PACT Analysis

Good design

- Takes into account:
  - Who the users are – People
  - What activities are being carried out - Activities
  - Where the interaction is taking place - Context
  - What technologies are used - Technologies

- User-centric View of Design Problems: ***PACT Analysis***

PACT Analysis

- ‘User-centric’ framework for thinking about a design problem
- Take each category –---People-Activities- Context and Technology --- and work through it
- People first, human-centered
- Use the analysis to help focus/orient early design thinking
- Important: revisit the analysis
  - As you get deeper into the problem the analysis should change and/or get richer

People: Who are the users/stakeholders?

- Those who interact directly with the product
  - those who manage direct users
  - those who receive output from the product
  - those who make the purchasing decision
  - those who use competitor's products

- Three categories of user (Eason, 1987):
  - primary: frequent hands-on
  - secondary: occasional or via someone else
  - tertiary: affected by its introduction, or will influence its purchase

People: variability

- Consider range of characteristics of people
- Physiologically
  - Age differences, physical abilities
- Psychologically
  - Attention, perception, memory
  - Forming the right ‘mental model’
- Socially and Culturally

People: What are the users' capabilities?

Humans vary in many dimensions:

— size of hands may affect the size and positioning of input buttons

— motor abilities may affect the suitability of certain input and output devices

— height if designing a physical kiosk

— strength - a child's toy requires little strength to operate, but greater strength to change batteries

— different abilities (e.g. sight, hearing, dexterity)

Activities

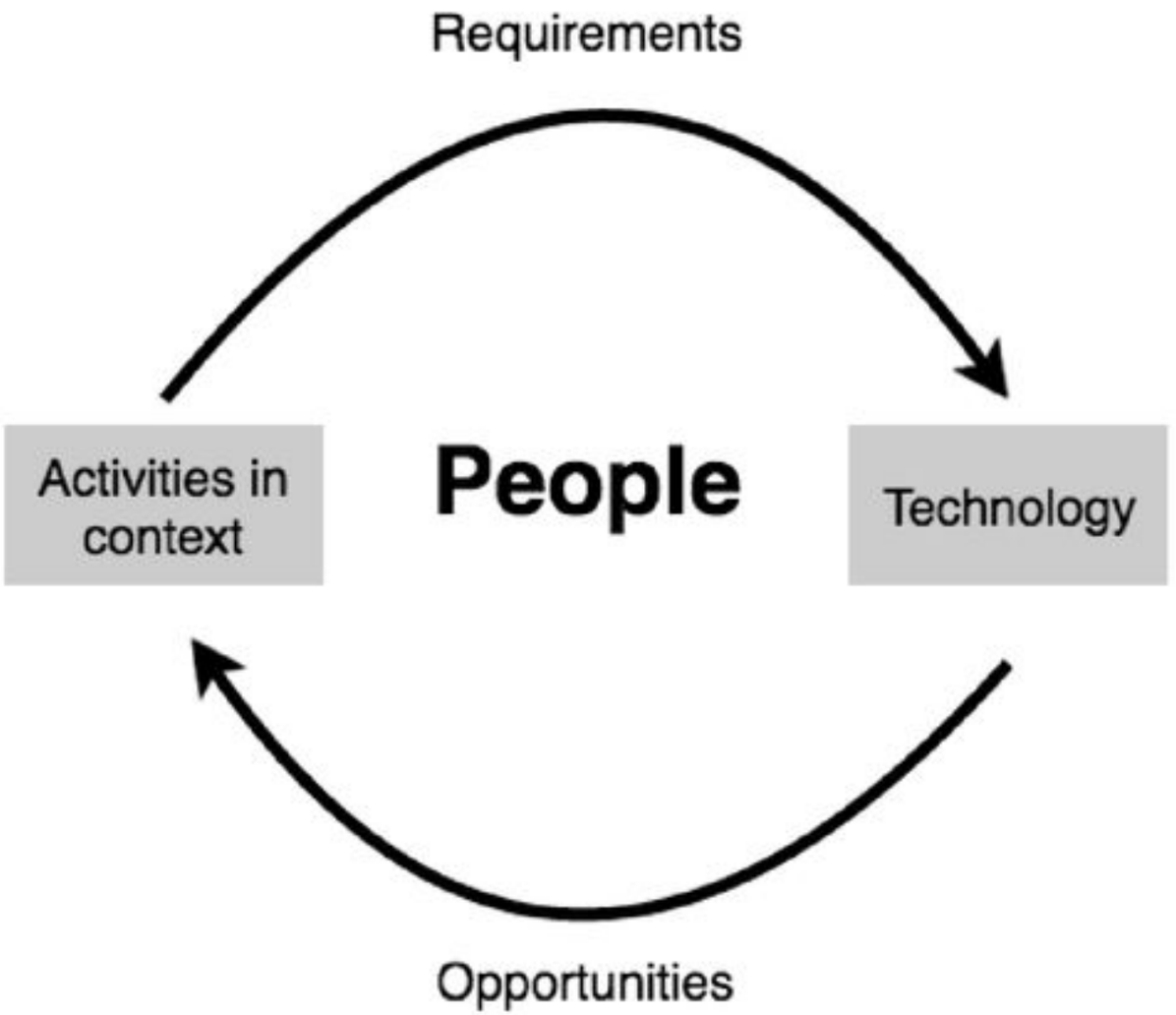
- What is the overall purpose of the activity?
  - What has to be satisfied
  - Hedonic vs. Pragmatic
- Temporal aspect
  - Regular or infrequent
  - Time pressure
  - Continuous or interruptions
  - Processing time
- Cooperation
  - One or more actors
- Complexity
  - Well defined or vague?
- Safety critical
  - Impact of error (how much?)
- The nature of the content
  - Type of data to be processed
  - Type of media

Context

- Where does the interaction occur?
  - Physical context
    - Noise, light, time
    - In the office, on the move
  - Social context
    - Individual activity, group activity
    - Computer-mediated social activity
    - Social norms
  - Psychological context
    - Motivation, attitudes
    - Cognitive demands
    - Level of arousal

Technology

- Input
  - Getting data in; getting commands; security
- Output
  - video vs. photographs; speech vs. screen
- Communication
  - Between people, between devices, speed
- Content
  - What data in the system: a web site is all about content


Requirements
Activities in context
People
Technology
Opportunities

References

- Benyon, D., Turner, P. & Turner, S. (2005). Designing Interactive Systems: People, Activities, Contexts, Technologies. Essex, England: Pearson Education Limited.