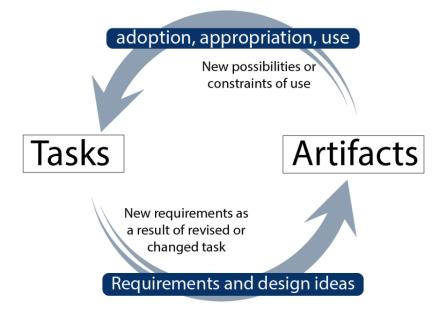




Chapter 1:

Task-Artifact Cycle and User Needs

Task-Artifact Cycle



In technology development, the task-artifact cycle is the background pattern: task outcomes and human experiences implicitly define the agenda for new technological artifacts, which modify subsequent task outcomes and experiences.

- Foundation of the Task-Artifact Cycle: **Humans have needs and preferences**
- Technologies are created to suit these needs
- Humans then use the technologies
- With the use, needs and preferences might change



"Human activities implicitly articulate needs, preferences and design vision. Artifacts are designed in response, but inevitably do more than merely respond. Through the course of their adoption and appropriation, new designs provide new possibilities for action and interaction. Ultimately, this activity articulates further human needs, preferences, and design vision" (Caroli 2013)





User Needs

In the task-artifact cycle it is essential to focus on user needs – however user needs are often very abstract and hence the guidance for a concrete implementation is often limited.

Maslow's Hierarchy of Human Needs

Self-actualization	Morality, creativity, spontaneity, problem solving, lack of prejudice, acceptance of facts
Esteem	Self-esteem, confidence, achievement, respect of others, respect by others
Love / Belonging	Friendship, family, sexual intimacy
Safety	Security of body, of employment, of resources, of morality, of the family, of health, of property
Physiological	Breathing food, water, sleep, homeostasis, excretion