform: 3

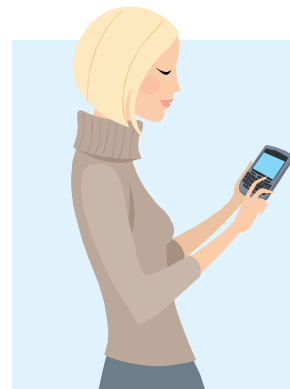


Tr.2184 MI Arrival:
10.13 Platform:18
Tr.9431 MI Departure:
10.16 Platform: 16 If
you want to select
later schedules please
answer "yes" to this
sms



Car
Rental

Contract n°72673
Planned delivery 10.30
Rescheduled delivery
12.35



Mr. Motta will arrive at
13.25 instead of 13.05

The architecture: overall concept



- *PASS runs as an App on a smart phone*
- *Business logic and information on the business process run on a server (IRMA)*
- *Service systems are accessed via web services*
- *Android platform (I-Phone as a potential extension)*

Reference
Scenario

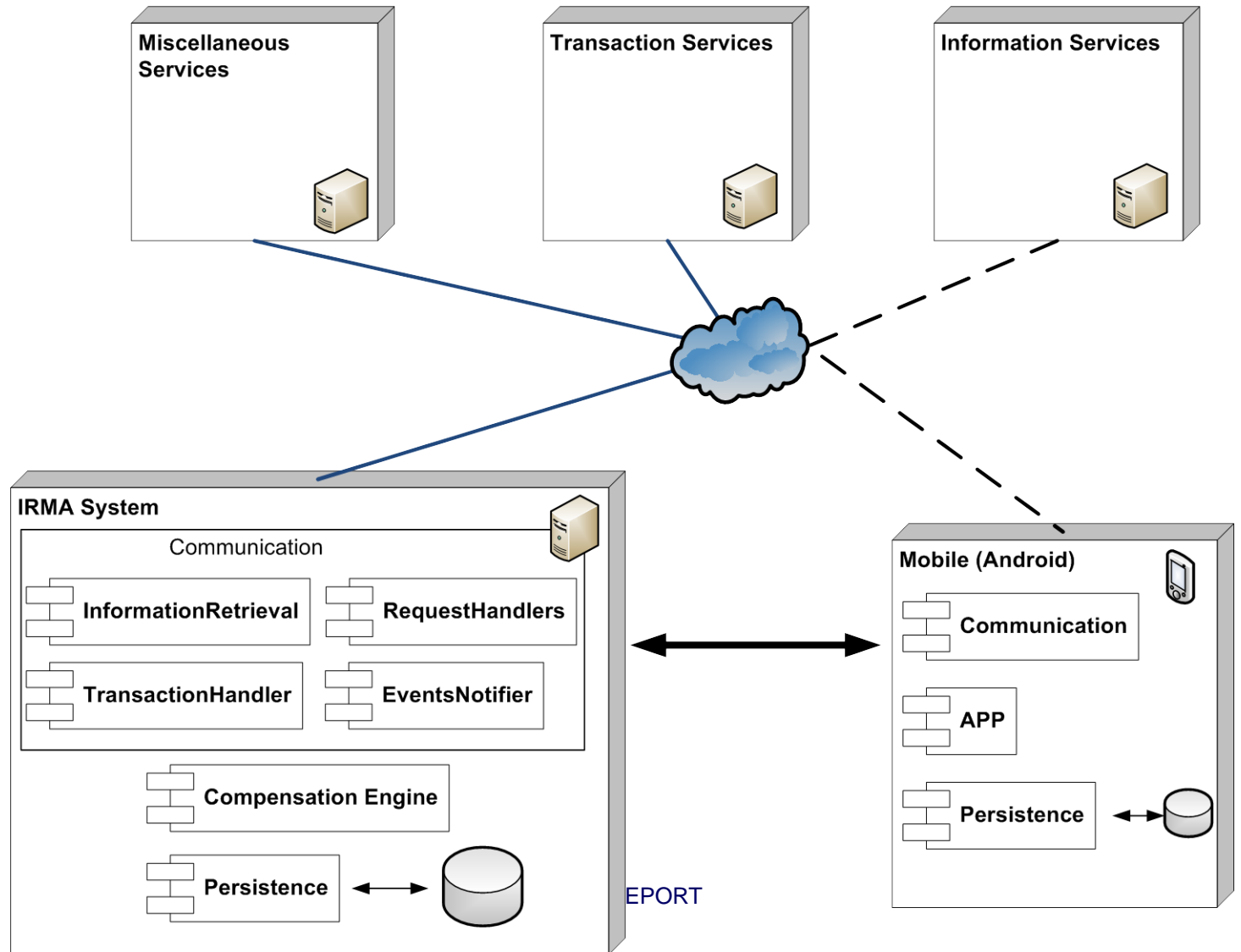
System
Architecture

Mockup

Conclusions

The architecture: deployment

Reference Scenario
System Architecture
Mockup
Conclusions



Use cases

Reference Scenario

System Architecture

Mockup

Conclusions



1. Register
2. Login
3. **New journey (= define a new journey)**
4. **Review plans (= modify journey)**
5. **Cancel (= delete a stop or the whole journey)**
6. Buy (= buy a ticket)
7. Services (= identify and buy side travel services)
8. Status (= visualize the status of the journey)
9. **Choose an alternative (the customer chooses among alternatives proposed by the system) : Pushing messages approach**

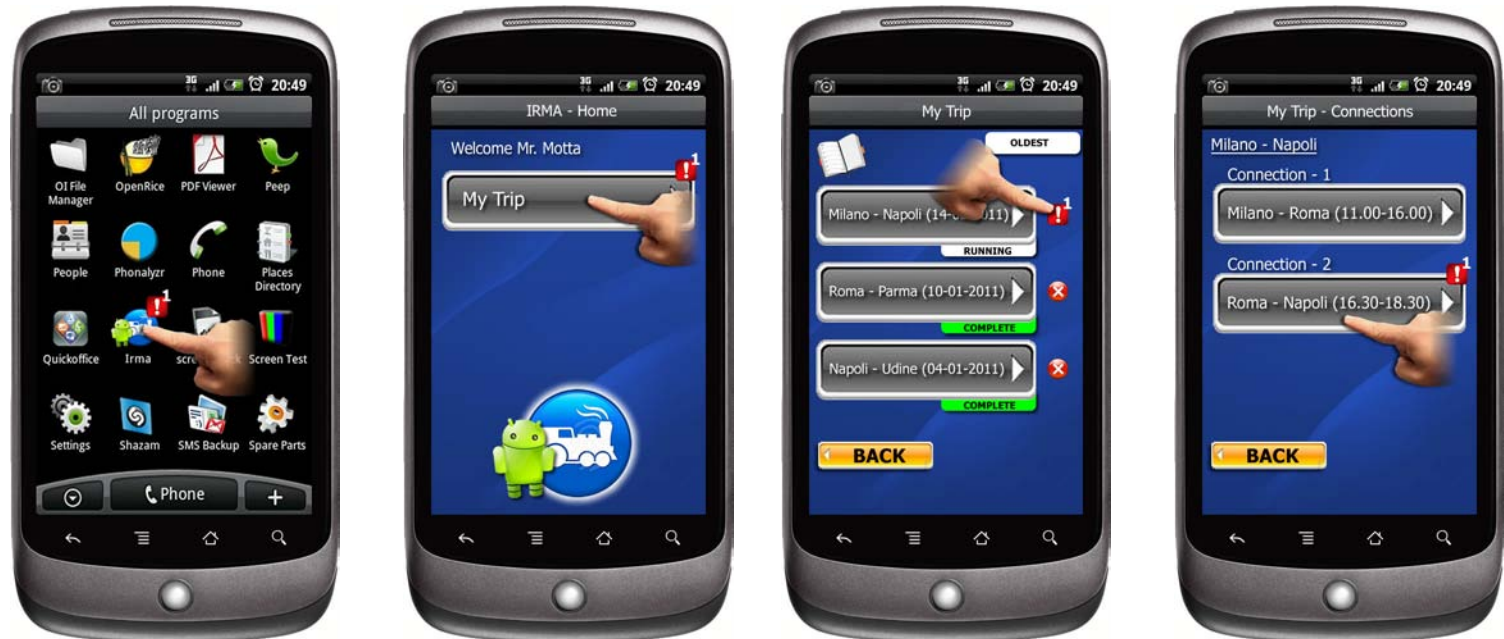
UC9: Choose Alternative Path Use Case (Part 1/3)

Reference
Scenario

System
Architecture

Mockup

Conclusions



- *The system notifies the android that a **delay impacting on the promise** has occurred*
- *The customer uses the android app to **obtain information on which connection is at risk***

UC9: Choose Alternative Path Use Case Part (2/3)

Reference
Scenario

System
Architecture

Mockup

Conclusions



- *The customer evaluates if he want to obtain alternatives for his journey*
- *The system shows proposes alternatives with related cost and time*

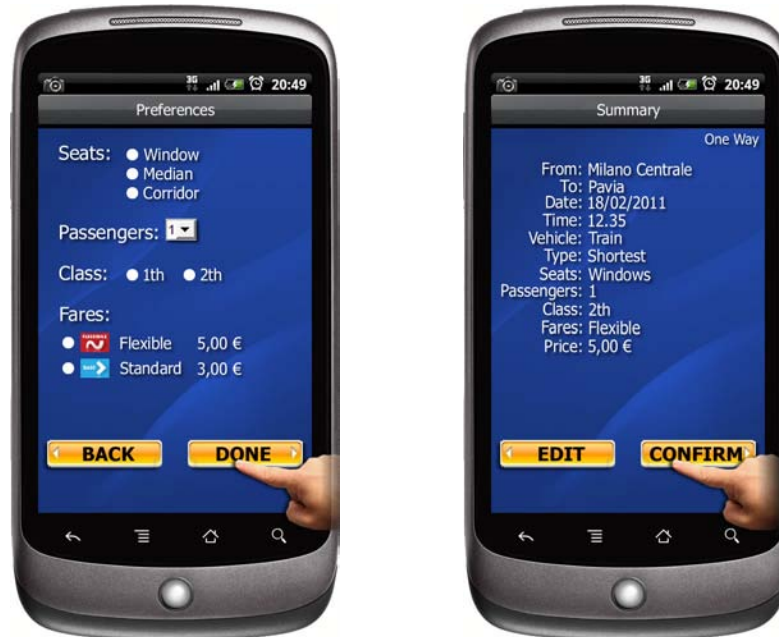
UC9: Choose Alternative Path Use Case (Part 3/3)

Reference
Scenario

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Architecture

Mockup

Conclusions



- *The customer buy the new connection tickets via his mobile*
- *The system displays the summary of the new journey configuration*

**Reference
Scenario**

**System
Architecture**

Mockup

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Conclusions

Potential benefits
References

Potential benefits

**Reference
Scenario**

- **Benefits to the customer**
 - Automatic, on line and updated information
 - Support to exceptions management
 - Selective information
- **Benefits to the company**
 - Higher customer loyalty with a marginal cost
 - Higher dependability image
 - Better knowledge of the overall customer expectations and needs by profiling customer selections and actions
 - Lower reimbursement on claims

**System
Architecture**

Mockup

Conclusions

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System Architecture

Mockup

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Mockup

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Conclusions