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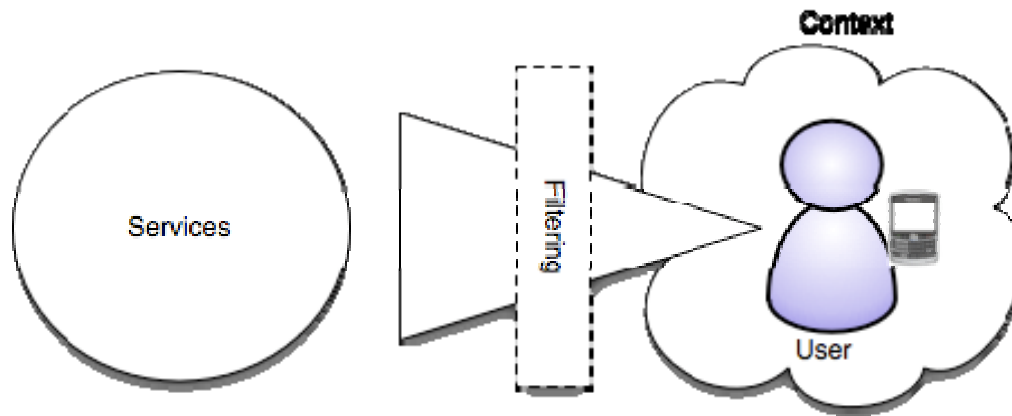
Personalisation by Semantic Web Technology in Food Shopping

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Outline

- Motivation for personalisation
- Case environment: Food shopping
- Using personas and scenarios
- Personal information
- Proposed personalisation architecture
- Experiments
 - Technology acceptance model (TAM)
 - Settings
 - Main results
- Conclusions and future work

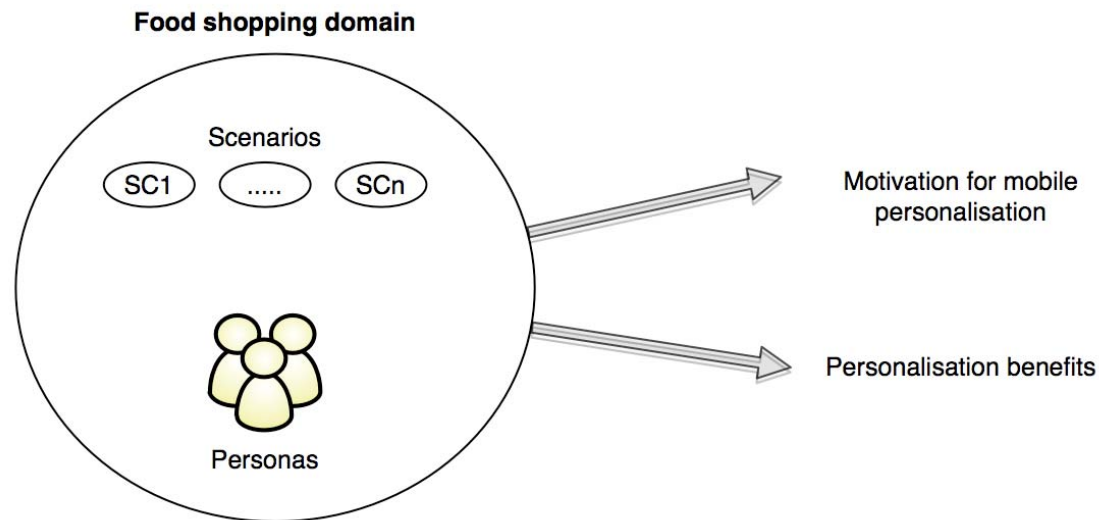
Motivation for personalisation



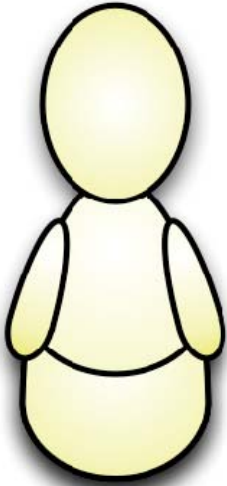
Case environment: Food shopping

- An easy task for many people
- But for some it can be a non-trivial decision process
 - Health issues
 - Family issues
 - General interest
 - ...

Using personas and scenarios



Persona: Bill



Bill

- 39 years
- Married
- 3 children
- Conscious about contents of food (e.g. not too much fat, not too much sugar, avoids certain additives)
- Prefers healthy non-harmful food
- Prefers ecologically produced food
- Small carbon footprint if possible
- FairTrade is regarded positive
- Price is an issue, but not the most important one
- Some particular producers of food are unwanted for different reasons
- Have certain affinities (e.g. sceptical to cheap brands such as Euroshopper)
- Conscious about limitations in the use of meat
- Bill often does shopping, but is not so active in the planning for purchases
- Likes to have a preset shopping list, and finds it difficult to adapt on the spot



Personal profile

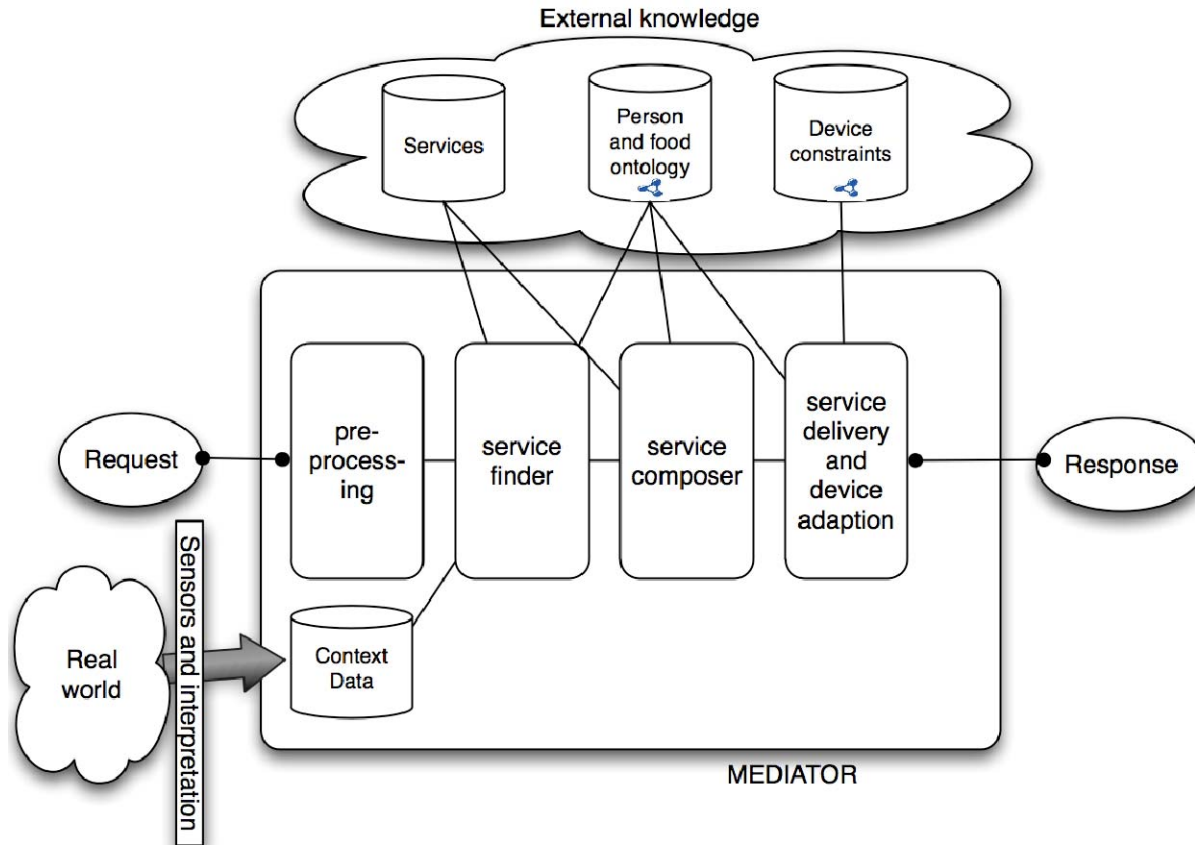
- Three layers of profile information

Personal information
Long term interests
Temporary interests

Scenario 1: Alternative product (pull)



Personalisation architecture

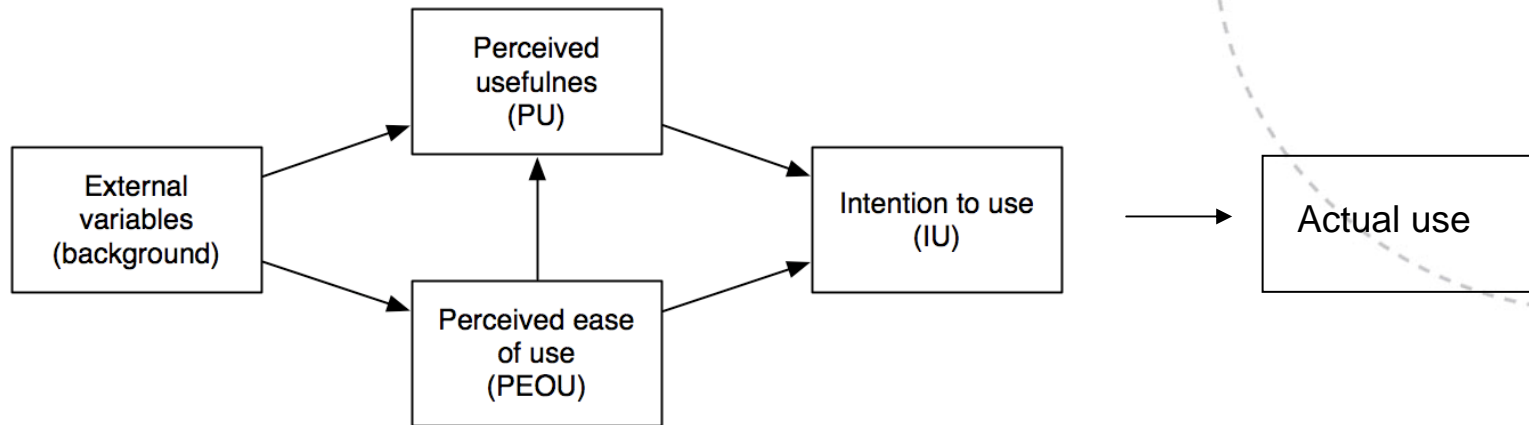


The Technology Acceptance Model (TAM)

- TAM is a widely researched model for user acceptance
- Users` intentions are good indicators of actual use of an information system
- Has a set of constructs
- Measurement scales and questions that have been developed, validated, and extensively pretested, showing them to have high reliability and construct validity



TAM model and constructs



- Perceived usefulness (PU): the extent to which the individual believes that using a system will enhance his job performance
- Perceived Ease of Use (PEOU): the effort of use of a system; the extent to which an individual believes using a system will be free of effort
- Intention to use (IU): considered to be a function of PU and PEOU (the strongest predictor of usage behaviour)

Settings for the analysis

- 200 persons randomly selected from a panel
- 20-40 years old
- 50/50 distribution of men and women
- Experiment run in Norstat's survey solution
- Two videos based on Scenario 1 and 2
- Two evaluations (TAM1 and TAM2) related to the two scenarios



Main TAM Results (1)

Background

- Mean age: 30 years
- In general an interest in health and food (mean 4,03)
- Fewer were interested in ecological food in particular (mean 2,36)
- (Three participants did not know what their relationship to ecological food was)

Main TAM Results (2)

Statistics

- Inter-item reliability - Cronbach's Alpha
 - Ensure that items for each TAM construct correlates
- Principal component analysis
 - Ensure that PU and PEOU are separate factors
- Correlations – is there is a relationship between the answers to the background questions with regards to interest in quality food, ecological food and the TAM constructs?

Main TAM Results (3)

Correlations

- Effect of person's interest in health, the contents of food and ecologically produced food
 - We found a positive relationship between health and food interest and TAM constructs only for the pull scenario (Scenario 1)
- High interest in ecological food would correlate with high PU, PEOU and IU
 - We could not find such a correlation from the computations
- High correlation between PU and IU in both experiments
- PEOU is also highly correlated with IU in both experiments, but not as highly correlated as with PU - also with regards to preferences to ecologically produced food



Conclusions and Future Work

- Use of personas and scenarios have worked well
- Should be developed further for implementation and testing
- Fit our data to the original TAM model and use it to predict values for the dependent variable IU in the two evaluations
- Use the videos for testing in collaboration with actual people through the RECORD Living Lab to get feedback on the developed material in the form of discussions in a forum

Thank you for your attention!