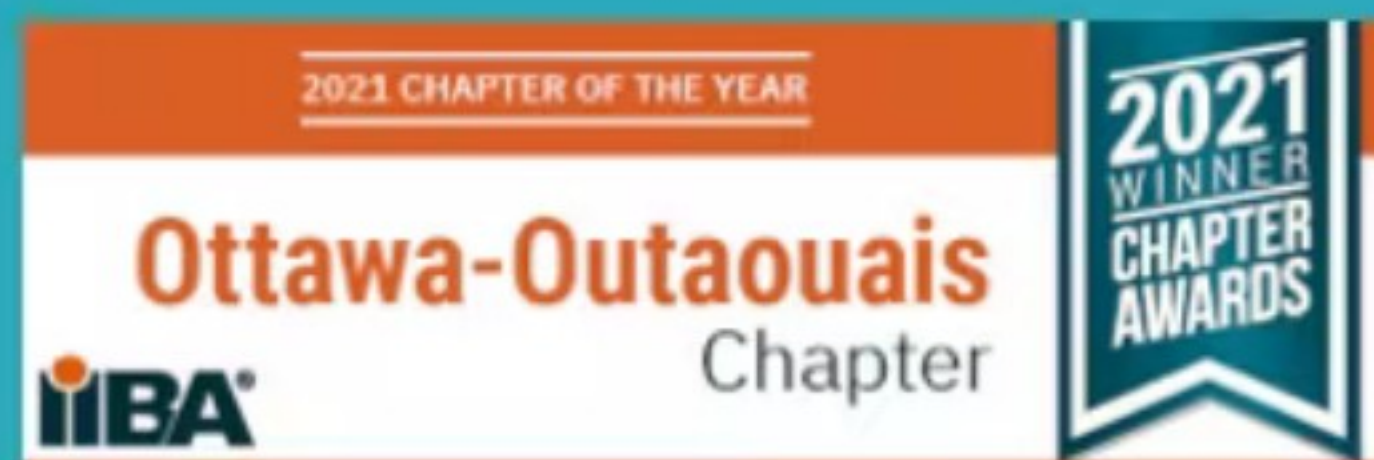


Introduction to Design Thinking Methods

Bruce Gay, PMP, CSM

February 21, 2023



Instructions

Go to
www.menti.com

Enter the code



Or use QR code





Where are you joining us from today?

morrisburg

ottawa

singapore

nova scotia

atlanta

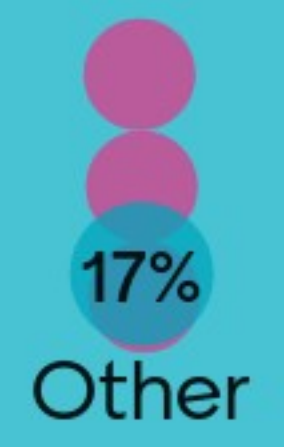
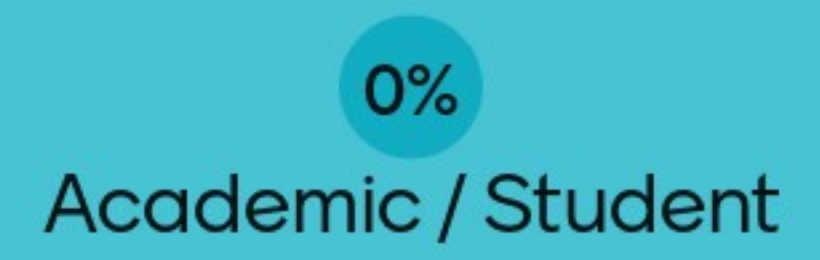
manotick

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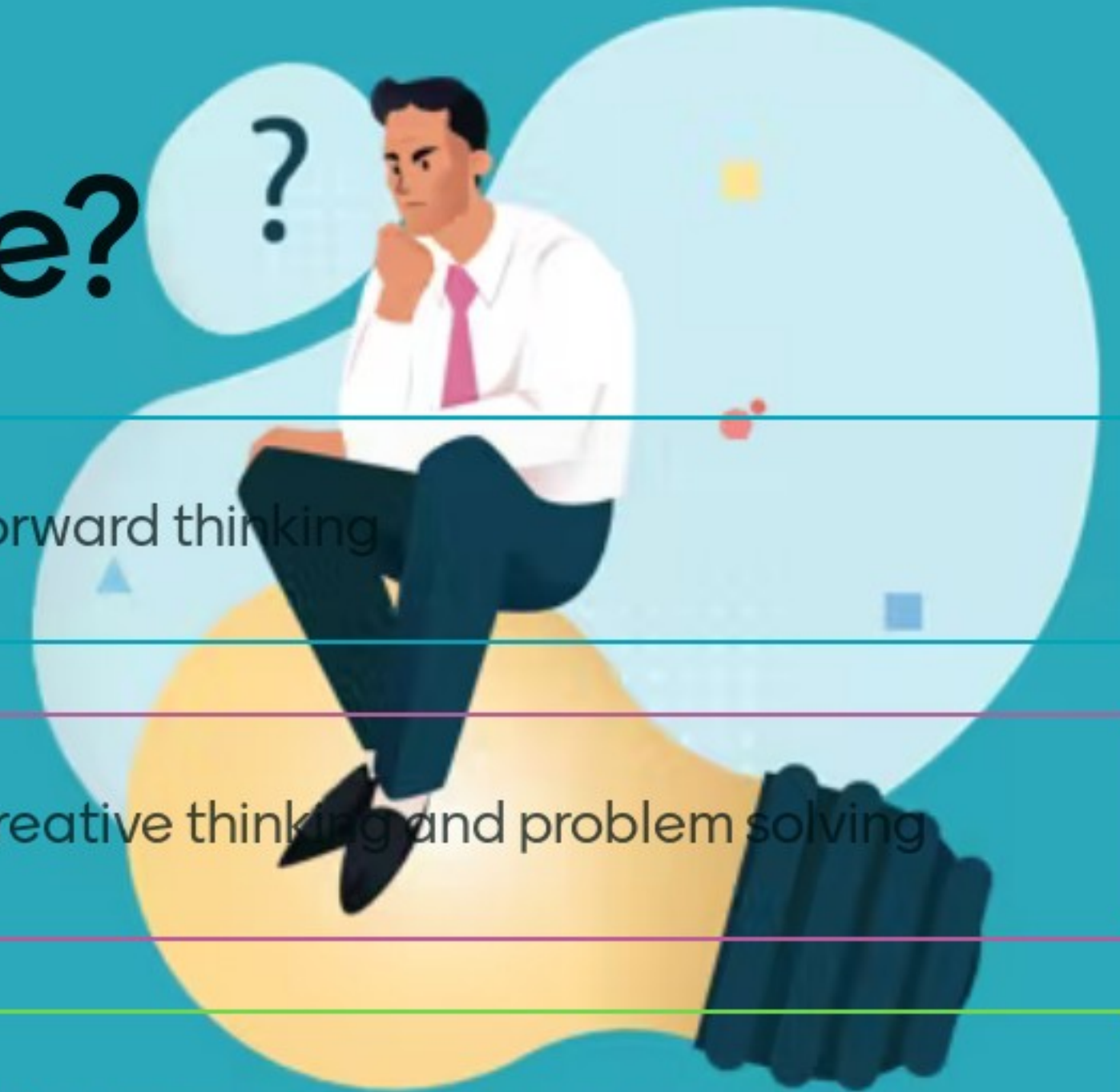
windsor

plantagenet

What type of job role do you perform?



What value to do you bring to your role?



Identify real needs vs wants

Empathy with customer problems

Stakeholder Management, Roadmap and Strategy Setting

Creating shared understanding of a problem / solutions. Helping people understand different perspectives

Pulling out order from chaos

Visualization of customer needs

Forward thinking

Creative thinking and problem solving

Risk management The now versus the roadmap Provide focus

What value to do you bring to your role?



Analytical Change driver

Requirements Analysis and make sure clients are satisfied

Focusing on needs and solutions to address them

Thinking strategically vs operationally to solve challenges

Market research and stakeholder management

graphic display of processes

Conversations using visual models

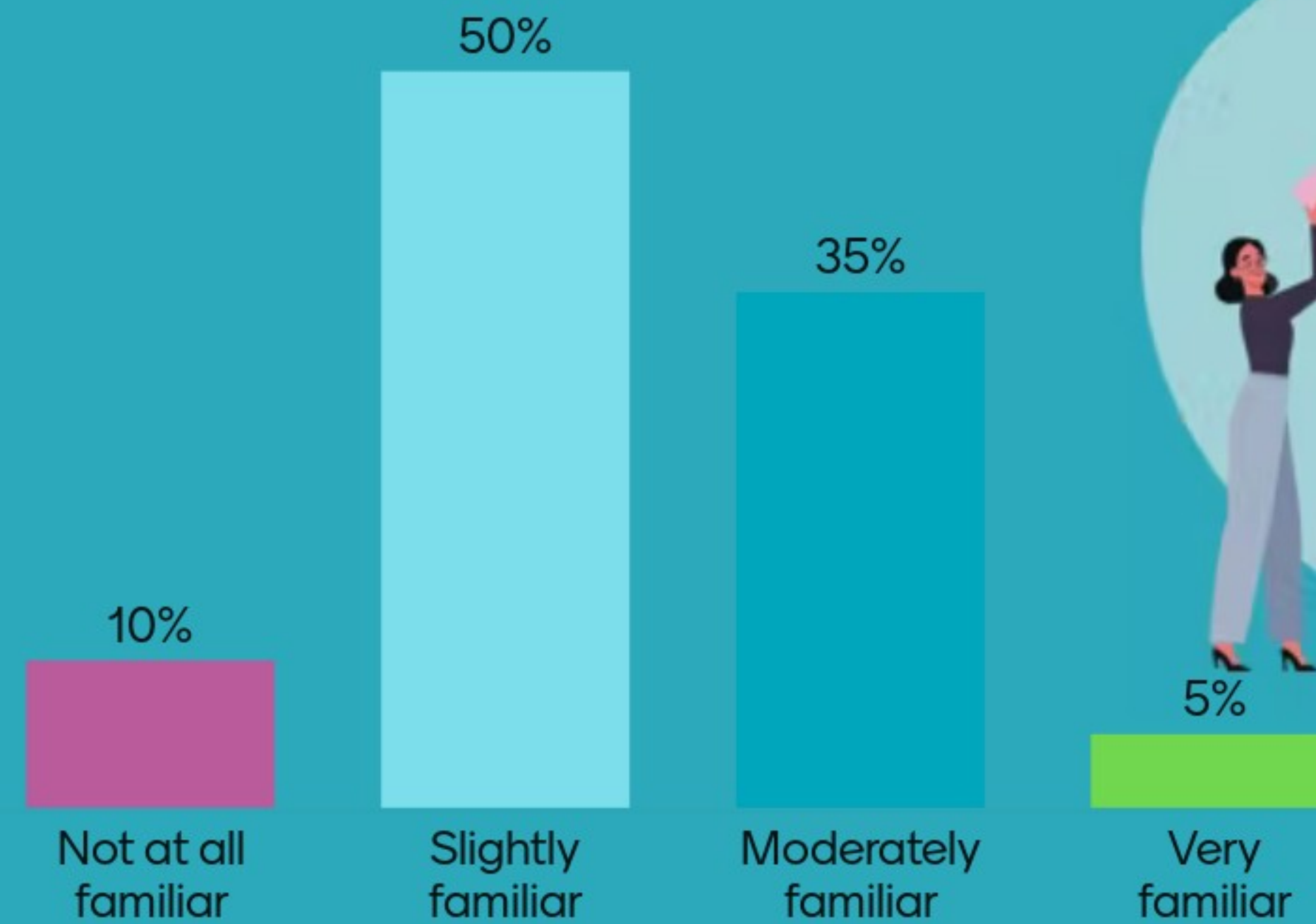


Toay's presentation will cover:

- High-level introduction to Design Thinking
- Hands-on experience that being visual is crucial to communication
- Importance of using User Personas on projects



How familiar are you with Design Thinking?



Why might a product or service FAIL to meet customers' needs?

Animal

To go cup

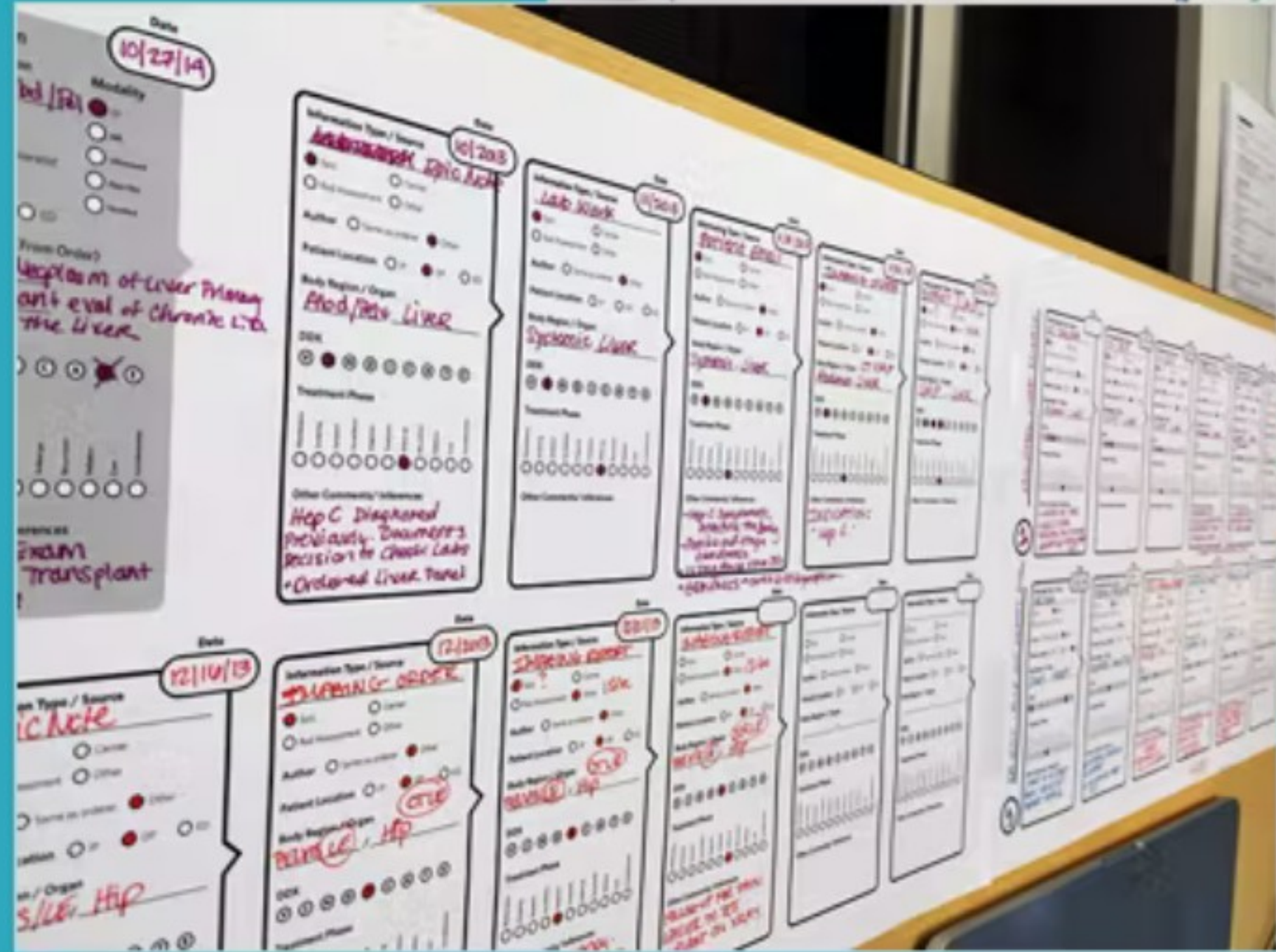
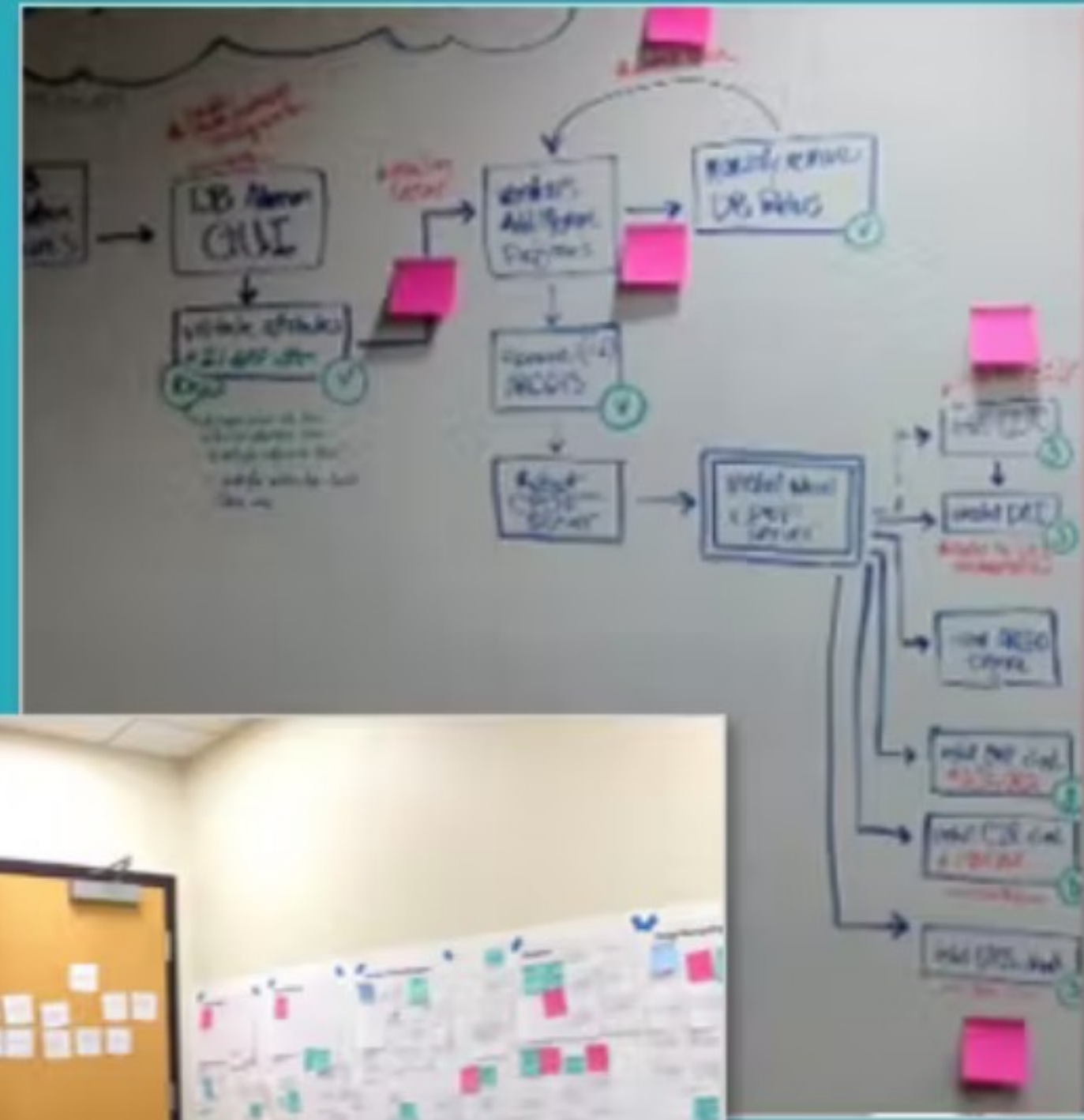
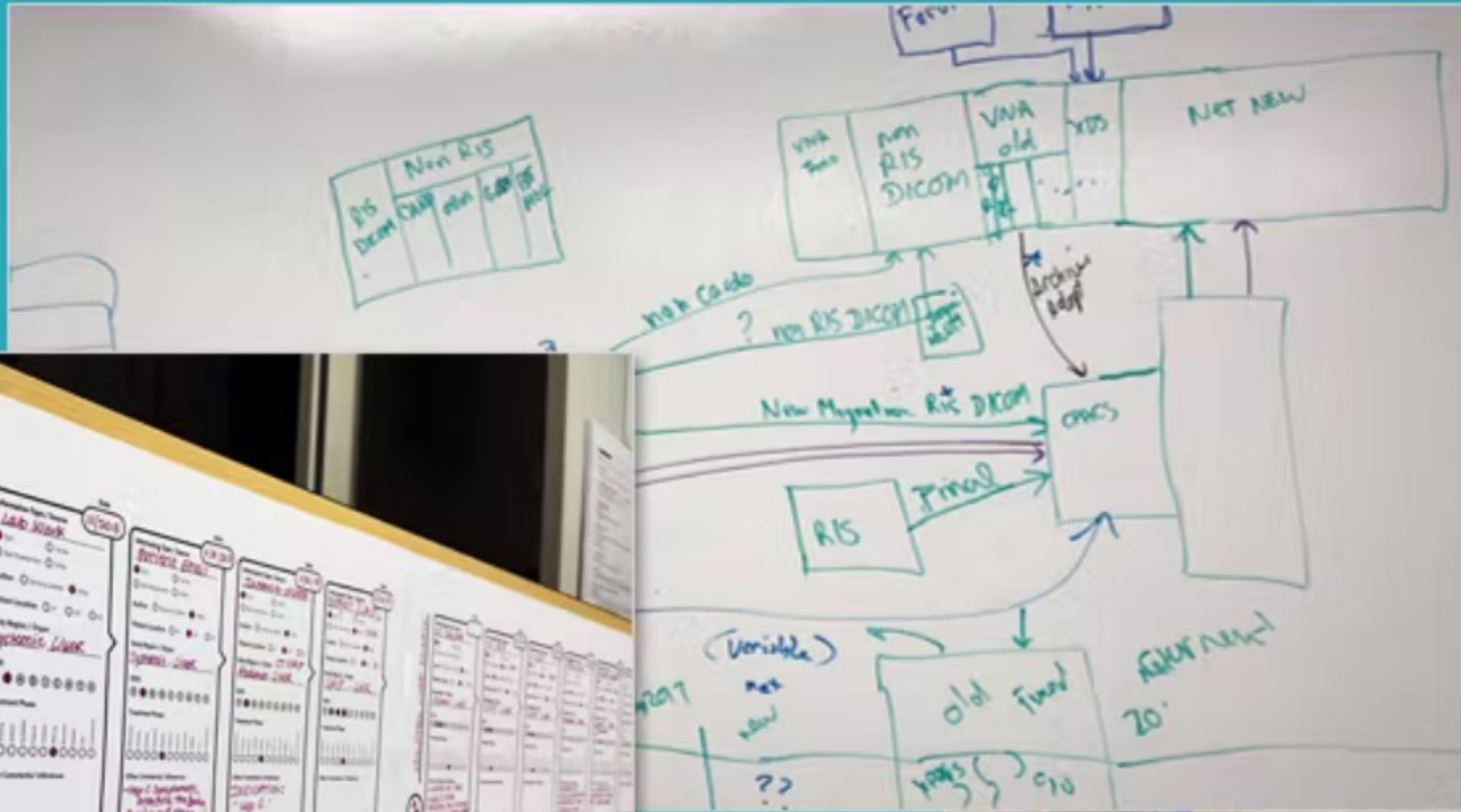
To go cup

Laptop

Wizards



Being Visual Promotes More Precise Communication



Benefits of Visualizations

- Externalizes thoughts and concepts
- Enables new perspectives and helps to integrate different perspectives
- Makes it easier to remember & recall topics and discussions

④ Digital Logic

Or Logic



$$X = A + B$$

And Logic



$$X = A \cdot B$$

Inverter

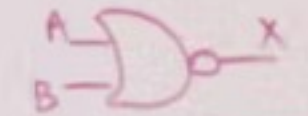


NAND



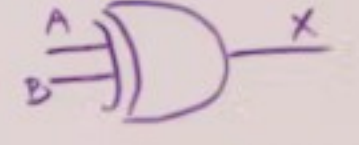
$$X = \overline{A \cdot B}$$

NOR



$$X = \overline{A + B}$$

XOR



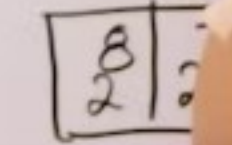
$$X = A \oplus B$$

XNOR



$$X = \overline{A \oplus B}$$

⑥



Ex. 00100
64

Hexadecimal

16^4	16^3	16^2	16^1	16^0
65536	4096	256	16	1



"Speed Sketching" Exercise

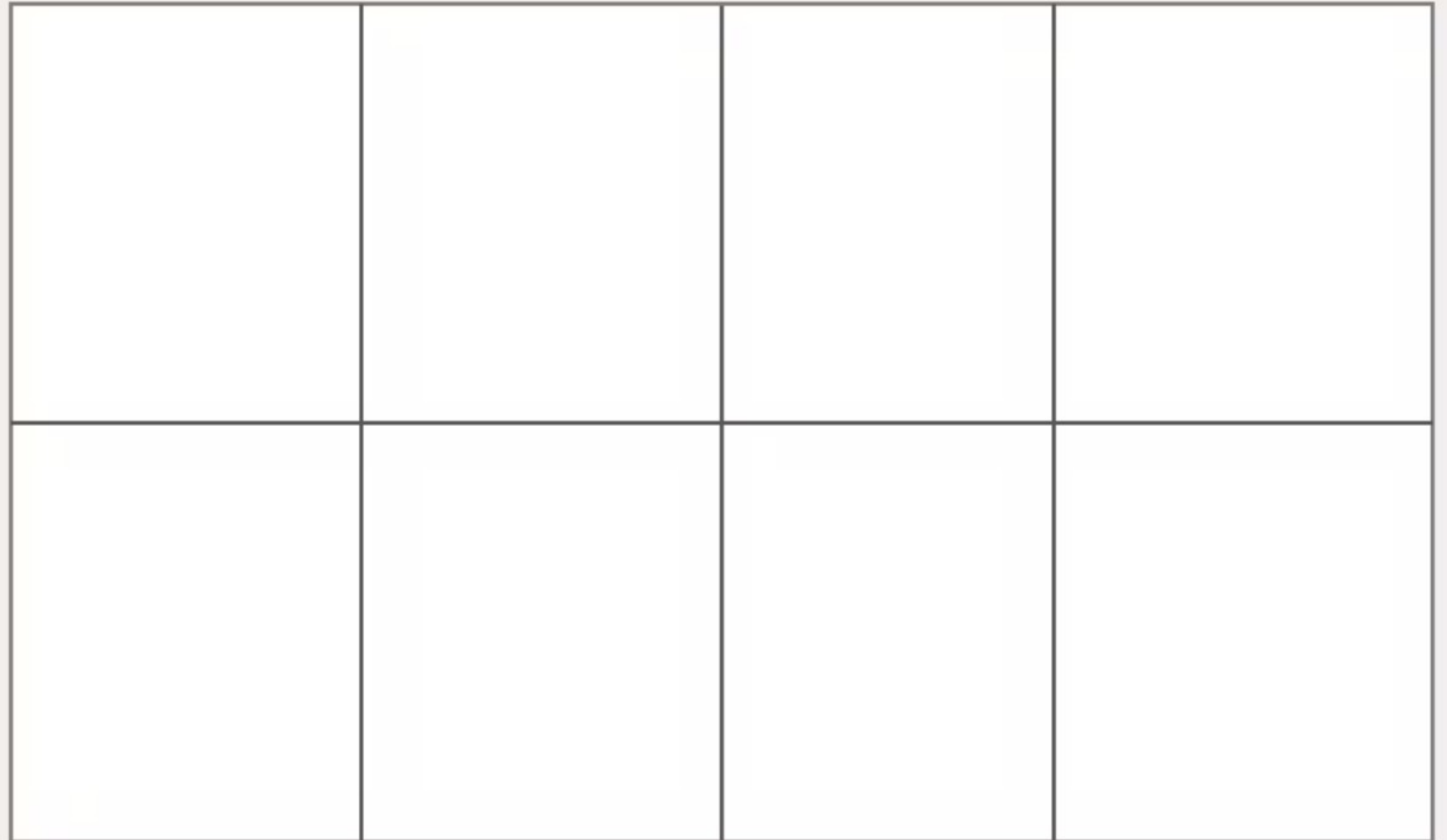
Learning Outcome:

See how visualizations help to **surface** differences in understanding and biases



Speed Sketching Exercise

Divide Up a
Sheet of Paper
Like This



You will be given **60 seconds** to draw
each of the words on the following slide.



Warm Up Exercise: Rapid-fire Sketch

In 60 seconds: draw a picture in the box that represents the word written below it.

home	coffee	mouse	sun

computer	bread	bicycle	flower

Take photos of your
sketches and email to:

bruce.gay@astrevo.com

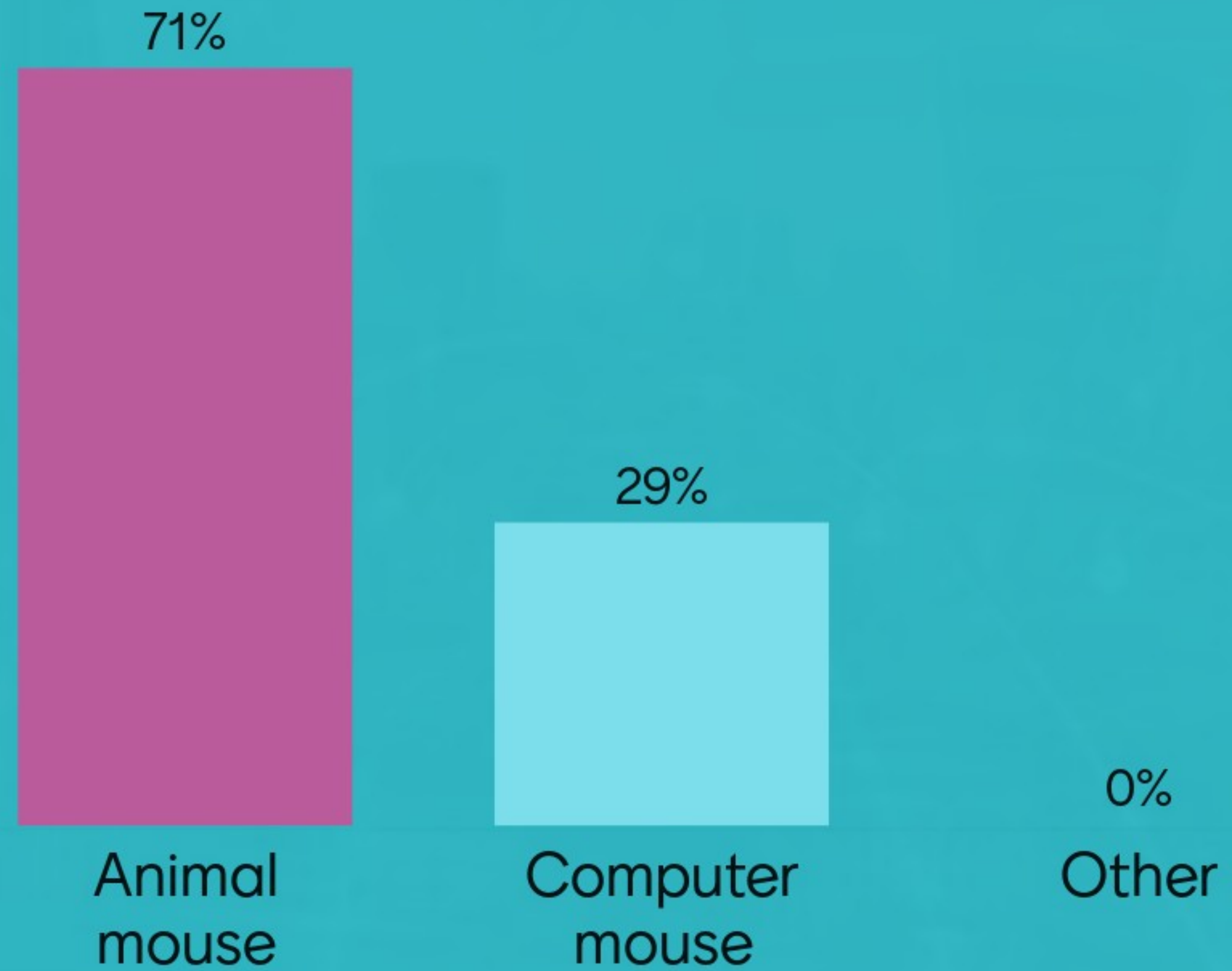


Let's Review the Sketches

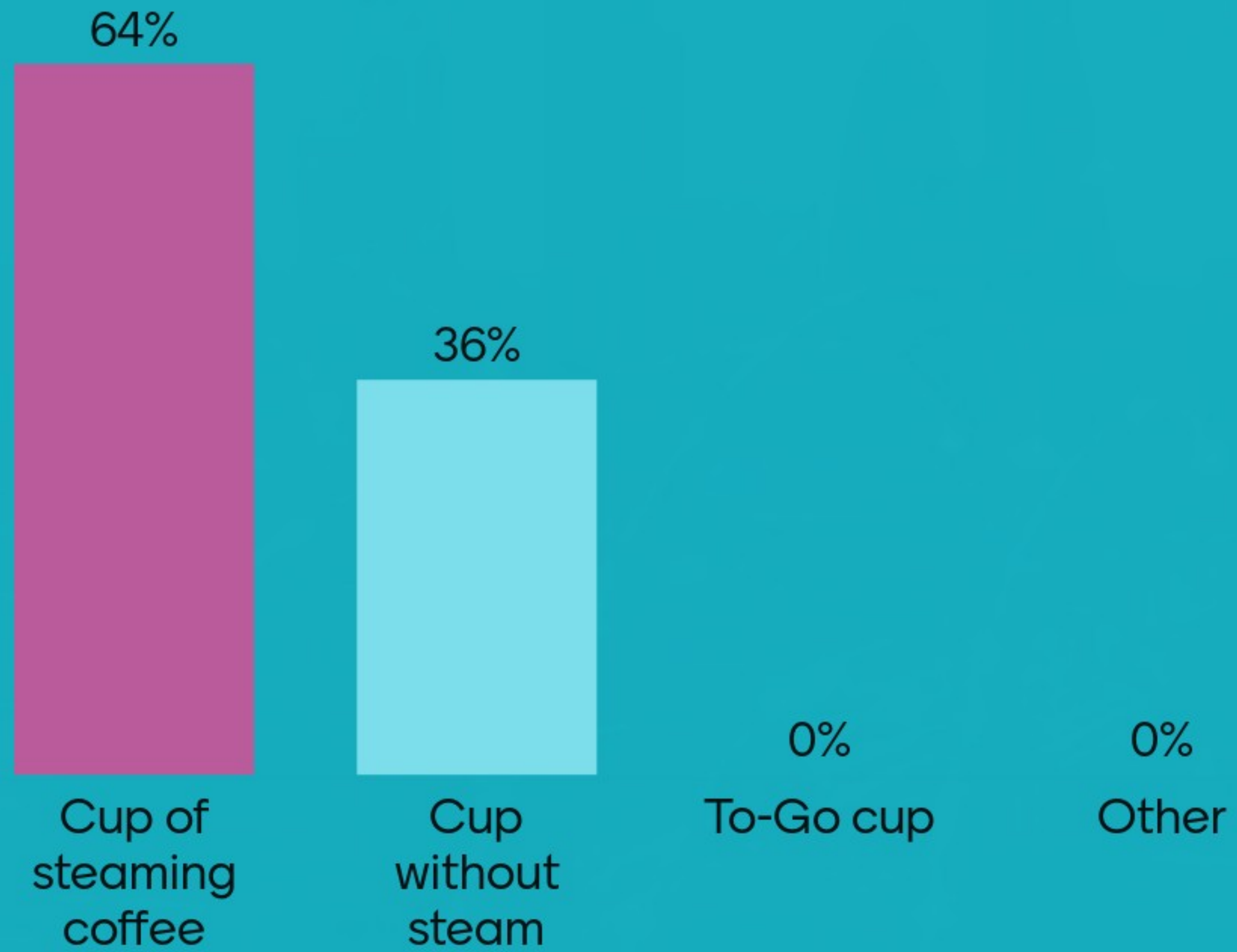
These are common words, but they could have different meanings depending on the situation.



What kind of MOUSE did you draw?

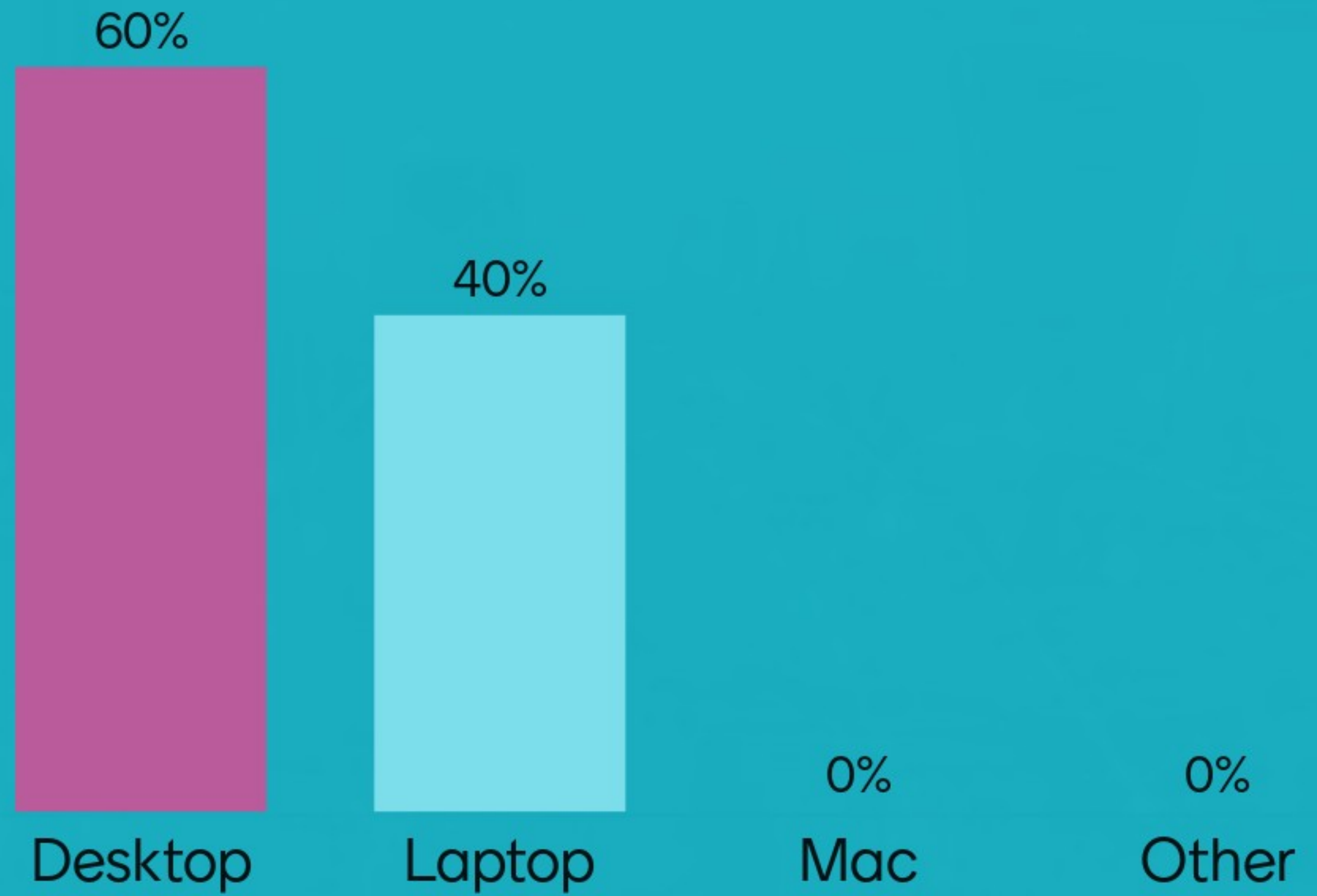


How did you draw COFFEE?

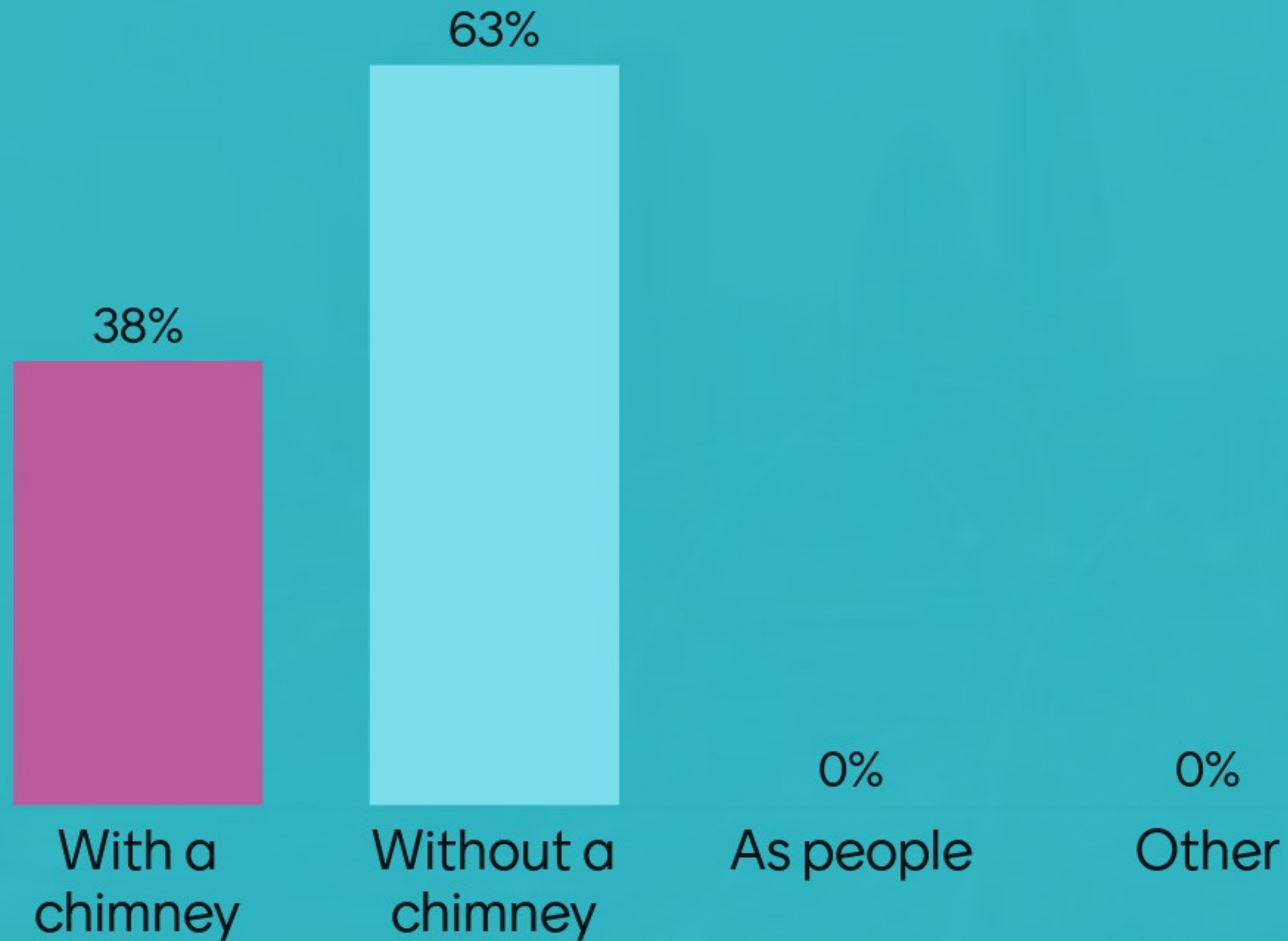




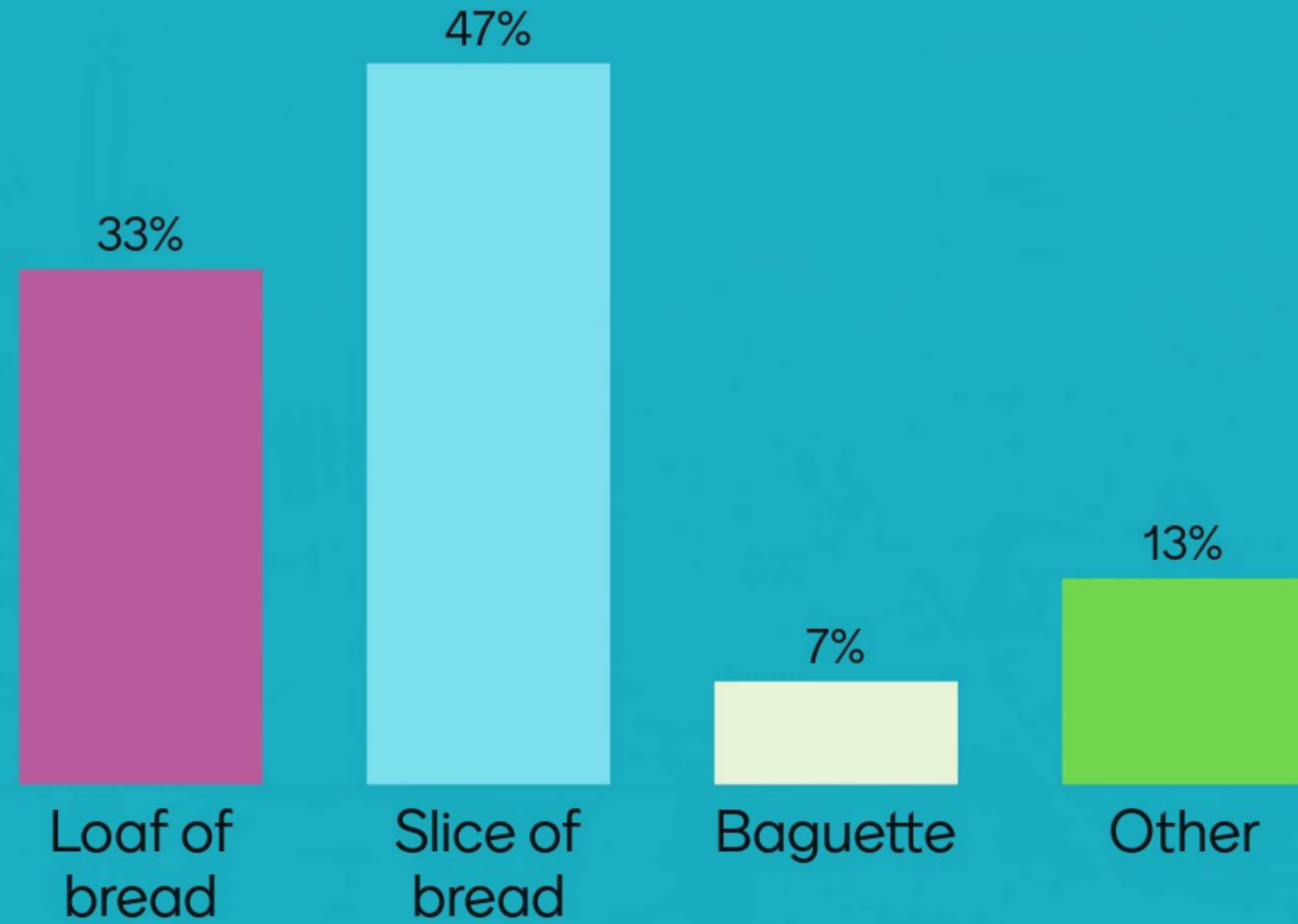
How did you draw COMPUTER?



How did you draw HOME?



How did you draw BREAD?

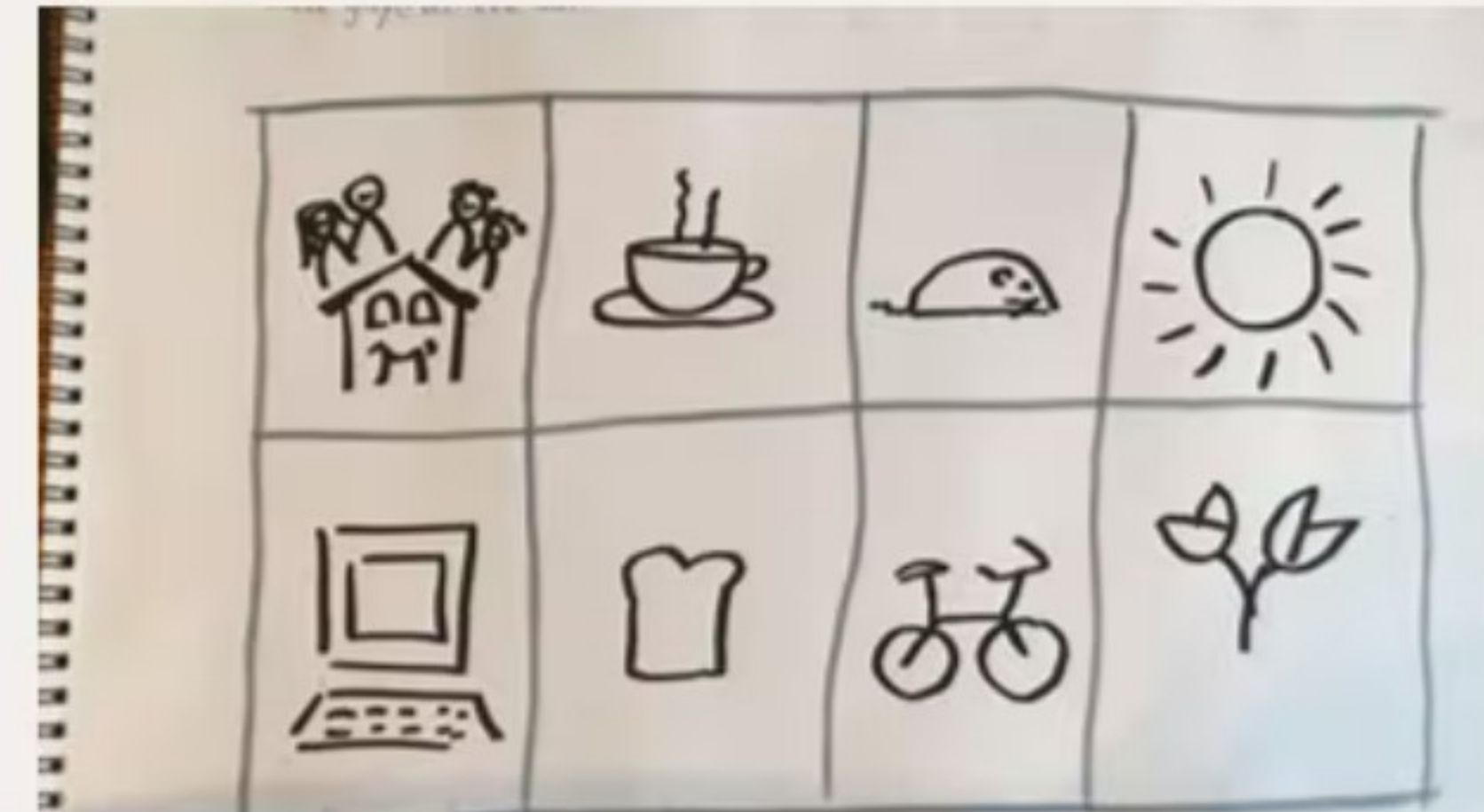
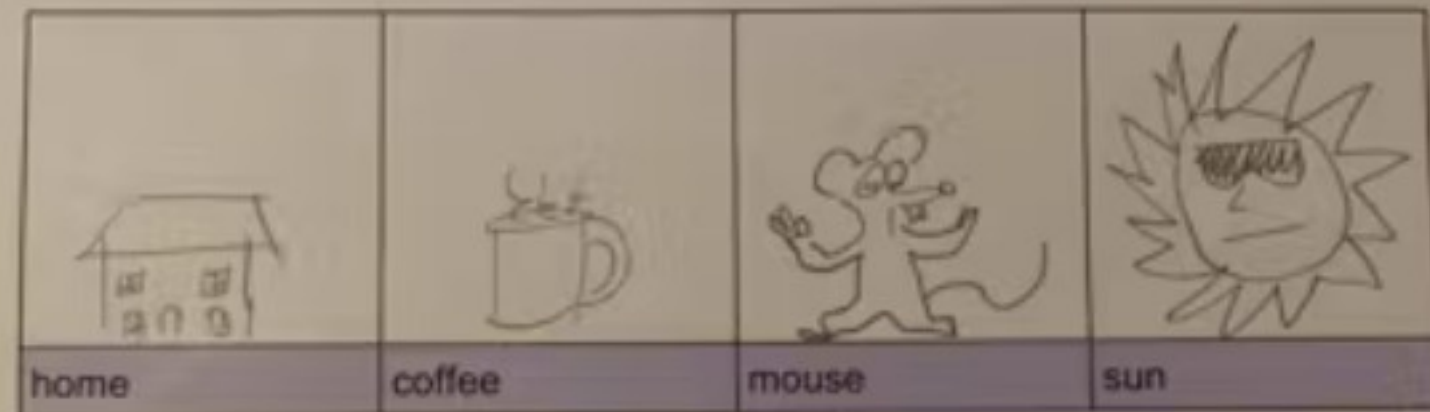


Take photos of your sketches and email to:

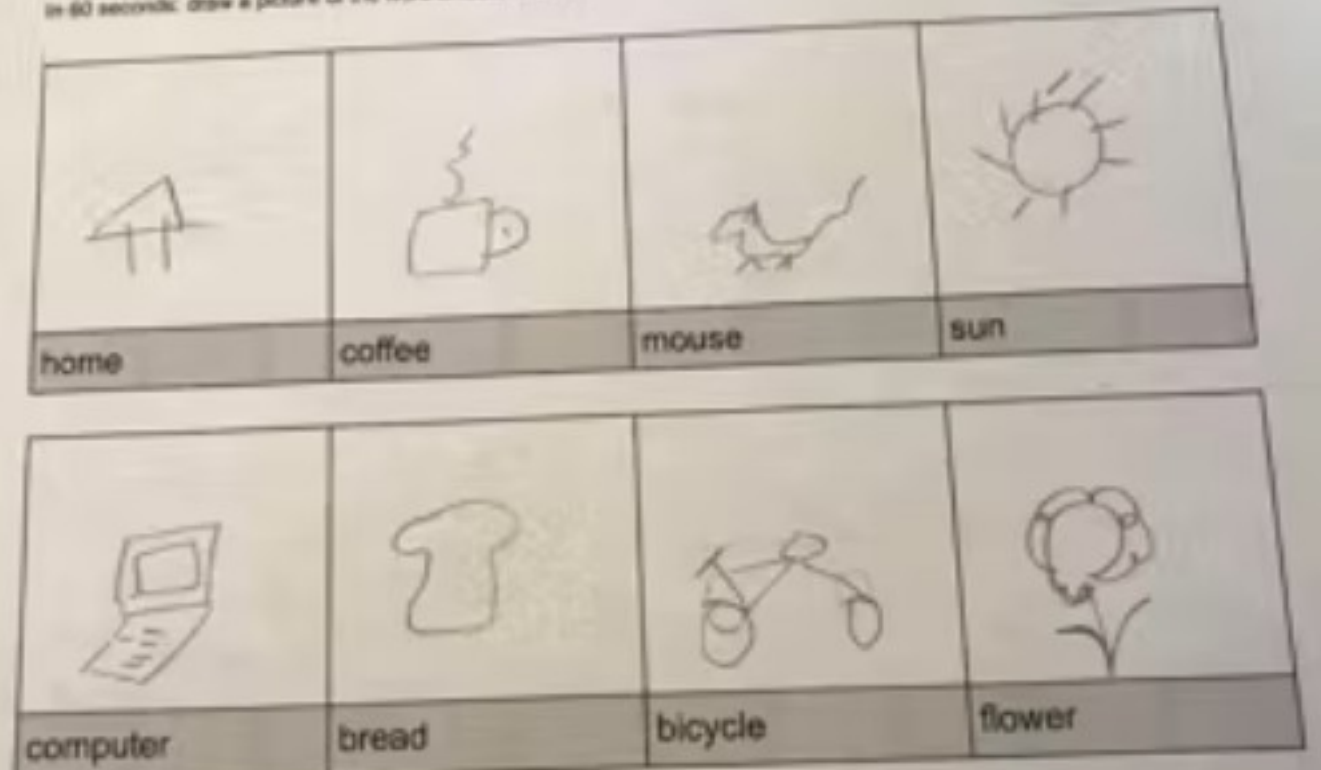
bruce.gay@astrevo.com

Recent Sketches

Warm Up Exercise: Rapid-fire Sketch
In 60 seconds, draw a picture of the word written below it.



Warm Up Exercise: Rapid-fire Sketch
In 60 seconds, draw a picture of the word written below it.



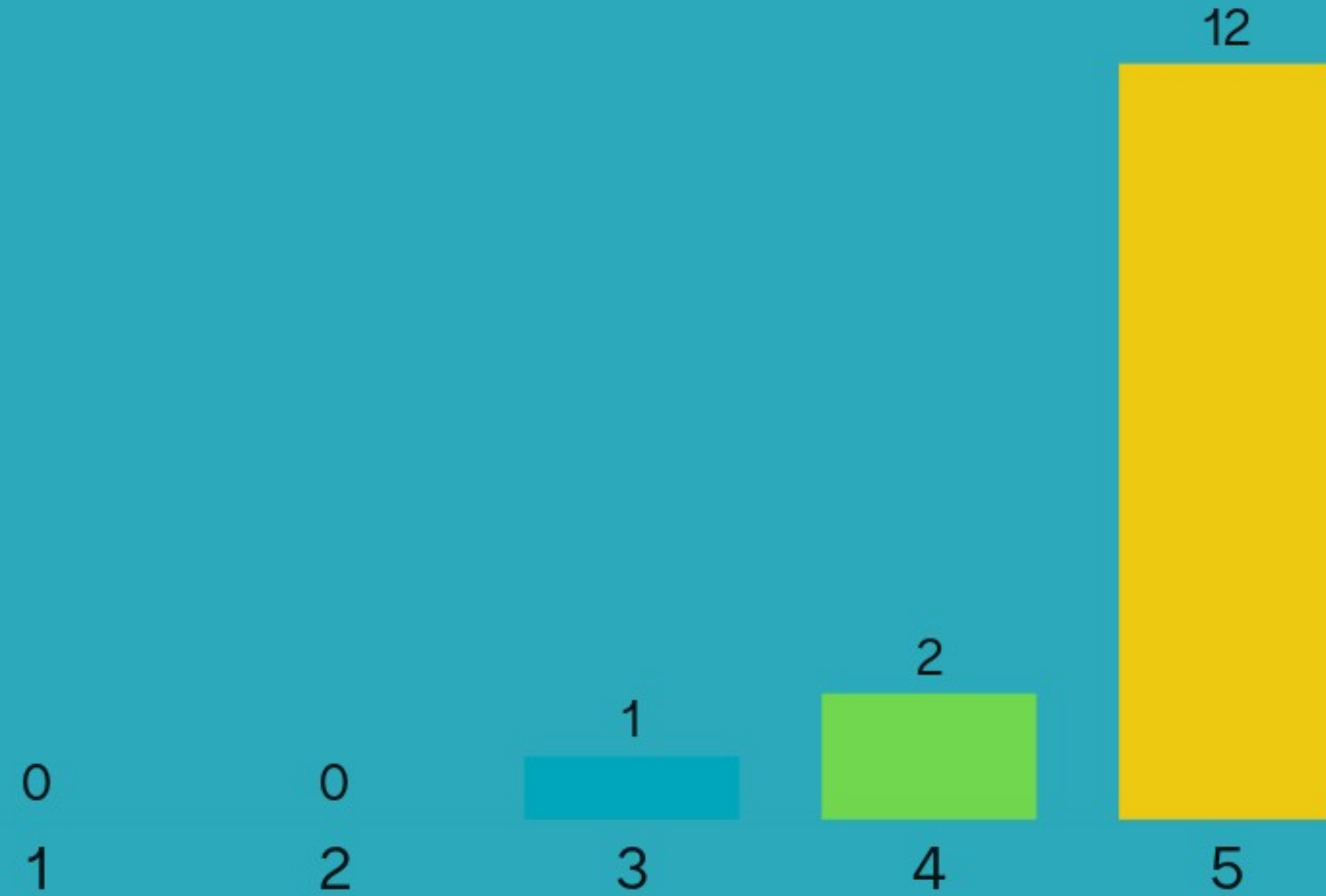


Audience Sharing

I need **TWO VOLUNTEERS** to share their thoughts and learnings from the visualization exercise.

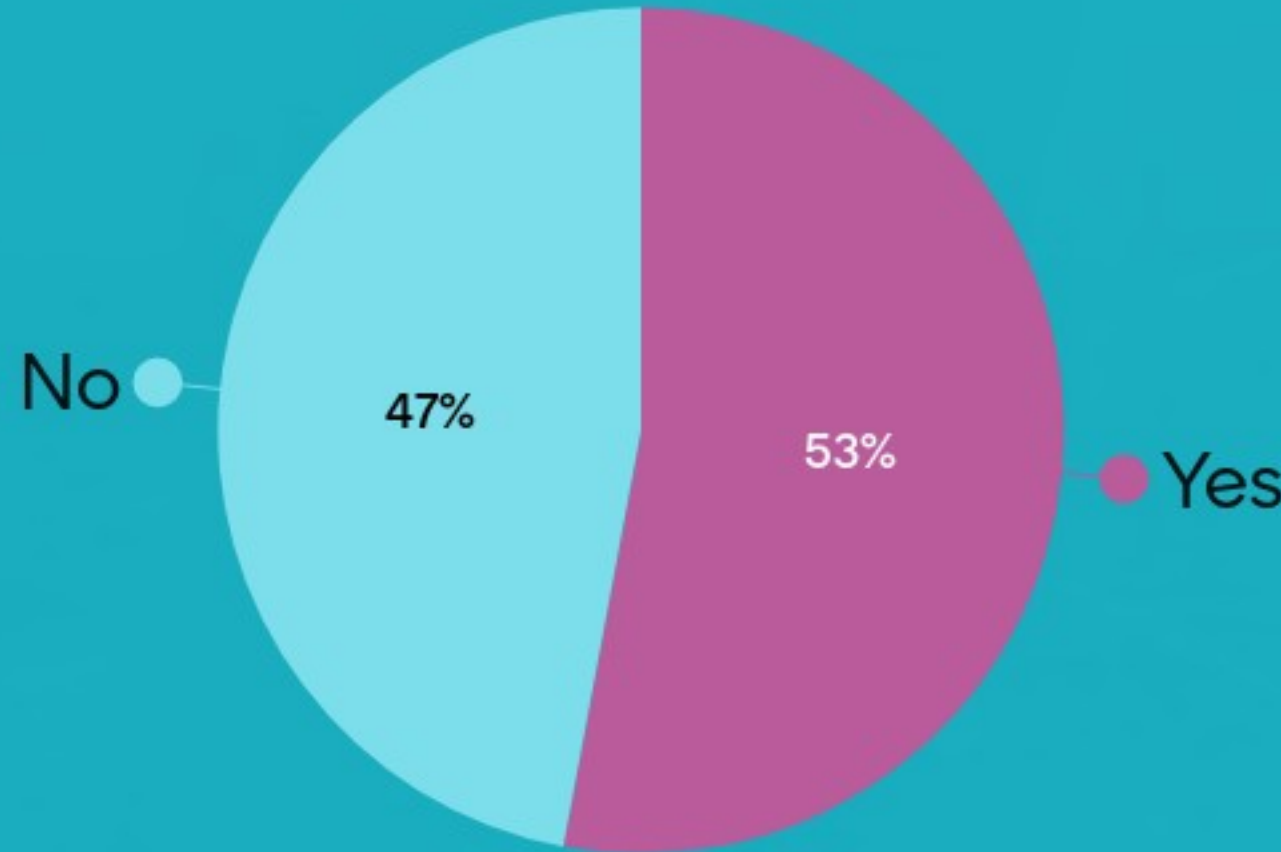


On a scale of 1 to 5: How well do you understand the concepts so far?





Does your team use personas as part of their projects?





Importance of User Personas

- Build a shared understanding of the customer
- Gain a perspective similar to the user
- Provide direction for making design decisions
- Communicate research findings with the whole team
- Anchors the user at the center of the process



Example User Persona

User Persona for a
radiology imaging
system



Diagnostic Radiologist
Alex Myers, MD
35 years

“At the end of reviewing a patient's case, I feel like I've solved a puzzle or a clinical problem.”

Goals

- Complete worklist for the day (diagnosing patient cases)
- Accurately diagnose and report all findings
- Efficient time per read

Pain Points

- Multiple software logins/time outs reduce efficiency
- Communicating with physicians and technologists is time-consuming and annoying
- Don't have access to all patient data

What requirements come to mind after reviewing the Radiologist User Persona?



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single sign on

Access to data

Easy navigation to full data set

Hardware improvements and better wifi

Single sign-on so I don't have to log in and out multiple times

System must be available 24 x 7 unless for planned maintenance

easy, efficient way to communicate results to ordering physicians

voice to text dictation

Central access point for all patient records



What requirements come to mind after reviewing the Radiologist User Persona?



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Streamline process

Easy interface

Ability to notify physicians using simple and custom alerts

Real-time access to other physicians and technologies - video communication

Multiple data entry methods (voice to text, quick fill forms)

Direct messaging to physicians and technologists

A system that will connect all the different processes that the radiologists partakes in

Ability to access data in real-time (API vs encrypted files), ability for system to automate review/approval process

Easy drill-ins through links and easy buttons to select different functionality



What requirements come to mind after reviewing the Radiologist User Persona?



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Alex Myers, MD
35 years

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system that shares text summary with all patients and doctors at the same time. MyChart used here in Ottawa Hospitals

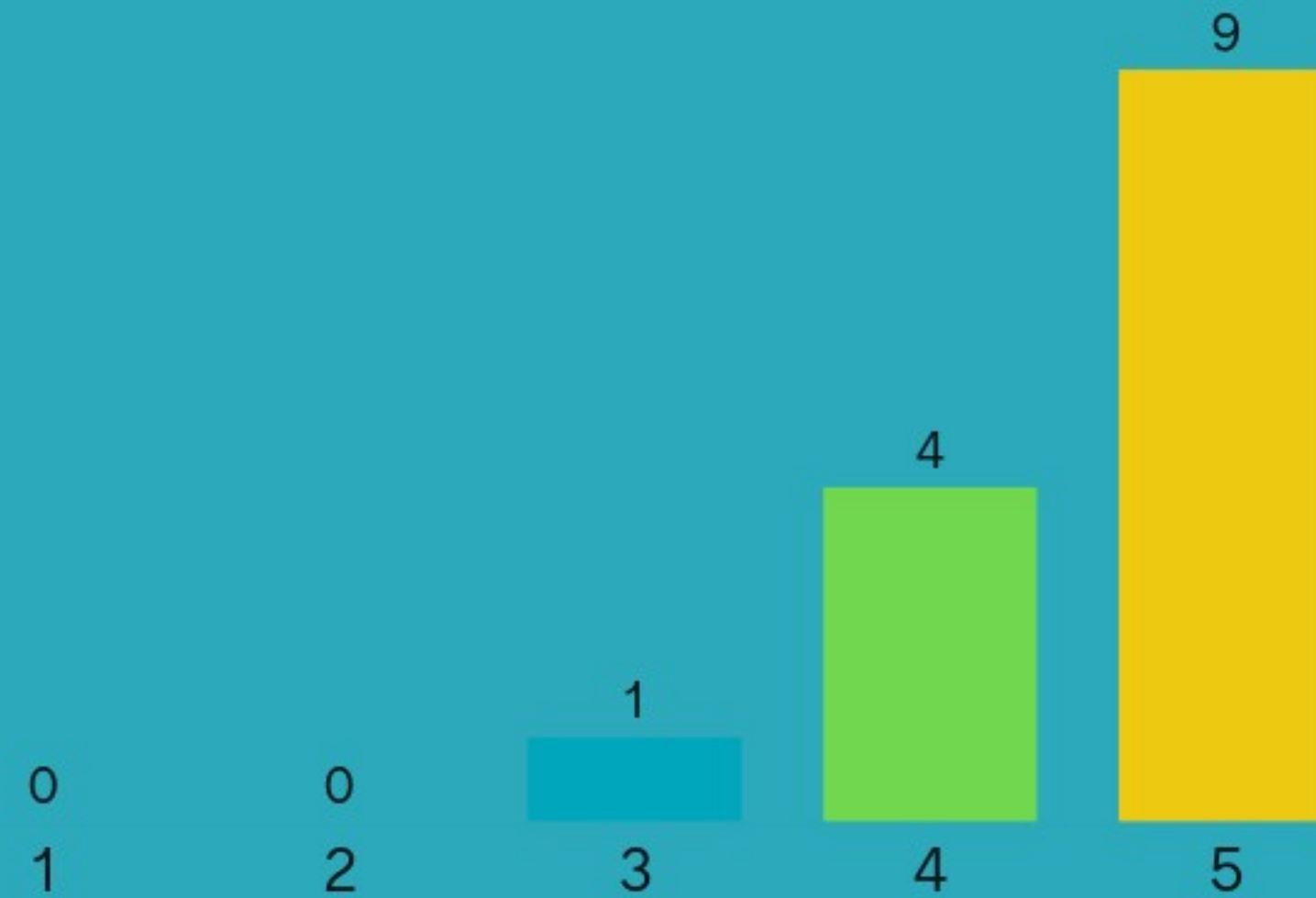
Alert or text option for communications

Ability to sign into multiple software so that I can save time
Ability to share data automatically with physicians and technologists so that I don't have to convey it
Ability to access complete patient data so that I can do my job effectively

single sign on integration of systems
doctors texting / online communications
patient data masked for the privacy issues



On a scale of 1 to 5: How well do you understand the concept of User Personas?



What is Design Thinking?

A collage of various infographics and diagrams related to Design Thinking. The items include:

- PHASES OF THE DESIGN THINKING PROCESS:** A horizontal flowchart with five circular nodes.
- DESIGN THINKING MODE:** A diagram showing three stages: Discover, Design, and Deliver, each with a corresponding icon.
- Design Thinking = Strategic Thinking:** A circular diagram with multiple overlapping segments.
- DESIGN THINKING:** A graphic with the title "DESIGN THINKING" and a subtitle "The Most Powerful Business Strategy".
- We are all DESIGNERS!:** A horizontal flowchart with five hexagonal nodes.
- INSPIRATION, IDEATION, IMPLEMENTATION:** A diagram showing a wave-like progression through these three stages.
- STEP BY STEP GUIDED PROCESS:** A diagram with five circular nodes and descriptive text for each.
- Empathize, Define, Ideate, Prototype:** A horizontal flowchart with four hexagonal nodes.
- Design Thinking Process - YouTube:** A small graphic with a play button icon.
- Design Thinking Studio in Social:** A small graphic with a social media icon.
- Design Thinking: A Beginner's Guide to:** A small graphic with a book icon.
- Design Thinking Process:** A small graphic with a lightbulb icon.
- What is Design Thinking? The Ultimate:** A small graphic with a lightbulb icon.
- The Design Thinking Process:** A small graphic with a lightbulb icon.
- Design Thinking Process:** A small graphic with a lightbulb icon.

Design Thinking is ...

A practical, user-centered methodology that embraces trial and error and immediate feedback that teams achieve through testing and validation of prototypes.



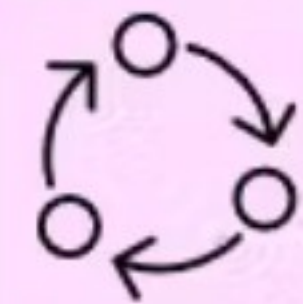
problem solving
approach



user-centred
methodology



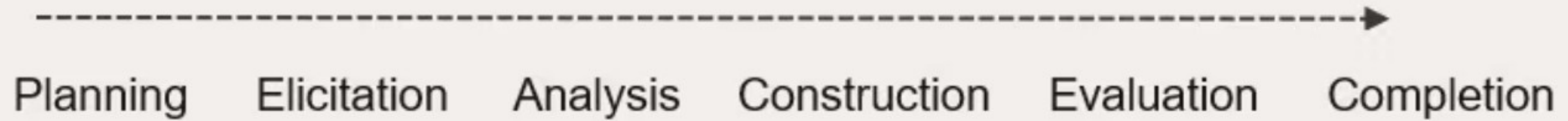
experimentation
trial and error



iterative testing of
prototypes

Different Approaches

Projects



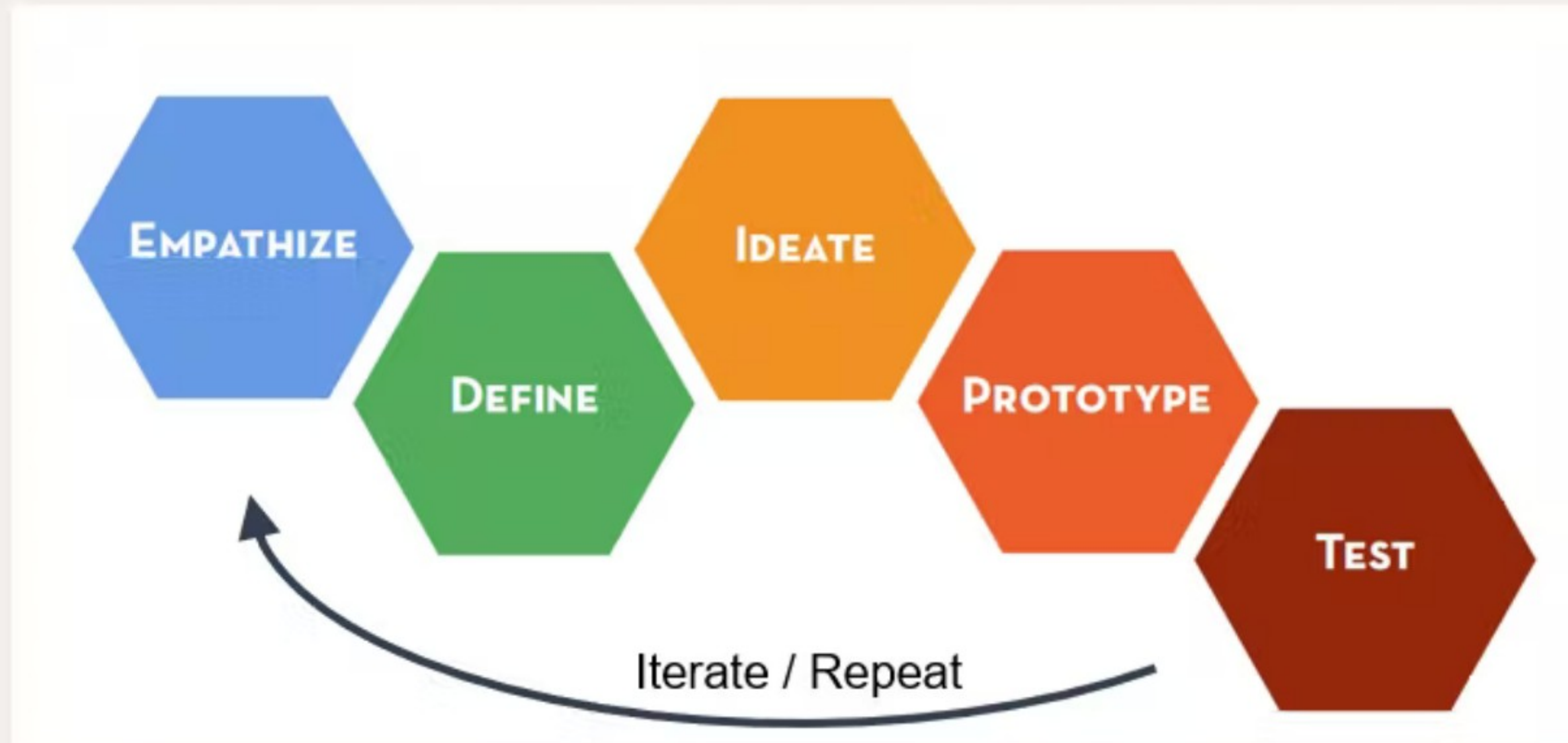
Design



Source: Process of Design Squiggle by Damien Newman



Stanford Design School 5-Stage Model



Stanford Design School 5-Stage Model



Conduct research to understand your users

- Interact and interview
- Shadowing
- Seek to understand
- Non-judgmental



Stanford Design School 5-Stage Model



Combine all the research & observe where the users' problems exist

- Synthesize the findings
- Extract insights and user needs
- Understand challenges and pain points
- Define an actionable problem statement

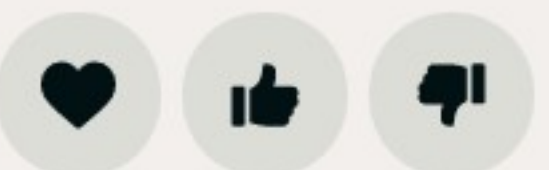


Stanford Design School 5-Stage Model



Generate a range of creative ideas

- Share ideas and alternatives
- Process of “going wide”
- Diverge/Converge
- Harness collective perspective of the team



Stanford Design School 5-Stage Model



Build real, tangible representations for a range of your ideas

- Make ideas physical
- Explore multiple options
- Deepen understanding of users
- Inspire others by showing the vision



Stanford Design School 5-Stage Model

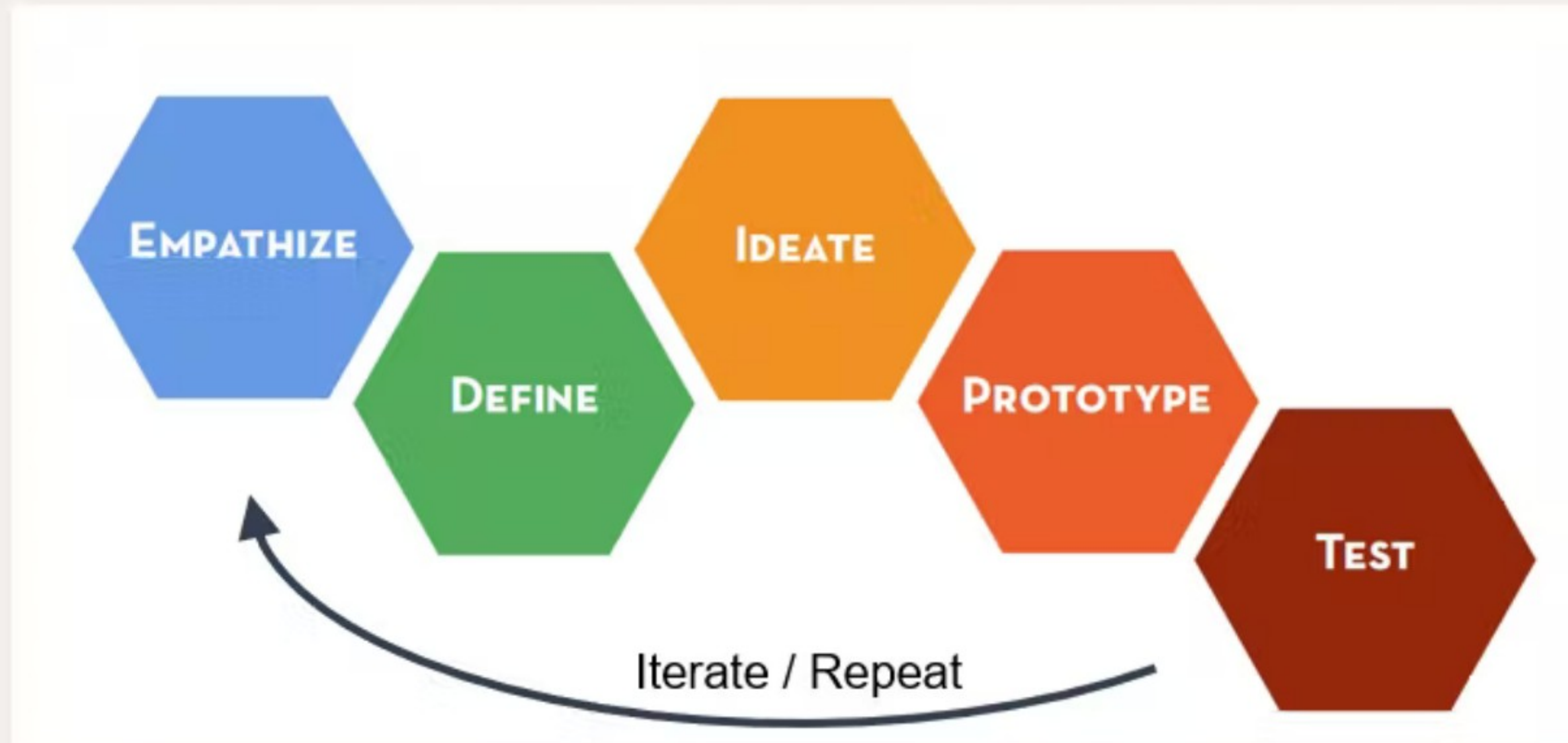


Return to users for their feedback & validation

- Refine prototypes and solutions
- Deepen understanding of users
- Validate the problem statement



Stanford Design School 5-Stage Model

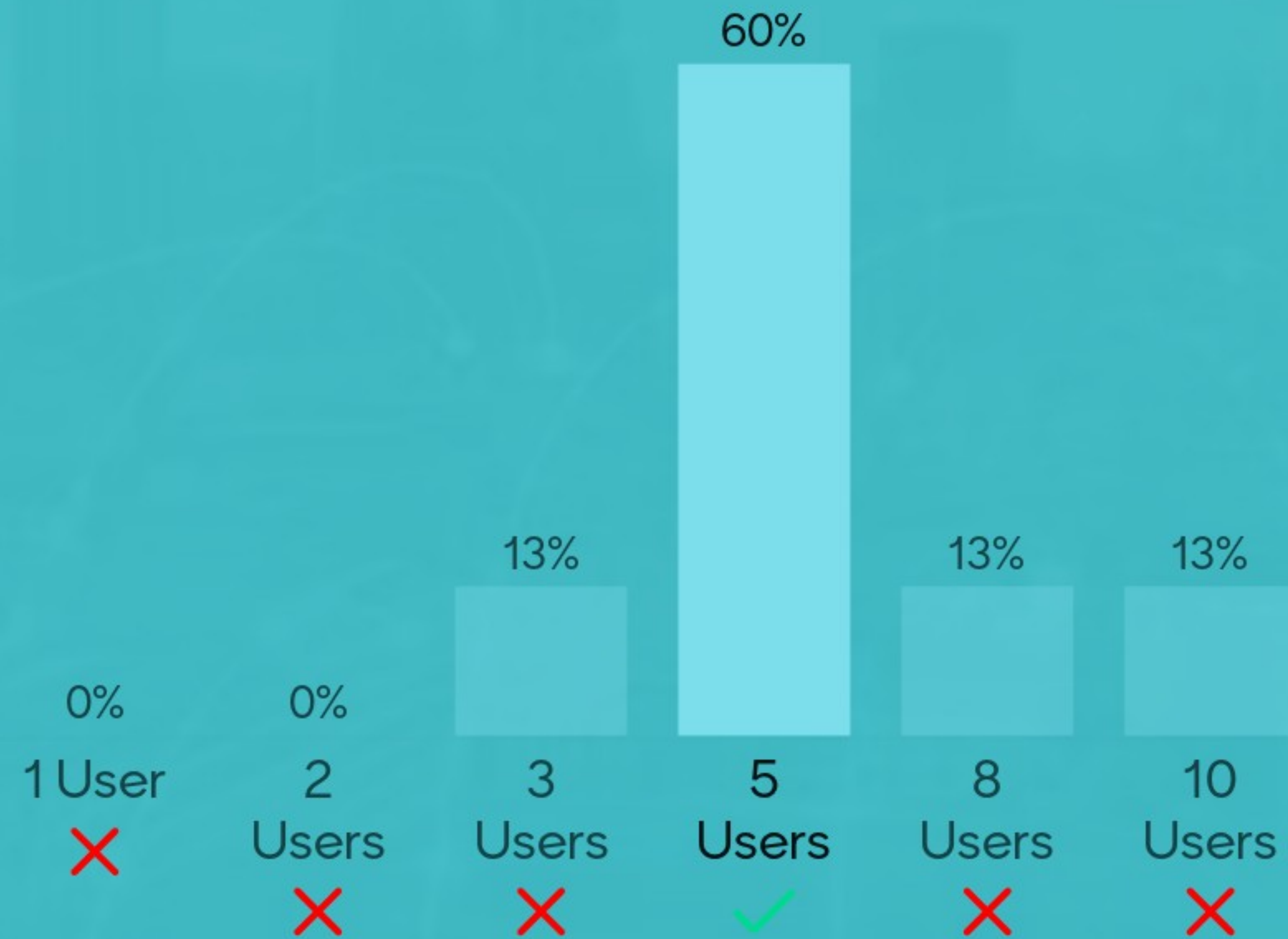


Is User Testing expensive?

Let's take a Quiz.



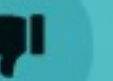
QUIZ: How many users do you need to test with to identify 85% of usability defects?





What we learned today

- Being visual is key to precise communication
- User Personas help teams better understand our users' needs
- Design Thinking is a problem-solving approach centred on the user
- Design Thinking encourages trial and error





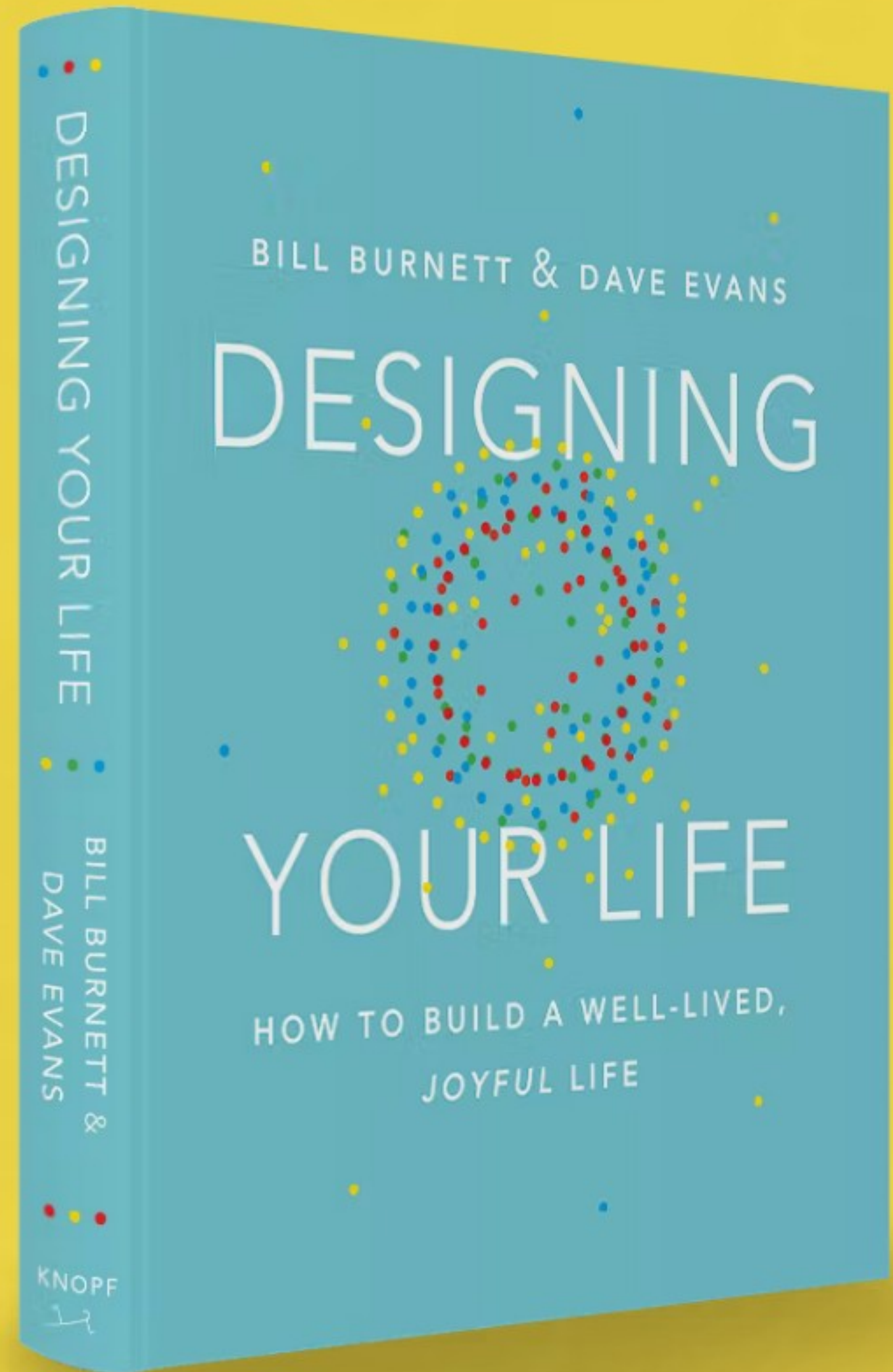
Design Thinking Resources

www.astrevo.com/2021/01/design-thinking-resources/



2





Designing Your Life

by Bill Burnett & Dave Evans

designingyour.life/the-book/

The book shows how design thinking can help us create a life that is both meaningful and fulfilling. It has useful fact-finding exercises and some very sensible advice for career growth.



Reflective Practice: How will you take ACTION on what you have learned today?

trust my gut feeling and incorporate user personas tomorrow morning on a project I'm working on

Get my hands on "Designing your Life" as not the first time I've heard good things about it.

More focus on drawing by me and by them

Focus on "user-centered" part of design thinking - start with empathy

already doing it; good to see was on the right path

Get more visualizations as part of design



Audeince Sharing

I need **1-2 VOLUNTEERS** to share how they plan to use their learnings today in the coming week at work.



On a scale of 1 to 5: How well did the presentation meet your expectations?



0 0 0 0 0
1 2 3 4 5





I publish a **popular monthly newsletter.**

Sign up for regular access at:
www.brucegay.com/signup/





LinkedIn QR code

Contact Bruce

→ bruce.gay@astrevo.com

→ www.astrevo.com

→ www.brucegay.com/signup



What questions do you have?

1 questions
0 upvotes

