

DESIGN OF INTERACTIVE SYSTEMS +TER

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WELCOME

DESIGN OF INTERACTIVE SYSTEMS + TER

Lectures

Tuesday 13:30 - 17:00

Room D101

TER

Friday 13:30 - 17:00

Room E212

LECTURES 2

OVERVIEW

Category	Activity	Duration (min)
Homework	Story Interviews	5
Recap	Design Brief	5
Lecture	Representing User data and Users	5
Exercise	Personas & Extreme Characters	10
Homework	Personas & Extreme Characters	5
Lecture	Capturing Stories	10
Exercise	User Profile	15
— BREAK —		20
Exercise	Object Table	15
Lecture	Current Scenario	5
Exercise	Current Scenario	50

HOMEWORK REVIEW_

The form of the question directs
the form of the response

For specific, detailed answers,
always start with a recent, specific question
never start with a general question

Avoid yes/no questions or short answers

Probe for details

What happened next?

Get them to tell you a story

REMEMBER

RED FLAGS!!!

If you hear these ...

Usually ...

Sometimes ...

Normally ...

When I do this, ...

Save your interview!

Ask more questions

probe for a specific story,

NOT how they usually do things

STORY INTERVIEWS

HOMEWORK STORY INTERVIEW

Each student is responsible for (at least) **two story interviews**

Each interview:

Ask for at least one detailed, specific story
about a recent situation where they faced a problem

Probe for more information

Do not stop with a single, simple action
Capture the context

Watch out for **red flags!**

Avoid tutorial or opinion interviews

Report:

- Transcribe these interviews
- Upload the two transcripts to your personal space until Friday

DESIGN

PROJECT_

COURSE PROJECT

Create an original design to support Interactive Navigation

Rethink Navigation

- Discover problems faced by real users
- Identify breakdowns, work arounds, user innovations and surprises
- Design a new interactive tool
- Illustrate with realistic story in a real context

...then redesign based on feedback

Examples of Navigation

- Public Transport
- Museum visit
- Tourism/ City exploration

Limitation:

- without a smartphone!
- without a laptop!

CONSIDER INTERACTION BEYOND THE DESKTOP__

Augment the person



Augment the object



Augment the environment



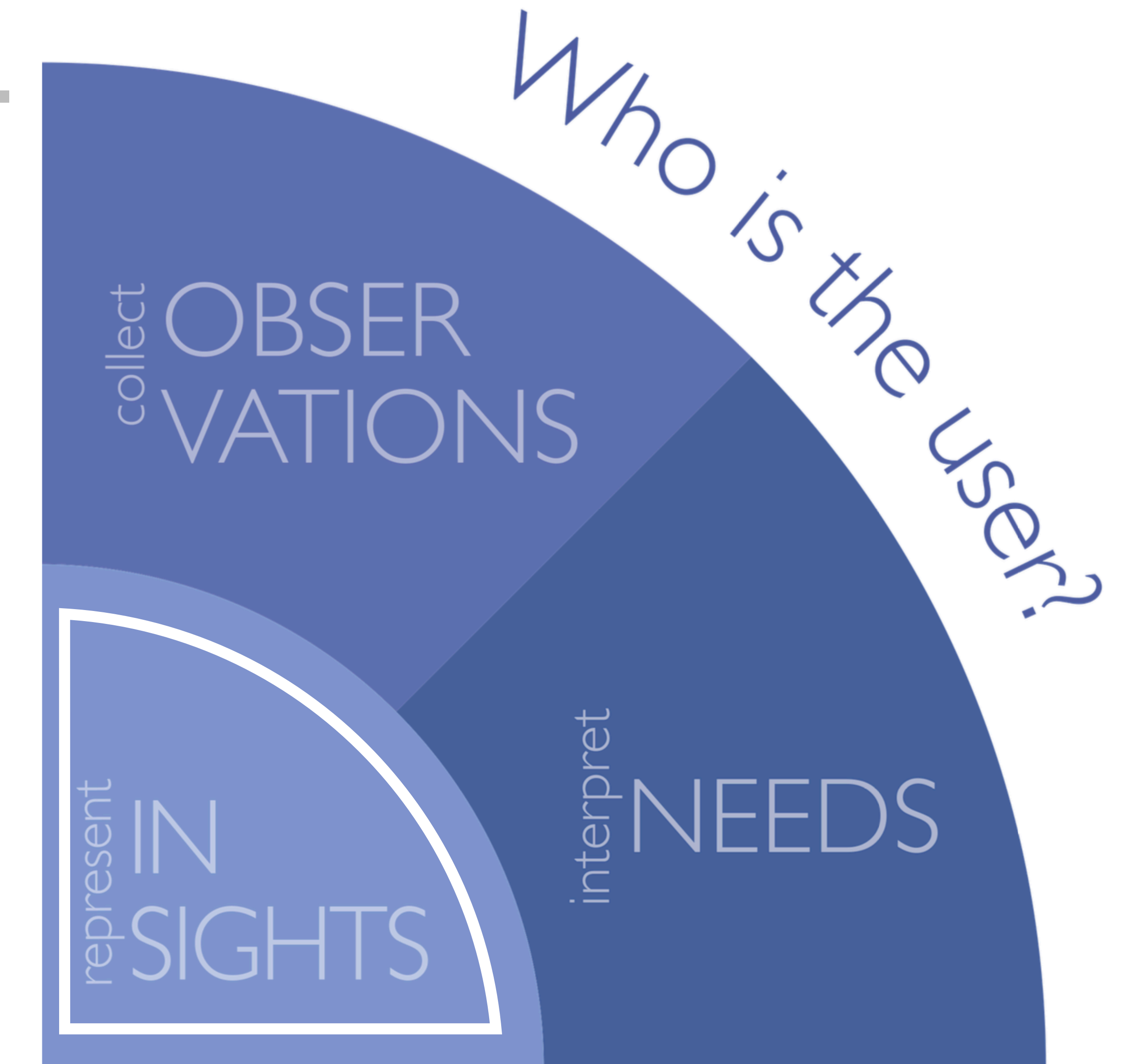
Use course design methods to:

- discover user issues
- generate new ideas
- design mockups
- create a video prototype
- evaluate your design
- redesign for major improvement

PROJECT

DISCOVERY

REPRESENTING USERS



DISCOVERY

REPRESENTING USERS

Understanding
users

	System	Action	Story
Collect	Literature review Introspection Questionnaire	READ OBSERVE ASK	Novels, films Observation Story interviews
Represent	User requirements Interaction snippets Cultural probes	LIST SKETCH ENGAGE	Persona Journey map Interactive thread
Interpret	User profile Themed video Descriptive statistics	DESCRIBE SHOOT ANALYSE	Current scenario Current video Thematic analysis

PERSONAS

Imaginary person similar to a real user

Personal details:

Name, age, gender

Physical description

Occupation, relevant activities

Representative or Extreme user?

Personality: Design-relevant details only!

Likes, dislikes?

Capabilities, weaknesses?

Unusual characteristics?

Activities:

Typical, breakdowns, user innovations

EXERCISE PERSONAS

Create an imaginary person based on user characteristics from your interview

Later, you will explore how this person will
interact with a selected navigation technology
– or – your new design

Extreme relative to the design problem

Based on **personal** characteristics

Adult	➔	Child
Normal hands	➔	Arthritic hands
Takes vitamins	➔	Cancer patient
Exercises regularly	➔	Olympic athlete

EXTREME
CHARACTER

Extreme relative to the design problem

Based on **personal** characteristics

Adult	➔	Child
Normal hands	➔	Arthritic hands
Takes vitamins	➔	Cancer patient
Exercises regularly	➔	Olympic athlete

Based on **context** — extreme due to situation

Copy two pages	➔	Copy a book
Lots of time	➔	Tight deadline
Simple task	➔	Complex task

Consider what turns ordinary users
into extreme characters

EXTREME
CHARACTER

EXERCISE EXTREME CHARACTER —

Create an extreme person relevant to your design problem.

Outline what turns ordinary users
into extreme characters in your use case.



HOMework

PERSONA & EXTREME CHARACTER ____

Create two personas and one extreme character drawn from your interviews to incorporate in your current scenario

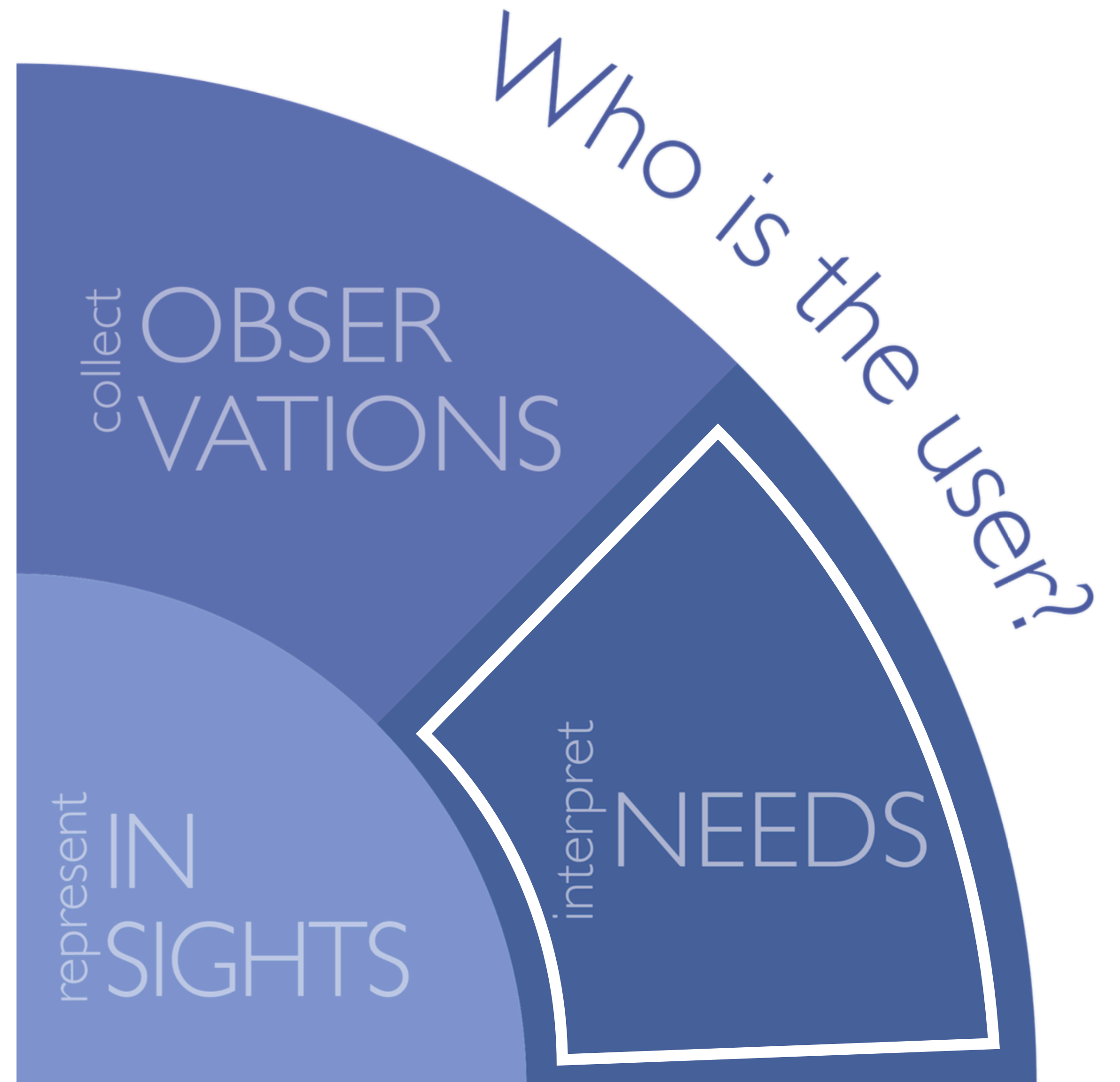
Ensure that each personas' characteristics are real, based on your data

Ensure that the extreme character has a characteristic that is extreme relative to your design problem

Choose a name, personal characteristics and a situation for each character

DISCOVERY

CAPTURING STORIES



DISCOVERY

CAPTURING STORIES

Understanding
users

System

Action

Story

Collect

Literature review
Introspection
Questionnaire

READ
OBSERVE
ASK

Novels, films
Observation
Story interviews

Represent

User requirements
Interaction snippets
Cultural probes

LIST
SKETCH
ENGAGE

Persona
Journey map
Interactive thread

Interpret

User profile
Themed video
Descriptive statistics

DESCRIBE
SHOOT
ANALYSE

Current scenario
Current video
Thematic analysis

USER PROFILE

Describes the characteristics and needs of the target user group, relative to a proposed design.

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Describes the characteristics and needs of the target user group, relative to a proposed design.

Top-down analysis of target users

Who is the audience for your system?

What did you learn from your user studies?

What are their key characteristics?

What surprised you?

What are the users' most important needs?

What are the key problems to solve?

What are the design opportunities?

EXERCISE

USER PROFILE —

Discuss then describe the most interesting user characteristics from your interviews

Describe the key user needs you need to address in your system



Identify user's key conceptual objects

What digital objects do users want to manipulate?

Example:

- Powerpoint or Keynote:
 - Presentations
 - Individual slides
 - Graphical objects
 - Text
 - Images

CONCEPTUAL
OBJECTS

What does the user care about?

Music apps include: songs, artists, playlists

Properties:

Songs include: duration, tempo
performer(s), style

Representations:

Songs appear as: name, album cover

Functions:

Songs can be: played, deleted, added

Interactions:

Songs can be: clicked, dragged

CONCEPTUAL
OBJECTS

OBJECT
TABLE

Example: Conceptual objects in a Web browser

Identify key objects:

Web pages and links

Identify properties:

What do they include?

Represent them:

How do they appear?

Choose functions:

What can users do with them?

Object table				
	Conceptual object	Property	Representation	Operation
1	Web page	HTML text	Content window	Scroll
		Link to pages		Add to favorites
		Images		Copy
		Videos		
2	Link	Page destination	Underlined text	Jump
				Copy
				Bookmark

EXERCISE

OBJECT TABLE —

List all “objects-of-interest” that have a meaning for the user

Include the object’s properties

the graphical representation in the interface

any functions that apply to the object

Do not include buttons and menus!

These are simply ways to access
objects of interest



Short one-act play

Goal: Highlight problems & opportunities
not to “sell” your idea

Draw from real, grounded observations,
interviews and introspection

Capture the details of how users
currently interact with the technology

CURRENT
SCENARIO

Procedure

Assemble a series of one-paragraph scenes
each describing an interaction snippet
into a single coherent story

Include:

Realistic setting(s):

date, time, place, context

Personas and extreme characters:

name, age, gender, motivation

profession, level of expertise

goals or motivation

**CURRENT
SCENARIO**

Procedure

Choose realistic users, specific day and setting

Include: normal & unusual situations

planned & unplanned activities

effective & problematic incidents

Tell the story, step-by-step:

- How does each user interact with the technology?
- Focus on breakdowns, work arounds and user innovations to highlight opportunities for design

**CURRENT
SCENARIO**

EXERCISE/ HOMEWORK CURRENT SCENARIO —

Create a realistic story of the user in context that reveals opportunities for design.

See assignment sheet!

