Freie Universität Berlin

User Modeling

«UCD: User-Centered Software Development»

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Homework 2-2: Interviews

Part 1

Work in your team (10 min)

- Review the results of your interview study
- Prepare are short presentation (without slides, 3 minutes) that
  - describes the main setting and
  - shows the main insights

Homework 2-2: Interviews

Part 2

Present your results 3 minutes per team

User Modeling

Introduction

Context for today

Last week

User-Research: Understand the user's

- mental model
- terminology
- needs
- goals
- tasks
- context
- capabilities

This week

User Groups

Personas

Scenario

Task Analysis

How to analyze your data?

Outline

1. User Groups and Personas
2. Scenarios
3. Task Analysis

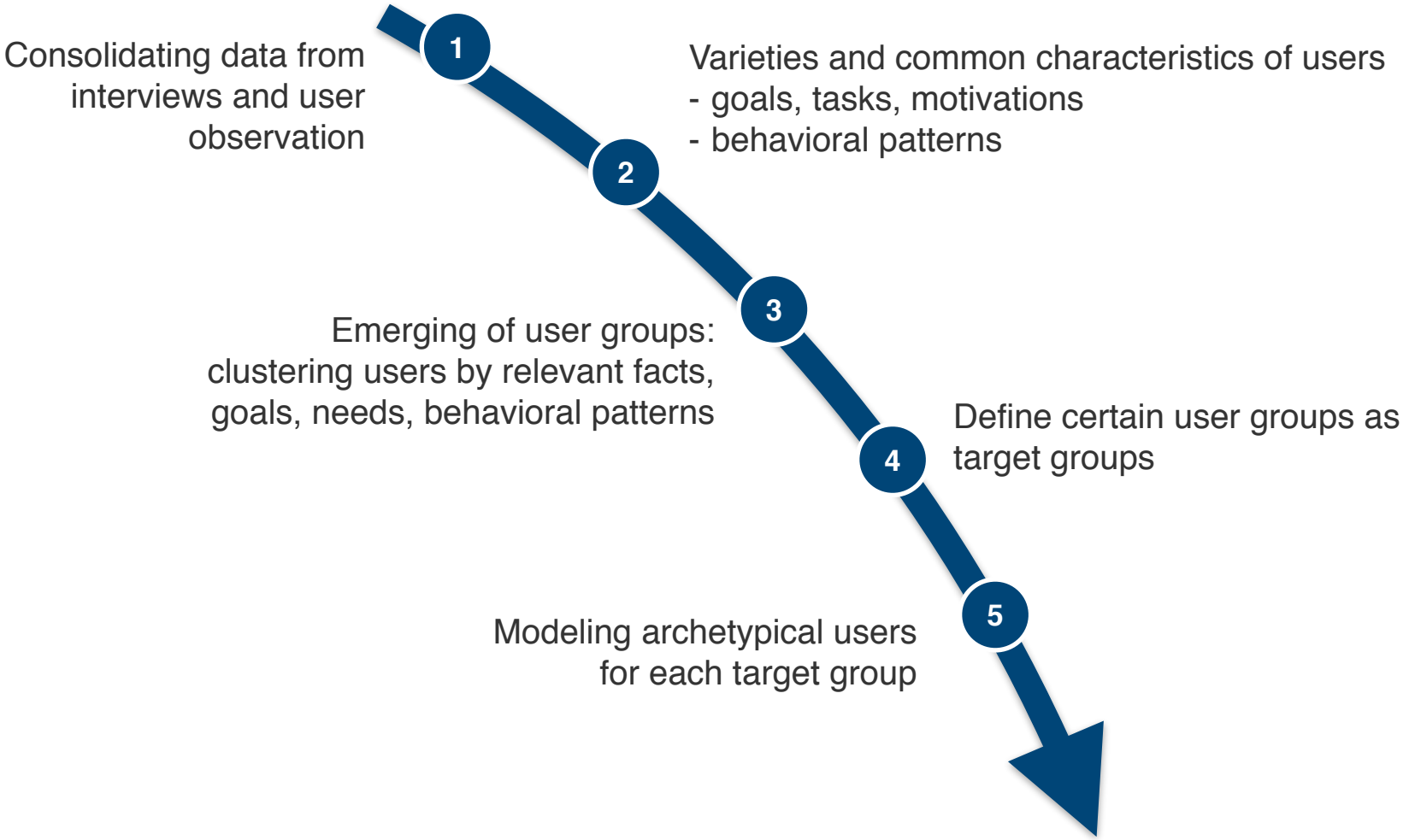
Learning goals for today

- Know how what to do with data from user research
- Know how to find out target user group
- Understand the usage and the value of personas
- Know how to do a task analysis
- Know how to come from task analysis to a navigation model
- Know the navigation models and systems

User Modeling

User Groups & Personas

Data analysis



Affinity diagram

http://hollybrosnahan.com/wp-content/uploads/2012/09/P1010123.jpg

„Ich kenne keinen sicheren Weg zum Erfolg, aber einen sicheren Weg zum Misserfolg: Es allen Recht machen zu wollen.“ Platon

User groups

Usability is not a per se product attribute, it is linked to a user group.

- Concentrate on few (up to 3) user groups
- Which one is mainly a business decision
- For each user group create 3 profiles
  1. *User profile - >WHO*
     - age, gender, education, health, language, computer expertise, domain expertise, expectancies
  2. *Task profile -> WHAT*
     - which tasks
  3. *Environment profile -> WHERE*
     - ordinarily resident, workspace, light, hardware, software

Example: user groups FU website

- Prospective students (age: 17 – 19)
- Current students (age: 18 – 26)
- Students in their second degree (age: 32 – 40)
- Parents of prospective students (age: 45 – 50)
- Retirees (age: 65 – 70)

Hands-On: User Profiles

Part 1

Single person working (10 min)

Based on the insights you gathered during the interviews think of possible user groups.

Use varieties and common characteristics of users to make this distinction.

Hands-On: User Profiles

Part 2

Work in your team (20 min)

Discuss the defined user groups and decide which are most important for you. Focus on one (document your decision and your sequence of importance!)

Create a

1. user profile
2. environmental profile
3. task profile

for one user group of your project.

» use the given tables in the handout

» keep the user profiles on file

After user research ...

You elicited the user data

- you learned to know the users
- you experienced their characters and personalities
- you witnessed or got a deep understanding of their daily work context

→ you have a vivid picture of their mental models

→ you can empathize with the users and therefore can easier judge design decisions corresponding to the users personality and needs.

... but other team members and stakeholder do not!

Challenges

Data from user research are abstract, „faceless“ information:

- hard to grasp
- do not make us feel empathy
- difficult to remember

User research data must be processed to

- give them a face
- be easily accessible during the whole design process
- create mental pictures and emotions
- be tangible for the whole design team
- base for user-oriented design decisions

Focus on probabilities, not possibilities!

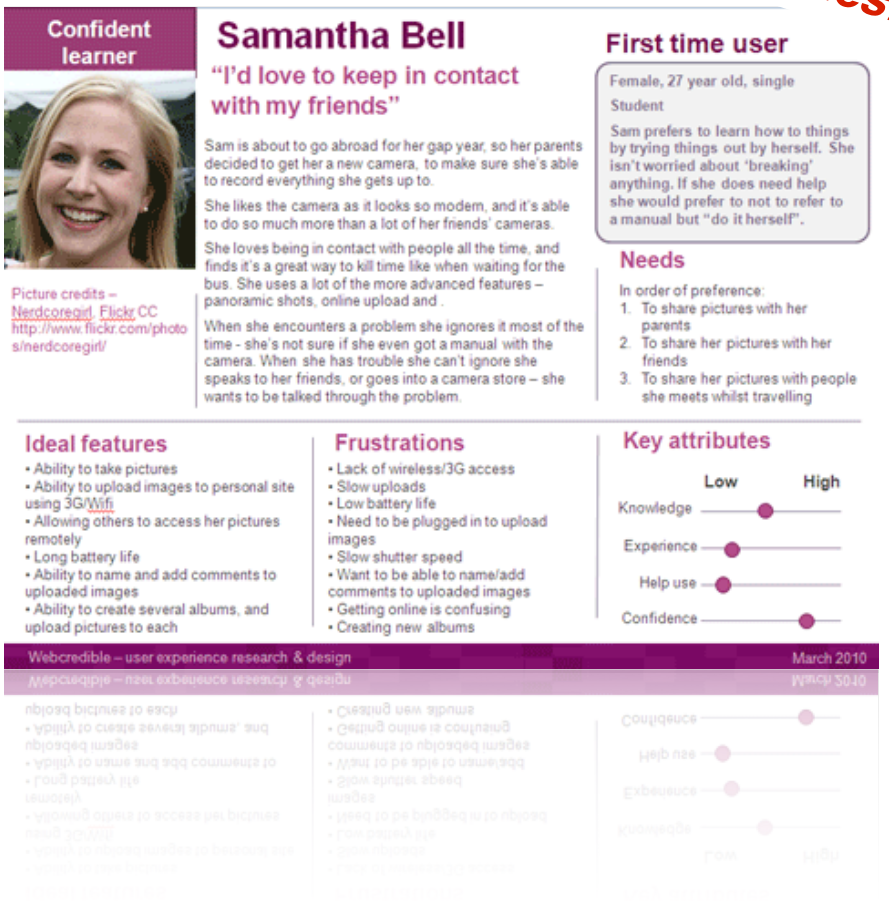
Persona

Persona

WHO
is doing what with the product?

A persona is

- a descriptive model of a user
- based on behaviors and motivations of real users
- a fictional person representing a concrete user



Why Personas?

Psychological Aspect: real characters,

- concrete and specific: *„Brian needs…“ or „Daniela doesn‘t like…“*

Facilitate design decisions focused on user (not mental model or wishes of developer / stakeholders /designer)

- no elastic user, no self-referential design

Common language: facilitates stakeholder / team communication

- „Brian“ ist well known, as well as his character, aptitudes, and goals

Implicit requirements management

- determine and prioritize functional, behavioral, and visual product aspects

Personas during SW-Lifecycle

Analysis

Develop hypothetical personas based on existing quantitative or qualitative data, i.e. demographic data, market research

Development

User-focused decisions in all aspects of product development

Test

Testing and judgement from the personas‘ point of view

Operation

Target-actual comparison of assumed personas and real user groups

In the case of differences

- optimize product for actual user groups
- reframing to attract intended users

Personas, Task Analysis and structural requirements

Scenarios

Scenarios

Scenarios

WHAT
do users
with the product?

Overall functional
requirements

„Stories“ telling things the users typically do with the product

- „Typical“ / frequent product usage
  - during make-up: check emails, call sender via contact information in address book, use loudspeaker
- environment, influencing factors (e.g., with mobile phone, in bathroom)
- user motivation, e.g., need not to switch on computer, save time

Based on data from user research

„Real-time behavior“ of persona: designers go through story in role of persona

Functional specification from users‘ perspective

Scenario Example

Each workday when Susan wakes up in the morning, after she turns off her alarm, she takes her mobile phone to view her appointments of the day. After ensuring she is not late for any appointment she gets out of bed and goes into her kitchen for her first coffee of the day.

Due to time reasons she does not boot up her laptop at home. Instead she checks her emails on her mobile while drinking her coffee. If there are some very important emails of colleagues she immediately replies.

After emptying her cup she goes into the bathroom, puts on clothes, and walks her dog for the morning round. During her walk she calls some customers who wrote her an email via direct dialing. Often during her calls she makes new appointments and has to schedule them in her calendar.

After arriving at work she turns on her computer and looks at the tasks she scheduled for today. [...]

Scenario reflects overall functional requirements

- Can the user view all appointments of the day?
- Can the user quickly grasp which emails are new?
- Can the user directly respond to emails?
- Can the user directly call an email‘s sender?
- Can the user enter appointments while holding a call?
- What are adequate time-spans to show in the calendar?
- Can the user adjust the speakers volume (when she is outside)?
- Needs the user different views for horizontal and vertical rotation?

From user research to design

Persona

WHO
is doing what
with the
product?

Scenarios

WHAT
do users
with the
product?

Tasks

HOW
users solve
specific
problems

Personas, Task Analysis and Information Architecture

Task Analysis

Tasks

Tasks

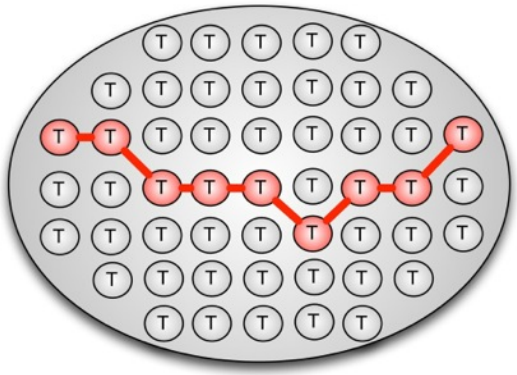
HOW
users solve specific problems

Steps the user takes to accomplish a concrete task

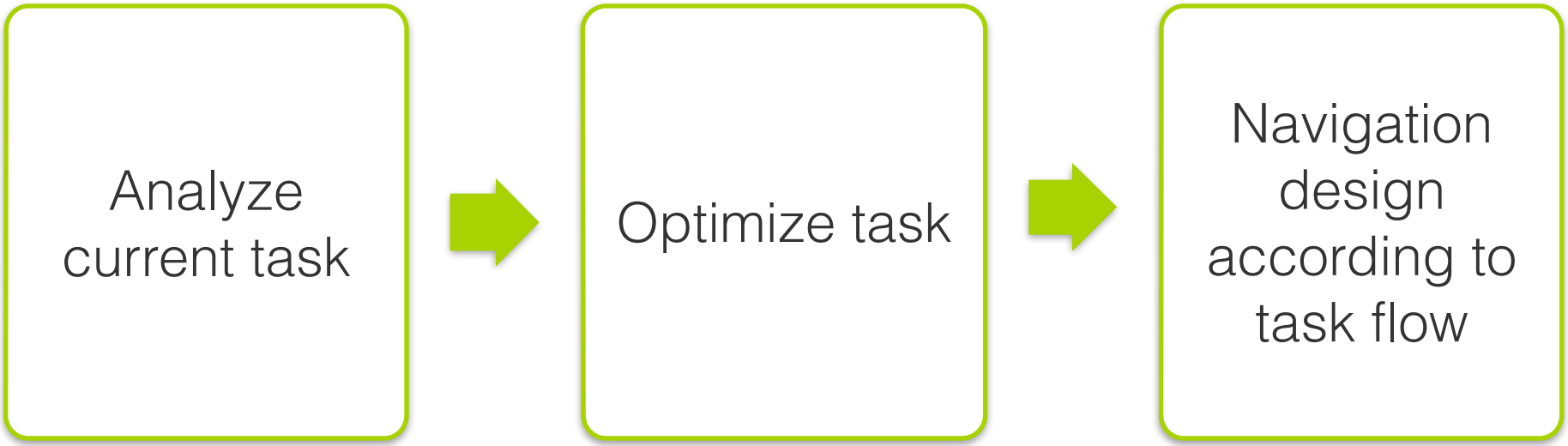
- edit customer data
- search for customer‘s last name
- view customer details
- enter results of last call into notes field
- set notification date for next call and enter note

Whole set of provided functionality by the product that are extracted from scenarios (functionality of things the users actually do)

Task set: subset of provided functionality involved in a typical product usage



Why Task Analysis?



Representation of task flows

Outline

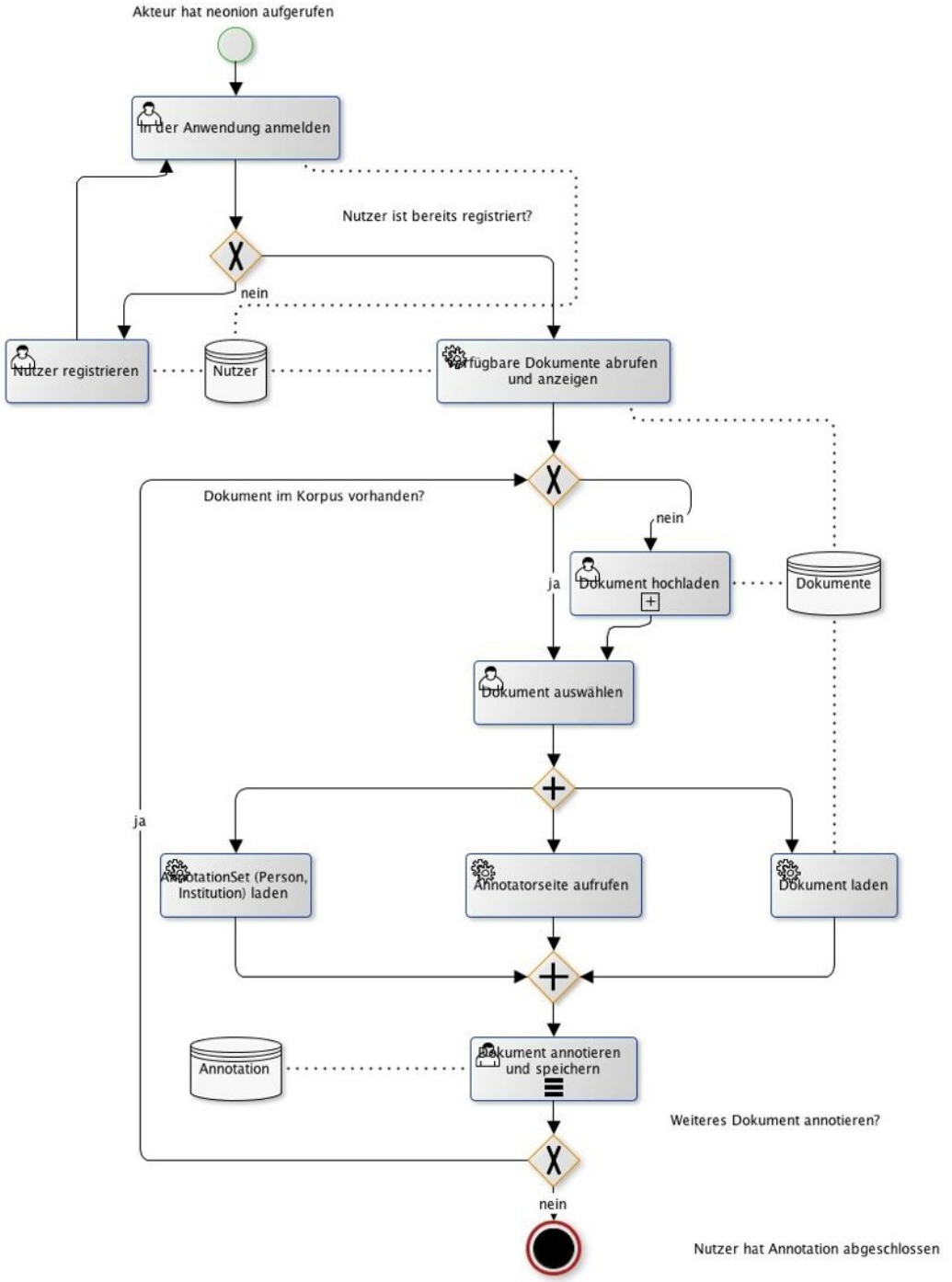
- Easy to write and to unterstand
- Linear sequence of steps
- Loops and branches are harder to visualize

Flow chart

- Easy to visualize loops and branches
- Complexity of task visually graspable
- Costlier to create

Examples: Task Flow Representation

BPMN Notation



Hands-On: Write Task Flow

Part 1

Work in your team (5 min)

- Discuss central tasks of your application
- Determine one of the central tasks of your envisioned application

Hands-On: Write Task Flow

Part 2

Single person working (15 min)

- Carry out a task analysis for your user group
- Outline task flow

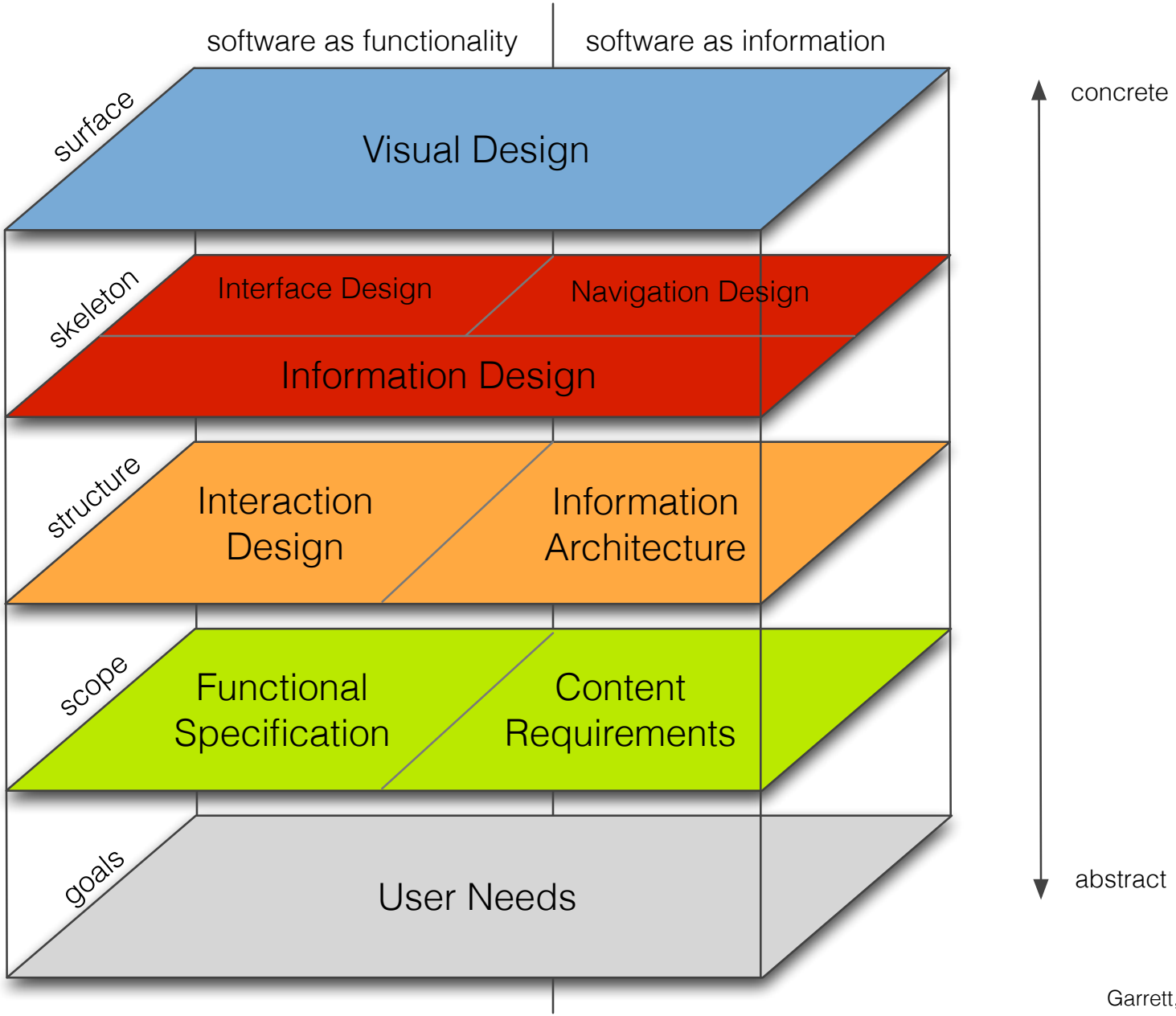
Hands-On: Write Task Flow

Part 3

Work in your team (10 min)

- Explain and discuss your task flow with each other
- Give feedback
- Design a commonly agreed task flow

How to use all this information
for concrete application design?



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Questions

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- Garrett, J. J. (2010). Elements of User Experience,The. Pearson Education.