

# The Design of Interactive Things

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# Generative design

## Coherent iterative design process

Discovery

Who is the user?

Inspiration

What is possible?

Design

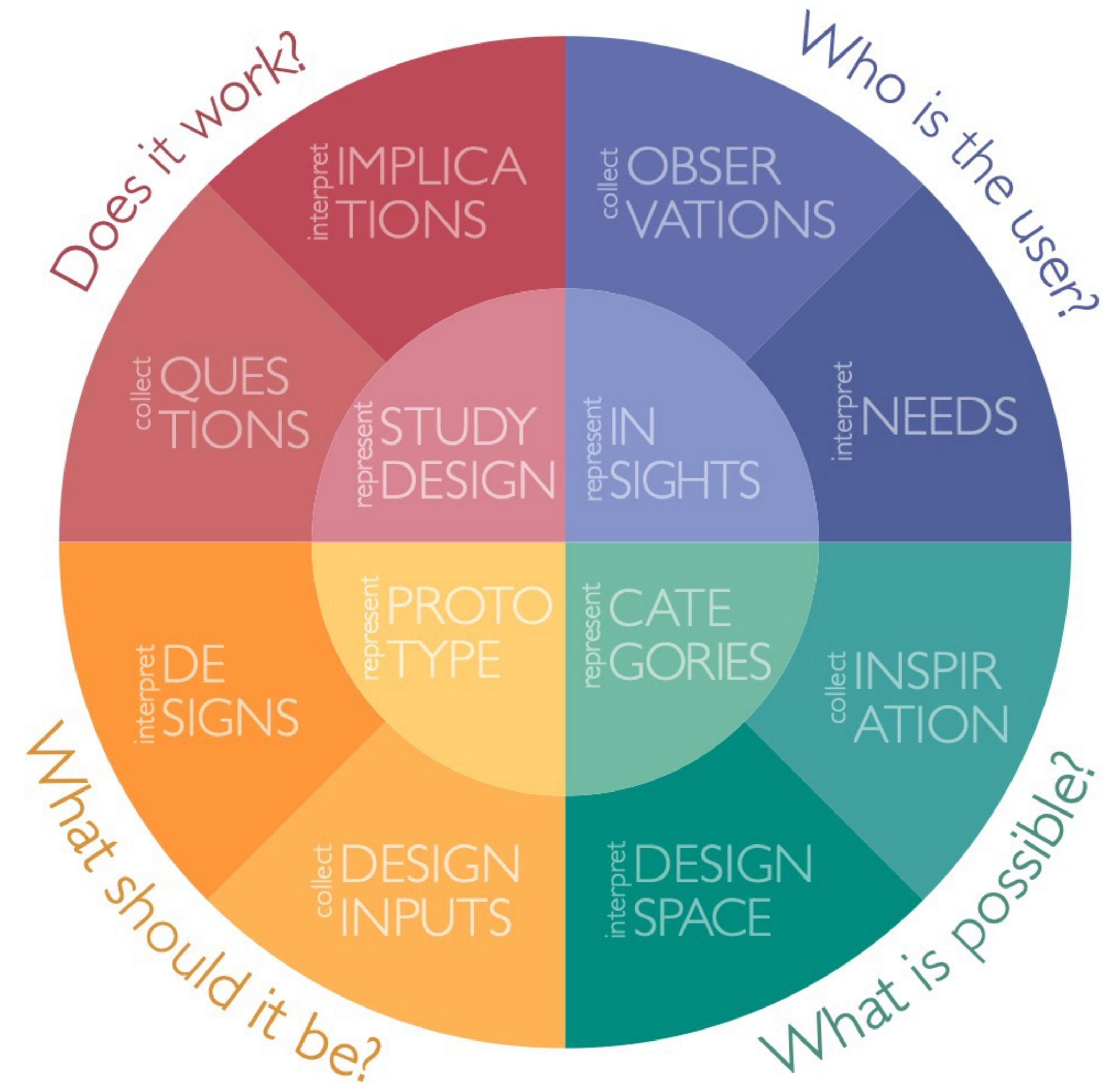
What should it be?

Evaluation

Does it work?

Redesign

Make it better!



# Generative design

## Methods may be:

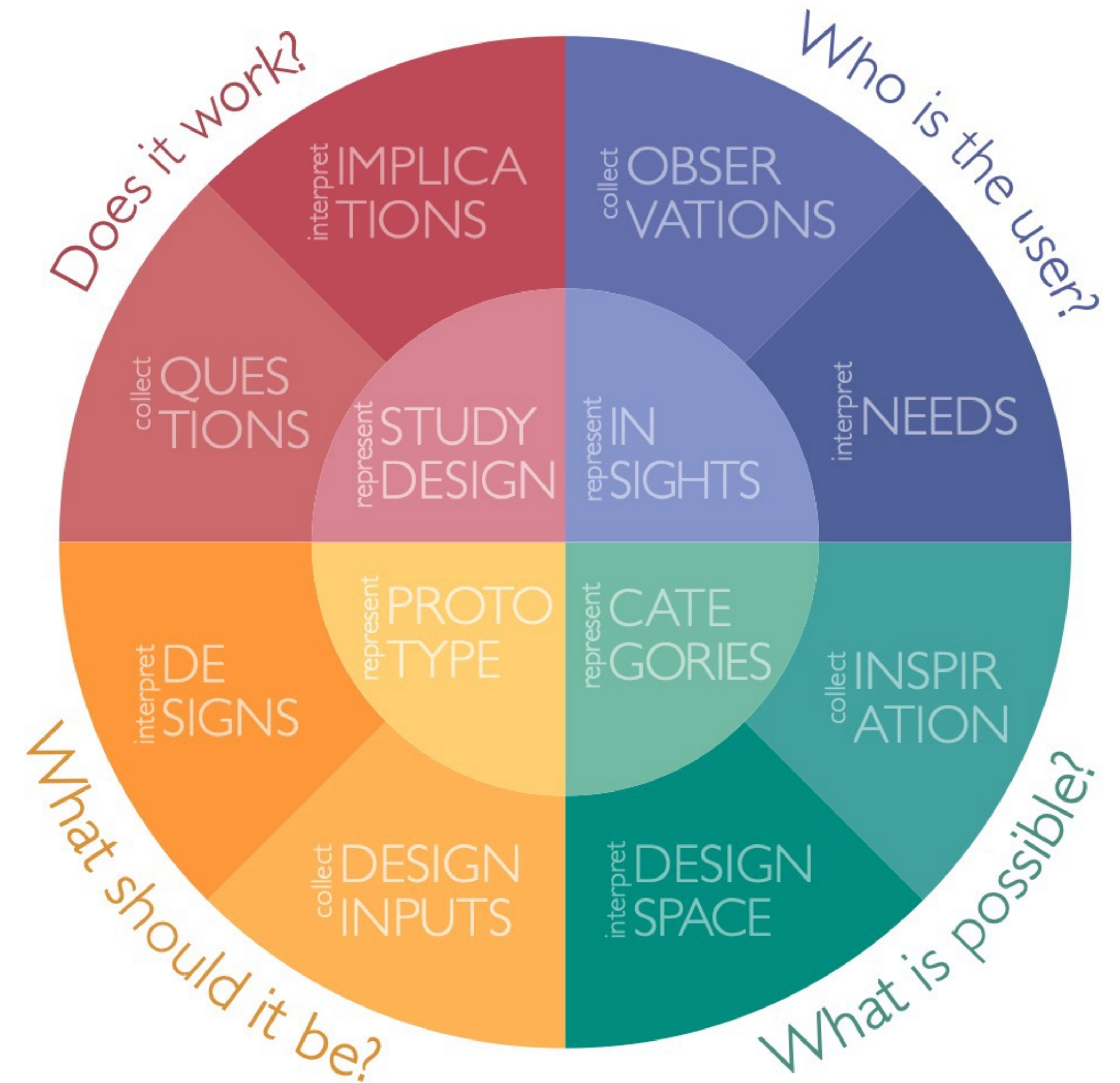
Divergent or convergent

Critical or generative

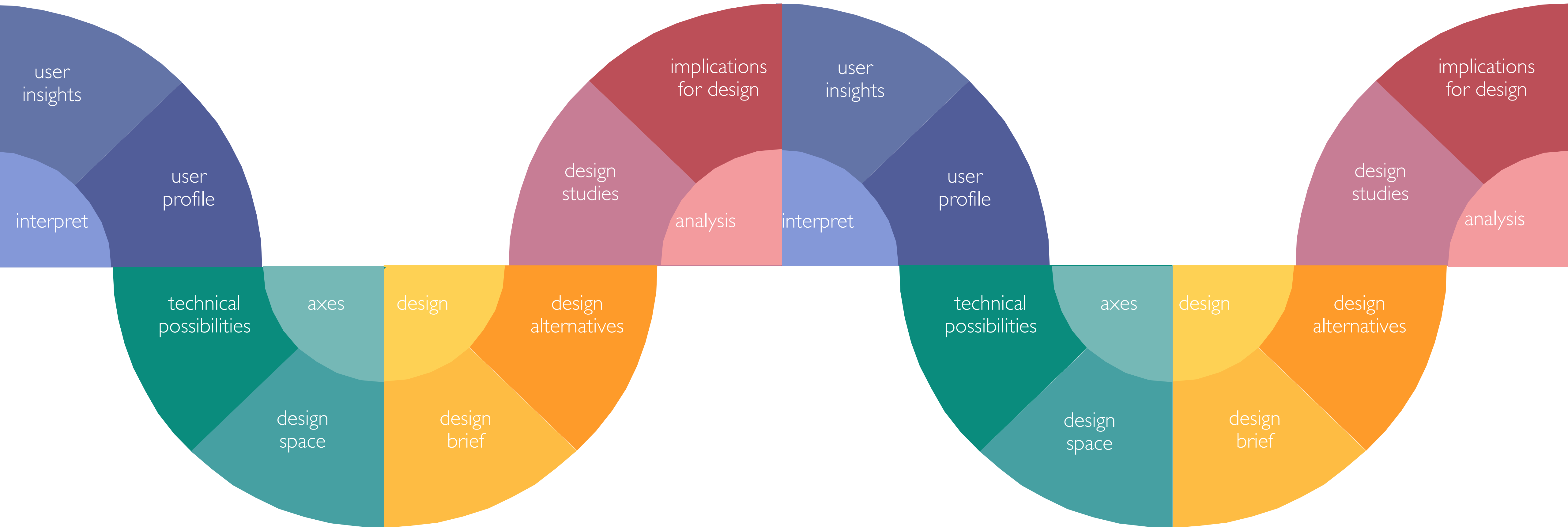
User focused or system focused

Story-based or system-based

General or specific



# All design is redesign



# Key Exercises

## Story interviews (two)

Capture detailed interaction stories

## Video prototype #1

Illustrate how users interact in a real context, including breakdowns

## Video prototype #2

Significantly improve the design based on feedback and analysis

## Final presentation

Present project (oral & poster)

## Expected due dates

04 November Tuesday (solo)

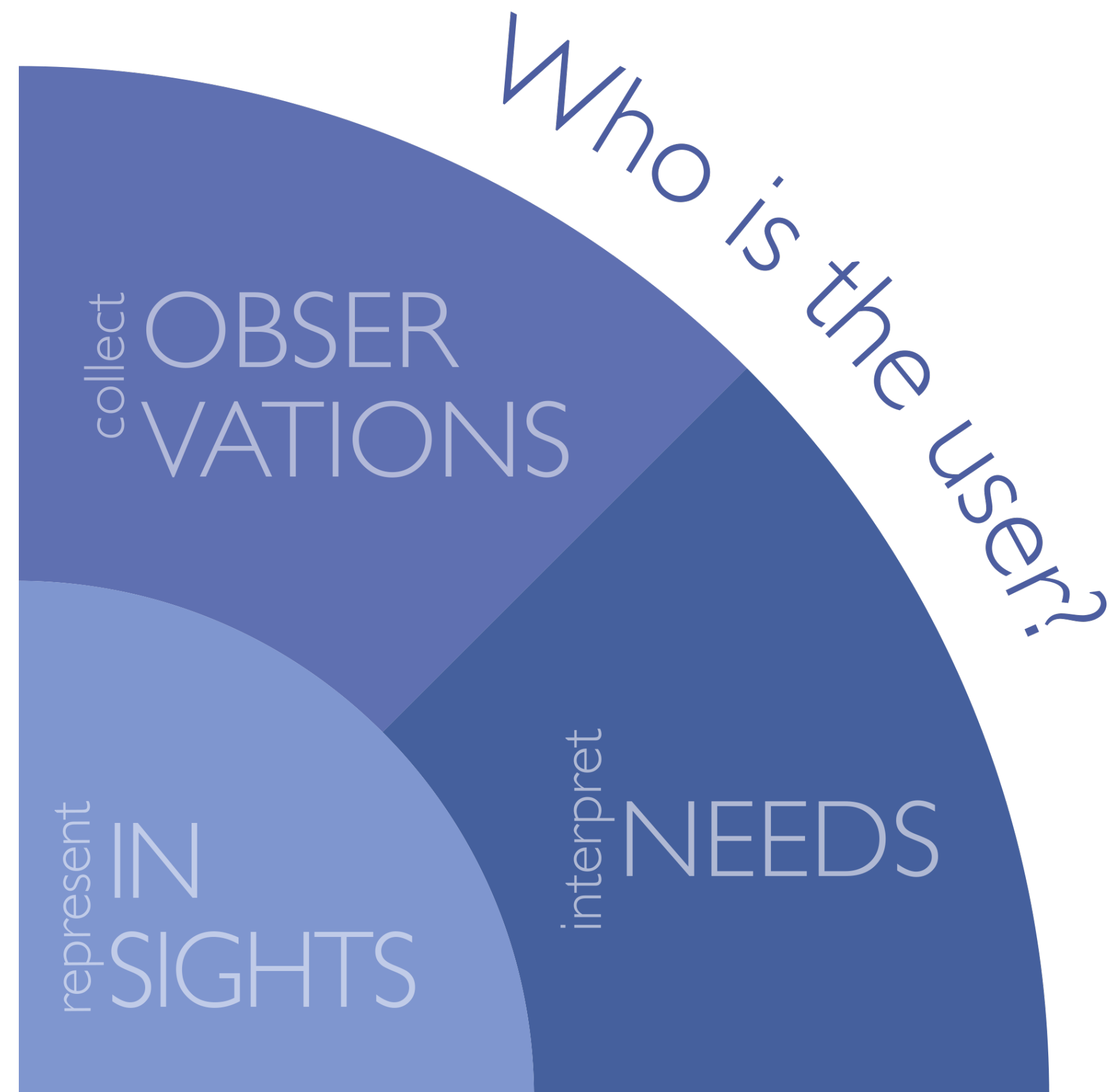
25 November Thursday (team)

11 December Tuesday (team)

18 December Thursday (team)

# Discovering Users

## Discovery



About

Interviews

# Asking questions

How you ask the  
question matters!

# Human memory

## Overview

Long-term memory is organized into:

### Declarative memory

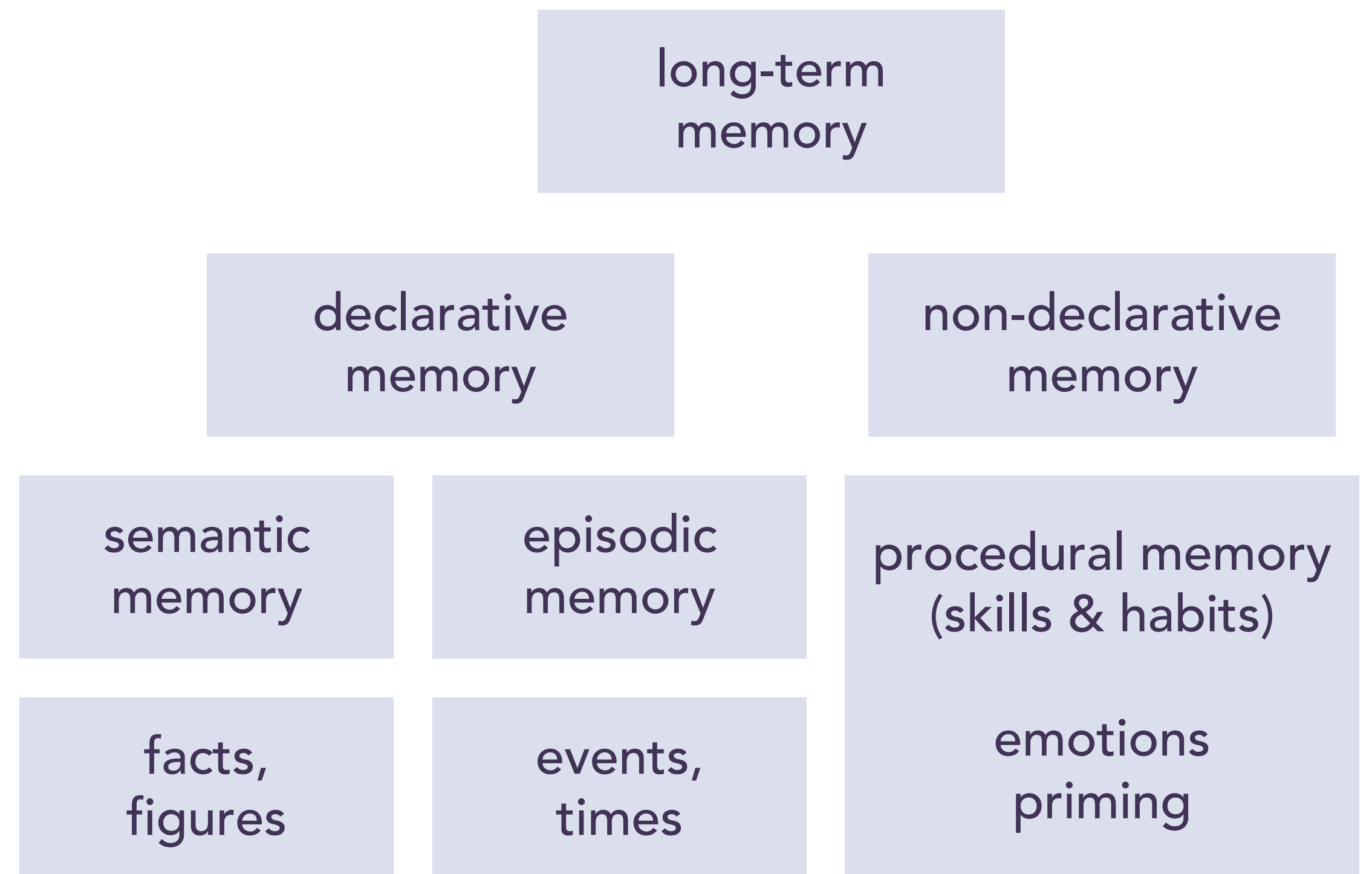
- semantic memory (facts & figures)
- episodic memory (events & times)

### Non-declarative memory

- procedural memory (skills & habits)
- emotional responses (can be primed)

# Human memory

## Focus on episodic memory



# Human memory

## **Why ask for user stories?**

Capture episodic autobiographical memory  
event-specific knowledge related  
to past personal experiences

Detailed user stories capture the user's  
conceptual objects  
desired functionality  
interaction with the technology  
specific context

Most useful for inspiring design ideas

How you ask the  
question matters!

The **form** of the question  
directs  
the **form** of the response

## How you ask the question matters!

The **form of the question**  
directs the **form of the response**

To get specific, real answers,  
you must ask the questions correctly  
If not, you will get vague general answers  
that do not help your design

Careful! Avoid marketing surveys!  
Understanding users better  
leads to better system design

# Asking questions

**Example: Ask about a recent email message**

**Poor question**

How do you manage your email?

**Why?**

Encourages general statements  
and non-grounded opinions  
Rarely results in a detailed story

Asking  
questions

## **Example: Ask about a recent email message**

### **Good question**

Think of the last time you wanted to find an email message but forgot the sender's name.

Tell me what you did to find it, step-by-step.

### **Why?**

Encourages the person to tell a recent, specific story and lets you probe for details

# Asking questions

## **Example: Ask about a recent email message**

### **Probe for details about the interaction**

What did you do first?

How did the system respond?

Was that OK?

What did you do next?

### **Probe for more context**

Why did you need that message?

Why couldn't you find it?

# Asking questions

## Question order matters!

First **specific** then **general**

First **concrete** then **abstract**

First **directed** then **open-ended**

First **facts** then **opinions**

# Asking questions

You can discover  
generalizations from details  
but  
you cannot discover  
details from generalizations

# Types of Interviews

## **Descriptions**

What does this technology look like?

## **Explanations**

How does this technology work?

## **Stories**

What happened to you that specific time?

## **Opinions**

What do you think or feel about it?

## **Data**

How many times did you use it?

Designing better systems requires  
understanding real-world user interactions

**Story interviews** produce specific stories  
**not** opinions (market surveys)  
**not** tutorials (how it should work)

### **Story interviews**

- preserve context
- identify breakdowns
- reveal patterns over time
- may uncover user innovations

# Story interviews

## **Goal: get a detailed story of interaction**

Extremely recent event

“Describe what happened at 9:00.”

Flashbulb or negative memory

“xxx.”

Bright spot or positive memory

“xxx.”

Critical object

“Describe how you made this”

Critical incident

“Exactly what happened that time?”

# Story interview questions

# 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

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

# Story Interview



Just do it!

# Story Interview

## **Solo**

Record a step-by-step account of how a user interacted with a particular system at a particular time. Record as much detail about the user's interaction as possible.

**Never** start with general questions

**Probe** for more interaction details

**Past tense:** answers should describe what actually happened not what **should** happen

**Look for** breakdowns, workarounds, innovations

Due:

**Tuesday, 4 November**

**13:00**

Conduct two story interviews

Record your questions and their answers  
(Transcript or written notes)

Be prepared to discuss in class

NOTE: This is trickier than it looks

# Story Interview