

Creating Assistive Technologies

Understanding The Problem

Intro	Gayle Curtis
Lecture	Understanding – What, Why and How
Exercise	Discover by Asking
Discussion	Your ideas, your questions

Gayle Curtis



MS Engineering
Product Design – Stanford

Lecturer

HCI Design Studio – CS247

Visual Thinking – ME101/313

Biomedical Engineer – VA Palo Alto

Information Architecture – vivid studios SF

User Experience Design – Yahoo!

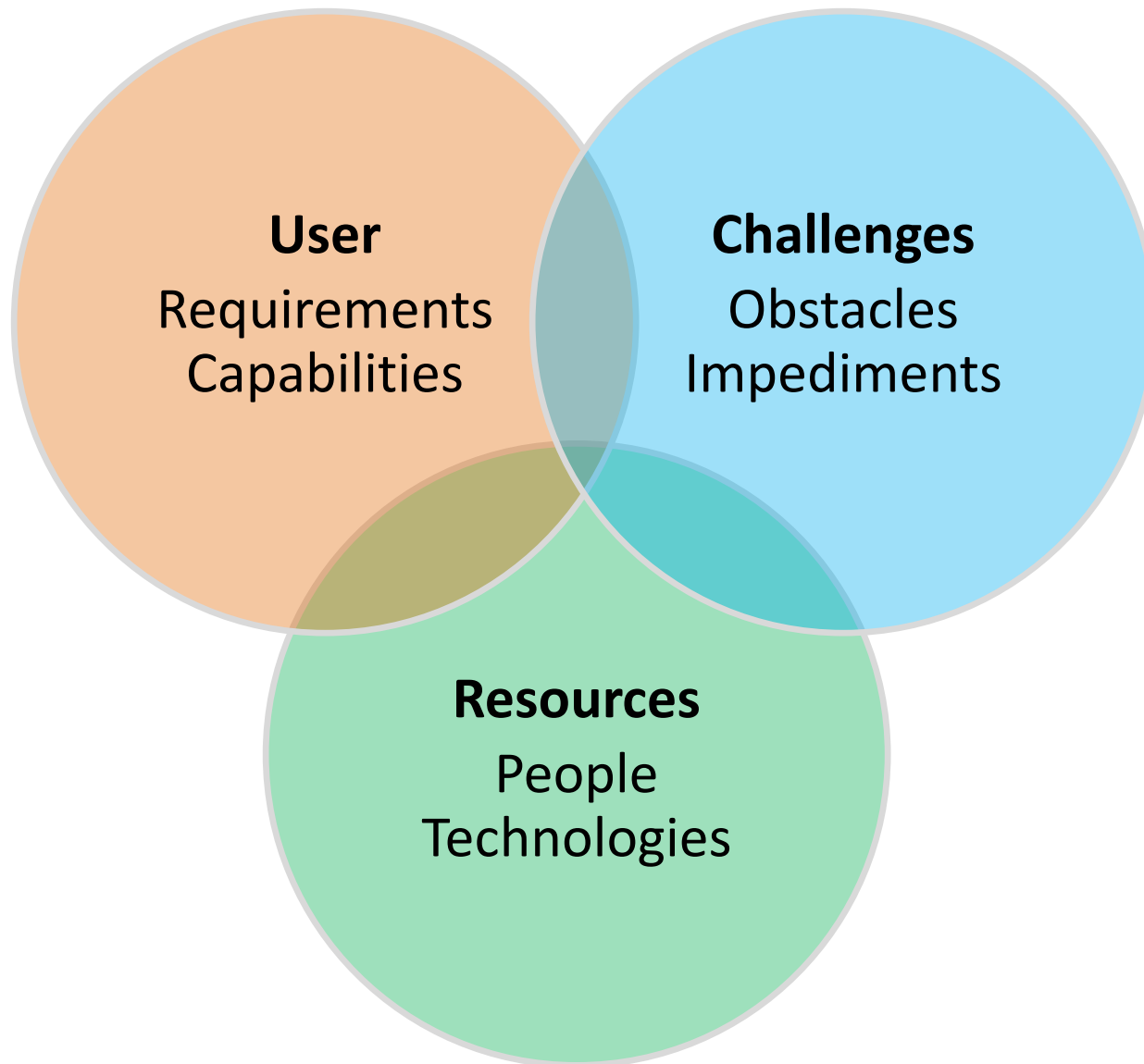
Interested in

How to think about **design**

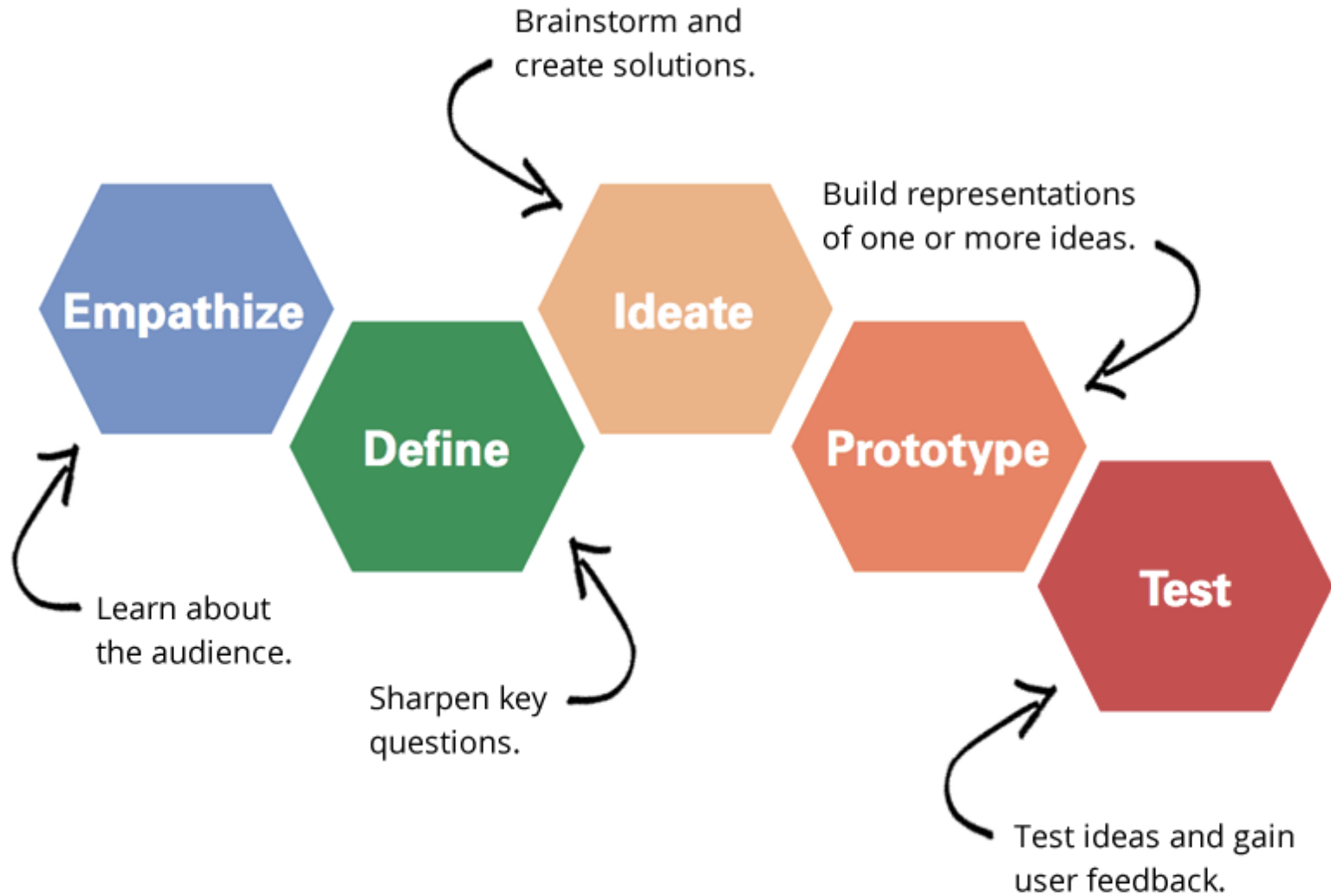
How to think about **projects**

How to think about **people in design of projects**

Parts of the problem



Design Thinking Model



Requirements, aspirations, desires – needs

Independence



Exercise – How you got here today

Think about what it took to be able to be here today –
From the time you woke up, or from your last class.

Make a list of ~10 things you had to do

The things you had to do to be here today ...

Make note –

1. What things were important for your journey?
2. Why was it important to be done in that way?
3. Tools/enablers you used
4. Blocks/challenges you managed

5 min

What we want to learn about the problem

Goals

What does the person want to do, have, or accomplish?

Values

What's important about what they want or the way they achieve it? What does it mean for them?

Capabilities

What resources, skills or abilities does the person have or bring to the situation?

Constraints

What kinds of obstacles, limitations, or deficits are at work in the situation?

How do we do it?

Interview – Talk to people

Observation – Watch people's activity, in context

Prototype – Make something and see what they do with it



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Then what?

CRITICAL THINKING

Facts

Assumptions

Inferences

DESIGN THINKING

Ideate

Sketch

Prototype

Test

Iterate

Interviewing

TIPS

Ask about goals & what's important

Avoid leading questions

Ask them to show as well as tell



- + We get information directly from the person – the user
We get their perspective, how they feel about it
- Time and skill intensive
Must be careful when generalizing
What people say is often different than what they do

Observing

TIPS

Observe *actual* activity

Approximate the design target

Immerse yourself in context

Shadow, record, review

Collect a rich description of activity



Look for –

Resources used to accomplish

Hindrances that get in the way

Group exercise – How they got here today

Work in groups of 4-5

One person volunteers to be ‘interviewee’

Class or community member

Ask about how *they* got here today

Activity | Materials | Gear

See what you can learn about their:

Goals – why they wanted to be here – their purpose in coming

Values – what was important about the way they got here

Capabilities – what resources were available or used

Constraints – what blocks stood in the way

