Requirements gathering

Requirements gathering and analysis

AS-IS

- Requirements gathering (including comparison with competitors)
- Analysis
- Conceptualization/formalization
- User-based validation
- Iterate

TO-BE

- Analysis
- Conceptualization/formalization
- Part of the input (with mock-ups/prototypes) of the evaluation

Requirements gathering and analysis (2)

- A requirement is something the product must do or a quality that the product must have
- Users may not be aware of all requirements
- Users may voice a perceived need
- But users do not mention some requirements
  - assume that the requirement is obvious
  - good interviews, observation will help to reveal these
  - some only surface when models are constructed or prototypes are reviewed
- Users also may not appreciate technical possibilities (or impossibilities)
- Functional requirements – what the system must do
- Non-functional requirements – qualities the system must have

•who will use it?
•where will they use it?
•what will they use it for?
•how will they use it?

Etnography

- Ethnography (sometimes called Field Observation) is an ethnographic technique where the evaluator visits the normal workplace of the users.
- The evaluator should be as unobtrusive as possible so as to allow the user to work normally.
- It is common to use a digital camera to take shots of screens, artefacts, scenarios etc. and a notepad to record pertinent details.
- Video recording may not be possible in this environment as it may be intrusive – particularly in a confidential situation (hospitals / banks etc).
- Field workers spend time in real-life situations observing, videotaping and interviewing.
- Attention is paid to how tasks are actually done, as opposed to the way they are thought to be done.
- The purpose of ethnography is to give designers and evaluators an understanding of the context in which a technology is used.
- Ethnography has the ability to deal with the social and collaborative context of the system.
- Ethnography is only successful when accepted by the people in the setting. Reluctance on the part of the subjects results in modified behaviour and hence invalid results.
- Even though the evaluator tries to remain as unobtrusive as possible their presence may still affect the performance of the observed workers.

Interviews

- Interviews should be thematic yet open-ended and discursive to allow the participant to direct the process somewhat.
- Extracts of interviews can be made to highlight details of particular interest.
- Structured interviewing has
  - a specific, predetermined agenda
  - specific questions to guide and direct the interview
  - more of an interrogation than unstructured interviewing, which is closer to a conversation.
- Unstructured interview
  - Used during the earlier stages of design
  - The objective is to gather as much information as possible concerning the user's experience, the procedures adopted by users and their expectations of the system
  - The interviewer does not have a well-defined agenda and is not concerned with any specific aspects of the system.

Focus Group

- Focus Groups are a technique for collecting data from a range of users
- A moderator is required to lead the group, but the session should be as fluid as possible whilst staying on topic.
- All participants should contribute and care should be taken to cover a broad range of topics and not allow one person to dominate
- Typically 3-10 participants, though 6-9 is the recommended size of focus groups.
- One or more moderators
- The data collected may be difficult to organise, but audio recording should help.
- Good relationship needs to be fostered between the moderator and the group to help discussion.

Questionnaires

- Need very careful design and piloting
- Closed questions / rating scale - easy to analyse
- Open-ended questions - harder to analyse & richer information
- Take care to ensure that questions are not 'leading'. Leading questions have built in assumptions.
- Sensitive questions. These questions should best be asked as a set of ranged multi choice answers, so that the exact answer does not have to be revealed.
- Questionnaires can be given out filled out by the users independently of the presence of the expert. This may make it cheap and easy to gain large amounts of information
- Questionnaires require testing before release and statistical verification and analysis, and therefore can be unwieldy.
- Standardized questionnaires

PACT Analysis

- **People**: relevant user characteristics and skills
- **Activities**: how is the activity currently carried out? Why? What can be improved?
- **Context**: the environment of the activity
- **Technologies**: what tools are used now, and how might new developments be used?
- Analyze information about the existing system and/or procedures

Storyboards

- Series of scenes/frames from the user experience point of view
- Usually based on scenarios
- Can be used in requirement collection and with mock-ups
- Can be time consuming
- Storyboards may not accurately reflect actual process to be implemented
- Should be refined during the design process
- Need list of requirements

Cultural probes, personas, scenarios already covered in another lesson