#### ICT incubators in Udine a first hand experience

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#### The beginnings (three years ago)

- A few considerations:
  - nowadays we have plenty of mobile devices with considerable computational power
  - we have wireless communication
  - we lack added value services



## 3G telephony

- Mobile Internet
- Mobile TV
- Videophony
- Something more? New applications? Are 3G smartphones smart indeed?

## A vision

- Don't waste the computational power of mobile devices
- Transform the mobile device in a general purpose one

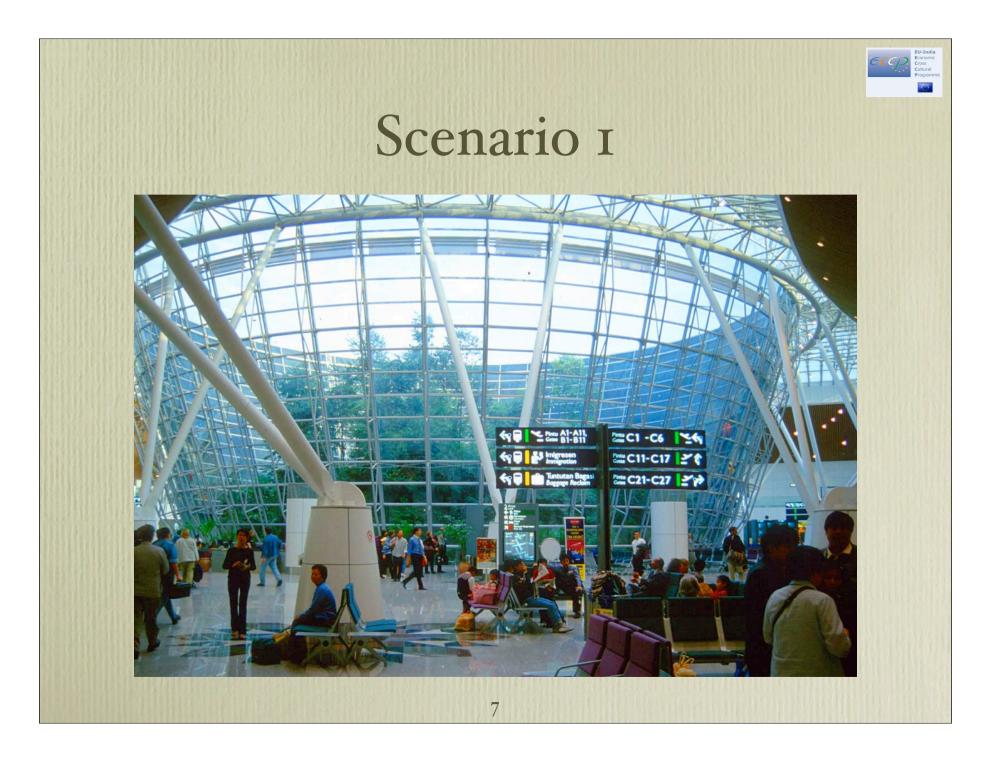
## The Idea

- "The right application in the right place"
- Associate an application to a place
- When the user enters, the application is automatically loaded and executed on her mobile devices
- When the user exits, the application is automatically unloaded



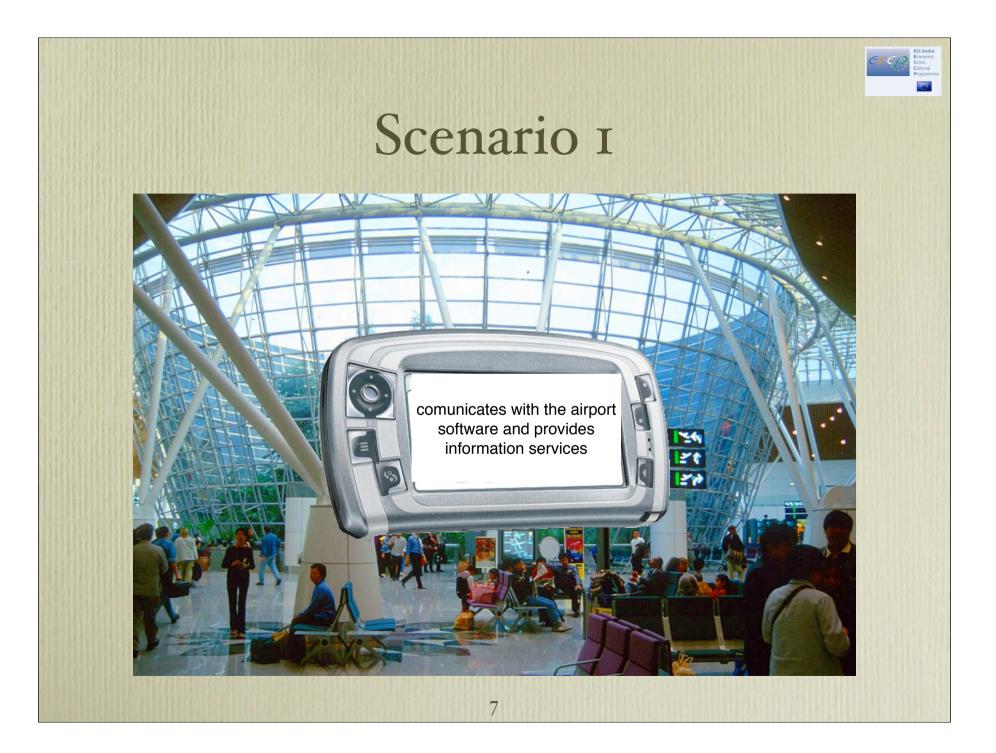
• From the end user point of view, the mobile device becomes the privileged way to:

- Find informations
- Interact with the surrounding machinery
- From the other side, the software developer can take advantage of the I/O device capabilities to allow the user to experience a more comfortable interaction with the environment

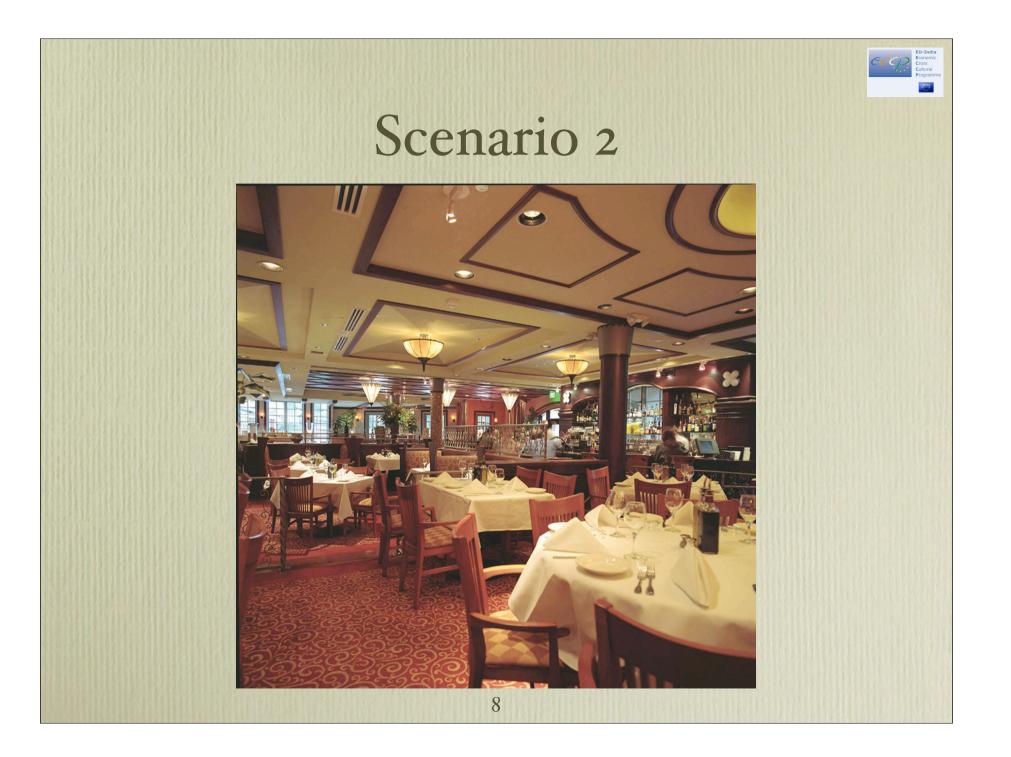








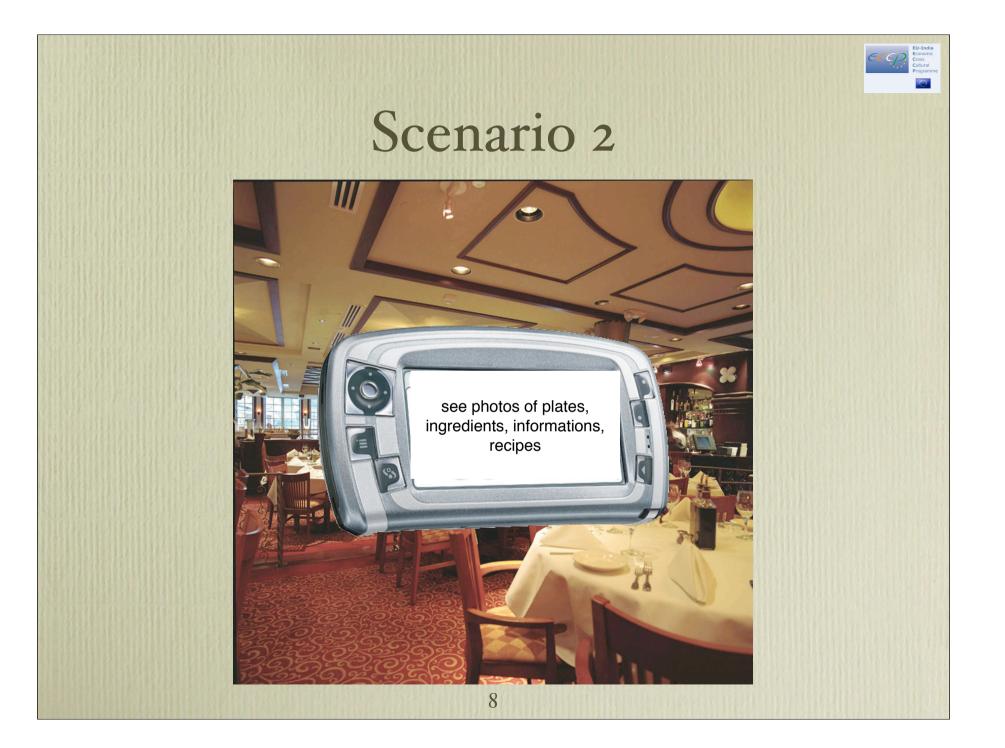


























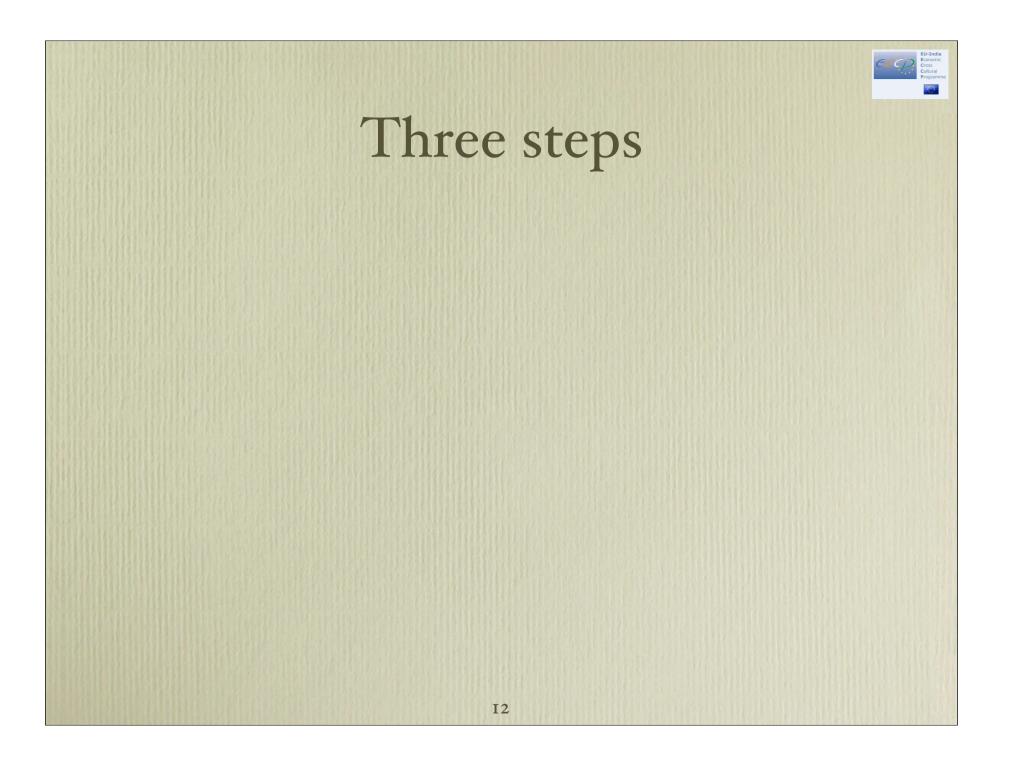


#### The first team

• 7 people:

 Vincenzo Della Mea, Luca Di Gaspero, Rudi Francescutti, Gianluca Franco, Stefano Mizzaro, Ivan Scagnetto and PC (Group leader)

• one name: MoBe (Mobile Being)



#### Conomic Cross Cultural Programme

## Three steps

1. attend the BP course

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2. prepare the BP

i. define the business idea (easy)ii. analyze the marketiii. define a marketing strategyiv. define the internal organization

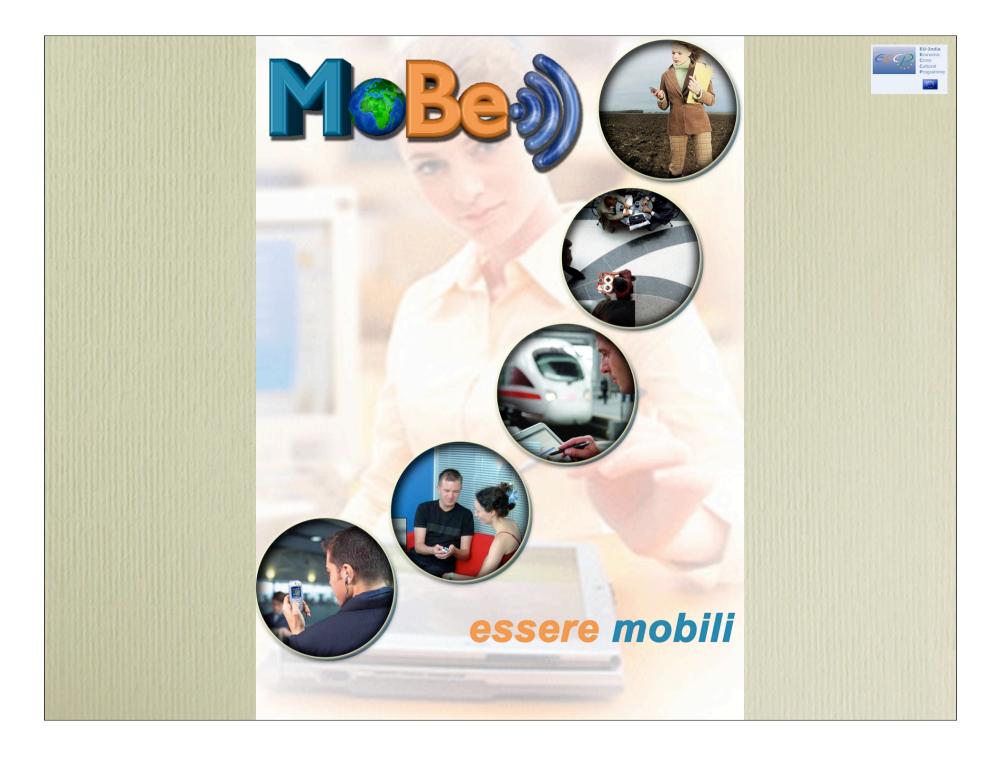
### Three steps

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3. cross your fingers :-)



#### Conomic Cross Cultural Programme

## Considerations

- The Start Cup experience is useful for academic people that, generally, are not used to think in terms of market
- Once you have a BP you can start to contact companies for funding
- The group leader have an excellent occasion to face the difficulties of managing a team in a competition. This can be thought as a training for a future general executive manager



- After the Start Cup experience we started to search funding
- Two academic research projects funded by CRS, a R&D company working in collaboration with VIMAR in the domotics field
  - Autoadapting mobile devices for residential environments
  - Context-aware migration of applications for mobile devices
- 70.000 euros of total funding
- 18 months



### The second team

- 8 people:
  - Vincenzo Della Mea (leader for the second project), Luca Di Gaspero, Stefano Mizzaro, Ivan Scagnetto, Andrea Selva, Luca Vassena, Paolo Zandegiacomo Riziò, PC (leader for the first project).
- Scientific supervisor: Furio Honsell



## Developing MoBe

 Mobile devices that constantly and frequently change their functioning mode, adapting to the surrounding environment and the current context





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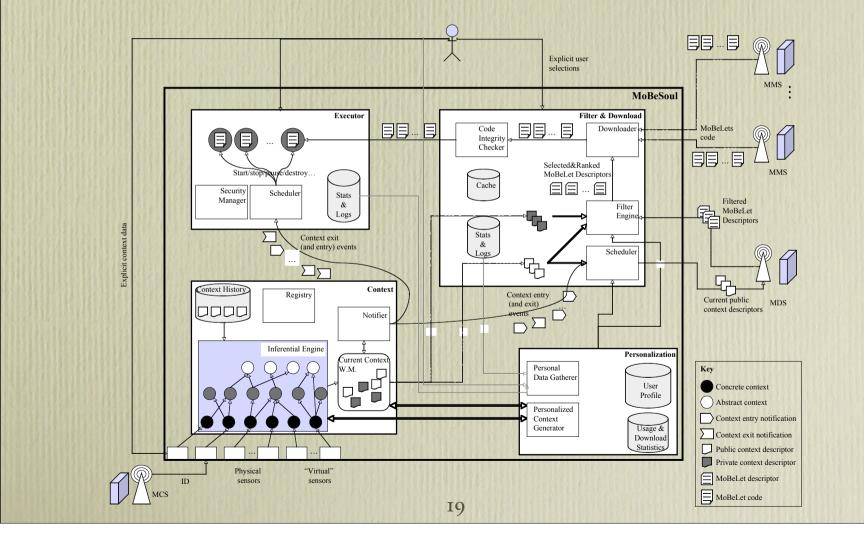


## Our receipt for MoBes

- Context-aware applications: MoBeLets
  - Pushed and executed on the mobile device
- Execution environment: MoBeSoul
  - Context sensing and inference engine
  - Personalization
  - Context filtering, query builder, code retrieval
  - Processor scheduler
- Ancillary servers:
  - Context provider
  - Search engine
  - MoBeLet download



#### The MoBe framework



#### Economic Cross Cultural Programme

# Some bibliography

- From E-Relevance to W-Relevance. PC, V. Della Mea, L. Di Gaspero, and S. Mizzaro. In Proc. of SIGIR2002.
- The concept of relevance in mobile and ubiquitous information access. PC, V. Della Mea, L. Di Gaspero, and S. Mizzaro. In Mobile and Ubiquitous Information Access, vol. 2954 of LNCS, 2004.
- MoBe: Context aware mobile application on mobile devices for mobile users. PC, V. Della Mea, L. Di Gaspero, S. Mizzaro, I. Scagnetto, A. Selva, L. Vassena, and P. Zandegiacomo Riziò. In Proc. of ECHISE 2005.
- MoBe: A Framework for Context-Aware Mobile Applications. PC, V. Della Mea, L. Di Gaspero, S. Mizzaro, I. Scagnetto, A. Selva, L. Vassena, and P. Zandegiacomo Riziò. In Proc. of CAPS 2005.
- Information Filtering and Retrieving of Context-Aware Applications Within the MoBe Framework. PC, V. Della Mea, L. Di Gaspero, S. Mizzaro, I. Scagnetto, A. Selva, L. Vassena, and P. Zandegiacomo Riziò. In Proc. of CIR 2005.



## Technoseed

(a couple of months ago)

- <u>http://www.technoseed.it/</u>
- Technical tutor
- Commercial tutor
- Scholarship of 500 euro/month
- 3.000 euro for hardware acquisition



#### ECOP Cross Cultural Programme

## New challenges

- Face the problem of choosing the right company structure
- Start learning rudiments of company laws
- What products? What customers? What prices? What costs?



### A difficult choice

- The general executive manager is, practically, a full time job
- If there is a flaw, it is that in the academic italian system there seems to be no stimulation from the career point of view
- Should a researcher bet?



#### Future works

- Academic spin off
- Tentative projects:
  - for car managing (in collaboration with CRF, a R&D organization linked to FIAT)
  - for domotic applications (in collaboration with CRS, linked to VIMAR)
  - for tourist guides in archaeological sites
- A PhD grant for efficient mobile information retrieval (in collaboration with Google)

## Contacts

EU-India Economic Cross Cultural Programm

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ECCP

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