Goal-Directed Design 3
# Requirements Definition

USER EXPERIENCE

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Requirements Definition

- Connection between the user model and the design's framework

- Use of scenario-based design methods

- Scenarios should match goals and needs of specific user personas, not user tasks

- Analysis of persona data and functional needs:

  - Objects

  - Actions

  - Contexts

- Iterative context scenario:

  - "A day in the life" of the persona using the product

  - First high-level touch points, then successive iterations deepening the detail level

Design Requirements

- What a website is and what it should do

- What information and capabilities do our personas require to accomplish their goals

- Needs to be defined before deciding how the website will behave

1	2	3
Explore and Brainstorm	Construct Context Scenarios	Identify Design Requirements

Ideation

Context Scenarios
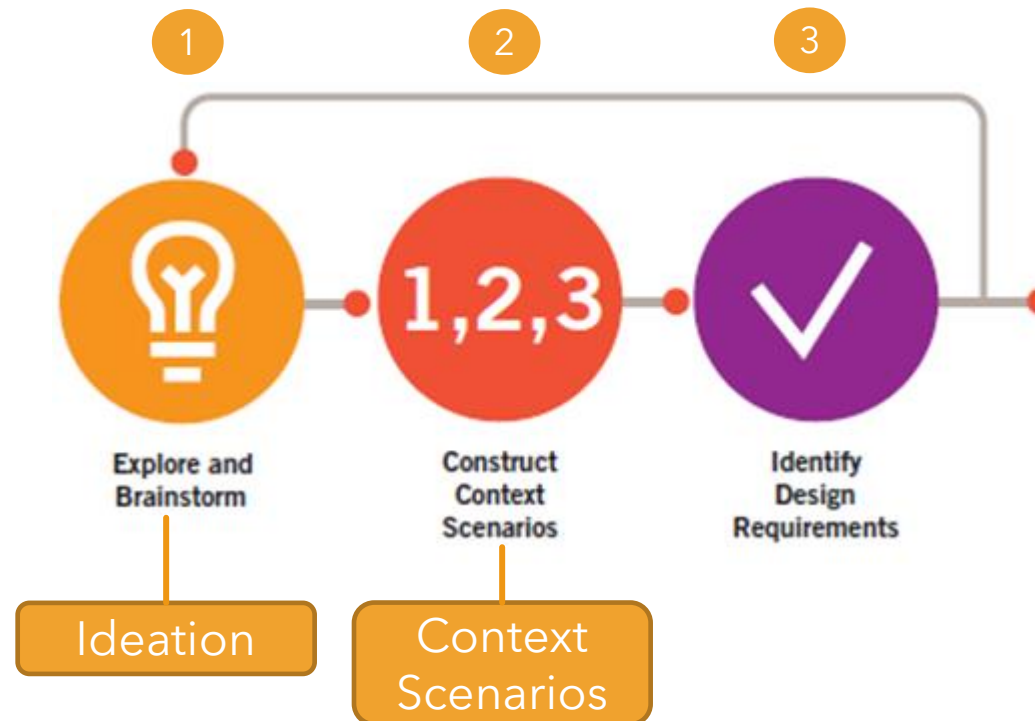
1. Explore and brainstorm: Ideation

- Widening of potential ideas for website design beyond preconceptions and existing versions

- Exploration of several solutions to avoid the local maximum problem

- The process is informed by personas and must focus on pain points

- Ideation techniques:

  - **Brainstorming**

    - It should be time-limited and moderated

    - Rules (as defined by creator Alex Osbourne):

      - Produce as many ideas as possible

      - Non-conventional ideas are welcome

      - Build new ideas on top of existing ideas

      - Criticism is forbidden

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- Ideation techniques (cont.):

  - **Negative brainstorming**. Four steps:

    - Positive problem formulation: "We need a good website to provide this service"

    - Negative problem formulation: "Design the worst website to provide this service"

    - Generation of negative ideas: "To make it really bad, we should implement a, b, and c"

    - Generation of positive ideas by reversing the negative ones

  - **Design charrette**

    - Each team member sketches his/her design ideas

    - Critique each idea as a group

    - Identify the concepts to keep

    - Time-limited (around 2 hours)

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2. Construct context scenarios

- Interaction design is the design of behaviour that occurs over time

- Similar to film storyboards, interaction design narratives are based on:

  - Plot. A story must be told

  - Brevity. Detail wastes resources

- Scenarios must describe broad clusters of interactions intended to meet user goals

- Scenarios must not describe task-level interactions

- Initial stages: focus only on **plot points**

> Scenarios are paradoxically concrete but rough, tangible but flexible … they implicitly encourage "what-if?" thinking among all parties. They permit the articulation of design possibilities without undermining innovation … Scenarios compel attention to the use that will be made of the design product. They can describe situations at many levels of detail, for many different purposes, helping to coordinate various aspects of the design project
>
> (John M. Carroll, *Making Use*, 2001)

2. Construct context scenarios (cont.)

- **Persona-based scenarios** are concise narrative descriptions of one or more personas using a website to achieve specific goals

- Based on information gathered in the Research phase and analysed in the Modelling phase

- They capture:
  - The nonverbal dialog between user and website over time
  - The structure and behaviour of interactive functions

- They allow us to start our designs from a role-play-like story describing an ideal experience from the persona's perspective

- The focus is on people and how they think and behave

- The focus is not on technology or business goals

- Building scenarios is an iterative process

- Types of Persona-Based Scenarios:
  - **Context scenario**
    - High-level exploration of how the website can serve the personas' needs
    - Written from the persona's perspective (human activities, perceptions and desires)
    - Goal: to design the ideal user experience
  - **Key path scenario**. Created after the design framework is in place
    - Description of specific user interactions with the website
    - Introduction of the design's vocabulary
    - Goal: finding out how a persona uses the website to achieve its goals
    - Refined iteratively
  - **Validation scenarios**
    - Design testing in a variety of what-if situations
    - Not detailed

2. Construct context scenarios (cont.)

- Context scenarios are the most storylike

- They bring focus to the results of the ideation phase, thus helping avoid further rework

- They must establish the primary touch points that each primary and secondary persona has with the system over the course of a day or other meaningful unit of time

- Focus is on persona's goals: They should not represent website behaviours

- More than one context scenario may be necessary:
    - Multiple primary personas
    - One primary persona with multiple contexts of use

- They are represented in textual form

- Tip for the early stages of design: pretend that the interface is magic!

This is where design begins

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2. Construct context scenarios (cont.)

- Questions addressed by context scenarios:
  - In what setting(s) will the product be used?
  - Will it be used for extended amounts of time?
  - Is the persona frequently interrupted?
  - Do several people use a single workstation or device?
  - With what other products will it be used?
  - What primary activities does the persona need to perform to meet its goals?
  - What is the expected end result of using the product?
  - How much complexity is permissible, based on persona skill and frequency of use?

2. Construct context scenarios (cont.)

- Describe interactions, not interfaces

3. Identify design requirements

- The persona's needs or design requirements must be identified as consisting of objects, actions and contexts (e.g., call *–action–* a person *–object–* directly from an appointment *–context*)
- Thus needs can be extracted into these three categories:
  - **Data requirements**. The objects and information that must be represented in the website
    - Objects (e.g., accounts, people, addresses, documents, messages, songs, images)
    - Objects' attributes (e.g., status, dates, size, creator, subject)
    - They should fit the personas' mental models
  - **Functional requirements**. Actions and operations to perform on the website's objects
    - Usually translated into interface controls (including where to display them)
  - **Contextual requirements**. Relationships between sets of objects in the website
    - Objects that should be displayed together to aid workflow
    - Physical environment where the website will be used (e.g., an office, a mobile phone)
    - Skills and capabilities of the personas using the product

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- Reality check: the interface is not magic ☹
- Further requirements to take into account:

  - **Business requirements**. Budget and resource constraints, regulations and legal considerations, development timelines, stakeholder priorities, pricing structures, business models

  - **Brand and experience requirements**. How the company wants users and customers to associate with the website

  - **Technical requirements**. Software platform, weight, size, display

  - **Customer and partner requirements**. Support cost, licensing agreement, installability, ease of configuration, maintainability

Sources

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