



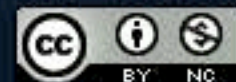
UNIVERSITY OF
MICHIGAN

Prototypes

INTRO TO UX

Mark W. Newman

Associate Professor, School of Information



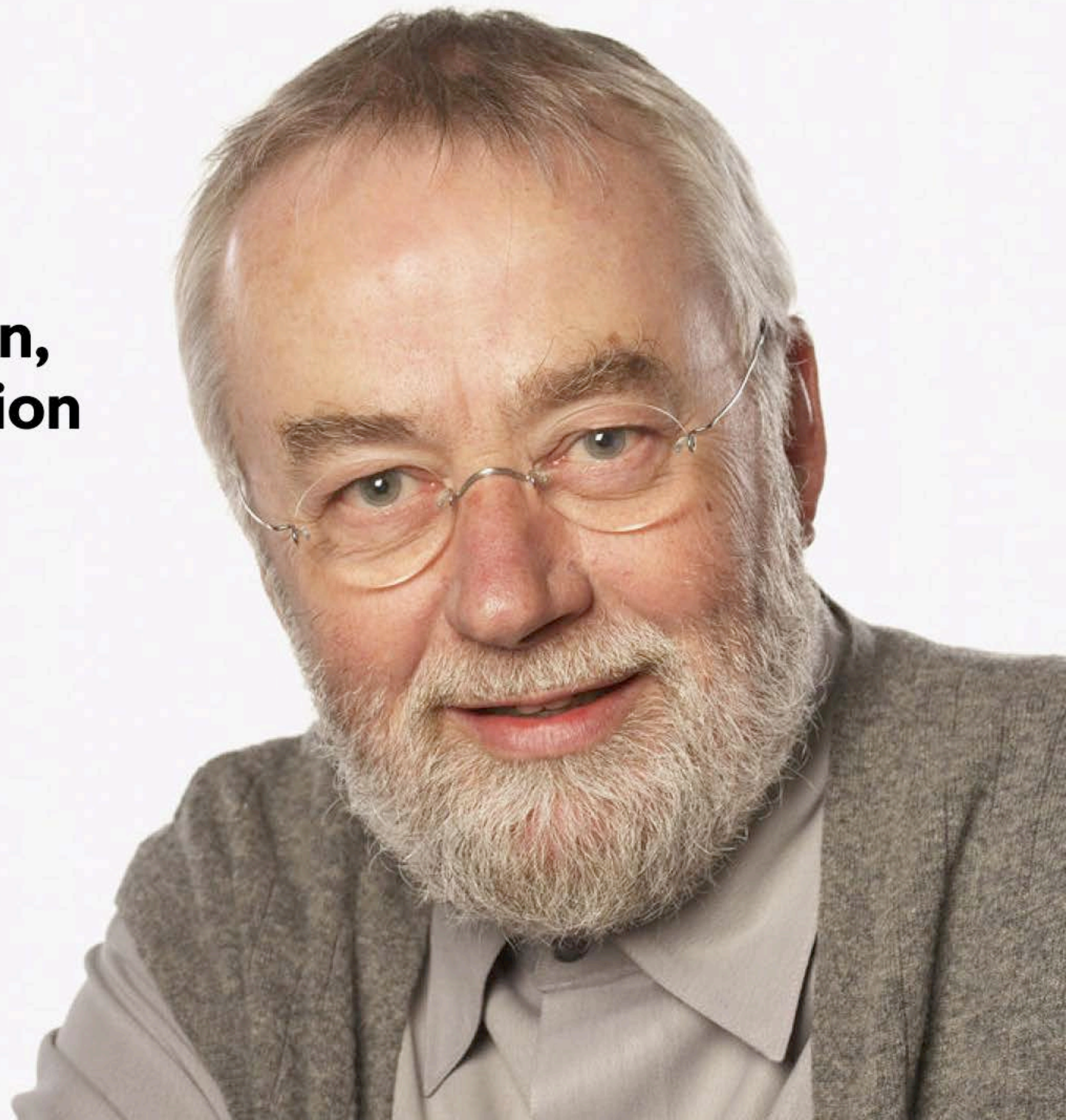
Prototypes

A Prototype is...

A prototype is...

**A representation of a design,
made before the final solution
exists.**

- Bill Moggridge



A prototype is...

**A representation of a design,
made before the final solution
exists.**

- Bill Moggridge

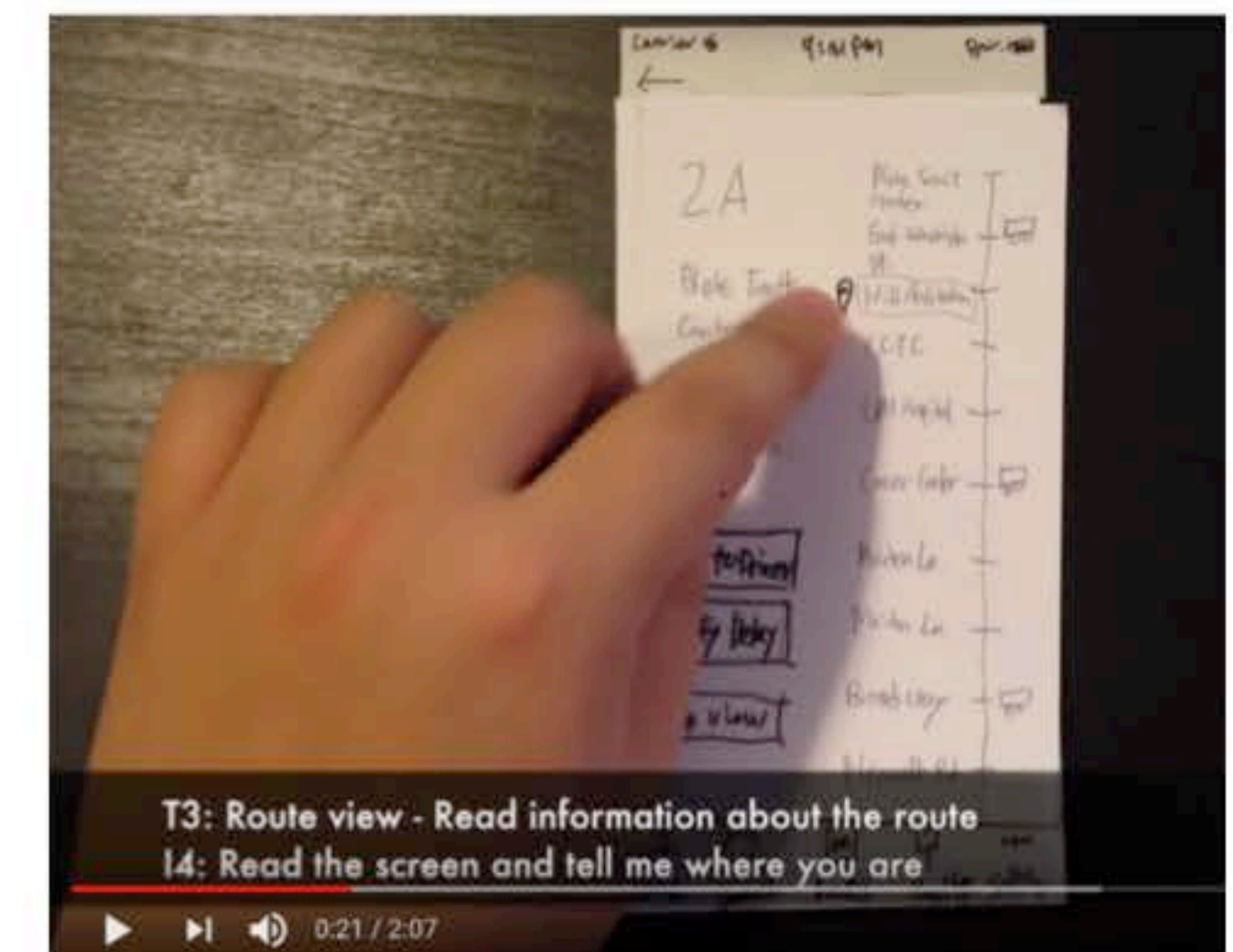
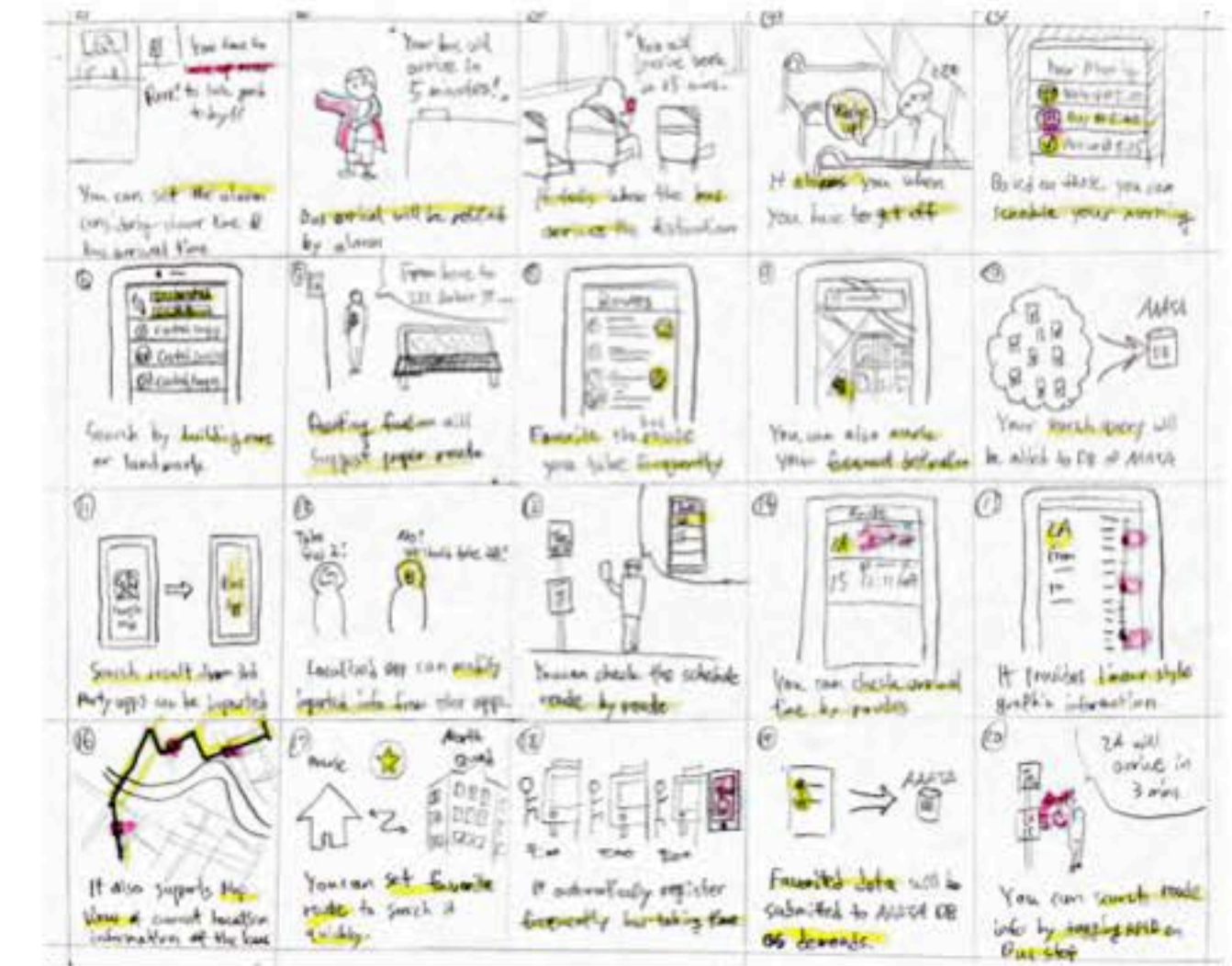
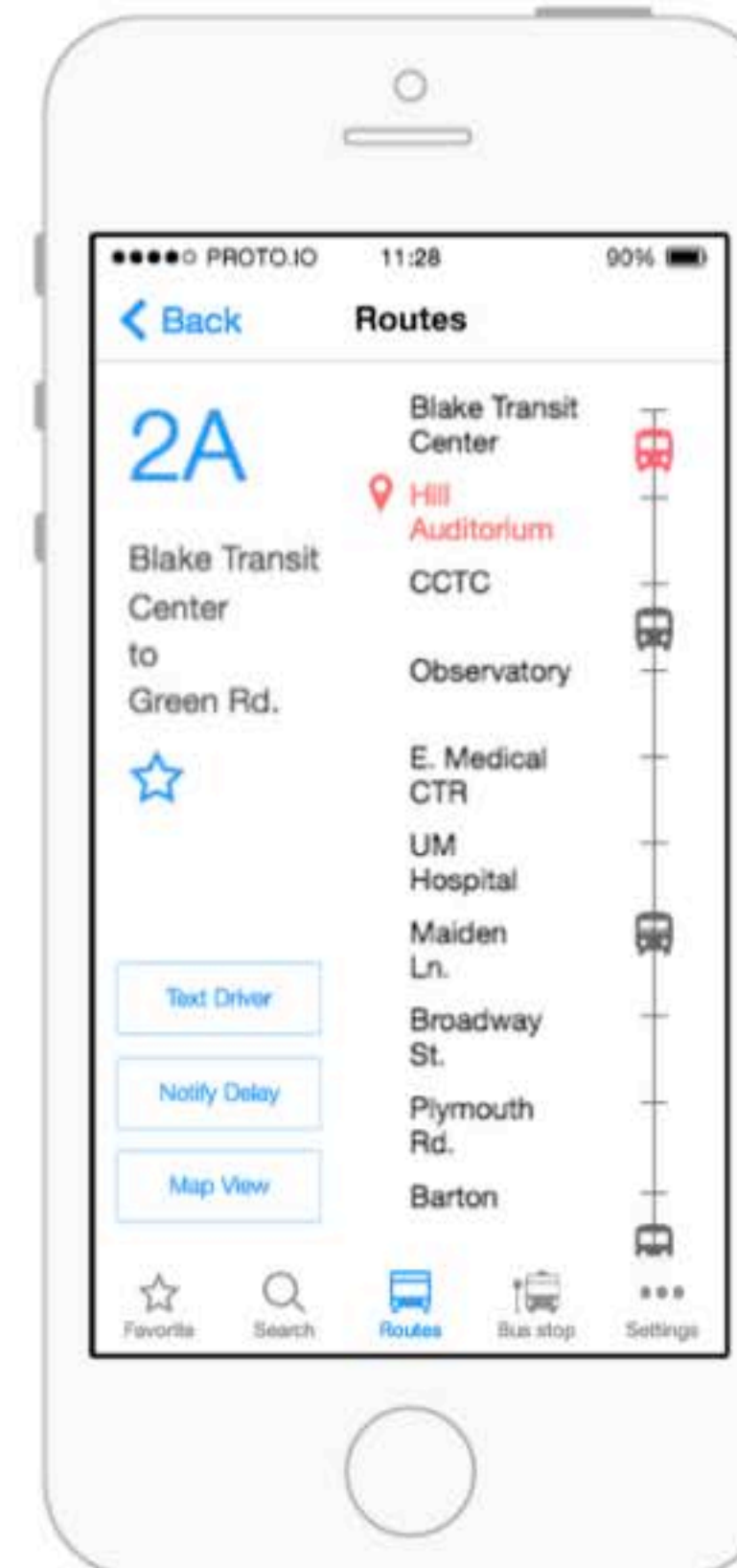


Why prototype?

- **Reification**
- **Reflection**
- **Communication**
- **Assessment**

Prototypes have many forms

- A “representation of a design” can mean a
 - Verbal description
 - Sketch
 - Storyboard
 - Navigation/flow diagram
 - Physical model
 - Video
 - Formal specification



But usually in UX...

WELCOME!

Let's set up your profile.



Name

Edit

Gender

OF OM OO

Birthday (Optional)

Phone Number (Optional)

All set!

Lo-Fi

Crime Alert

Report Crime

Description

I witnessed a car getting broken into today. I have attached a picture of the car.

Address of Crime

12

123 Blue Road, Detroit, MI

1294 Victory Lane, Detroit, MI

Optional: Add Media


 

Mid-Fi


AT&T 8:08 PM

Search


glove




\$8 12



\$5 3



\$14 12

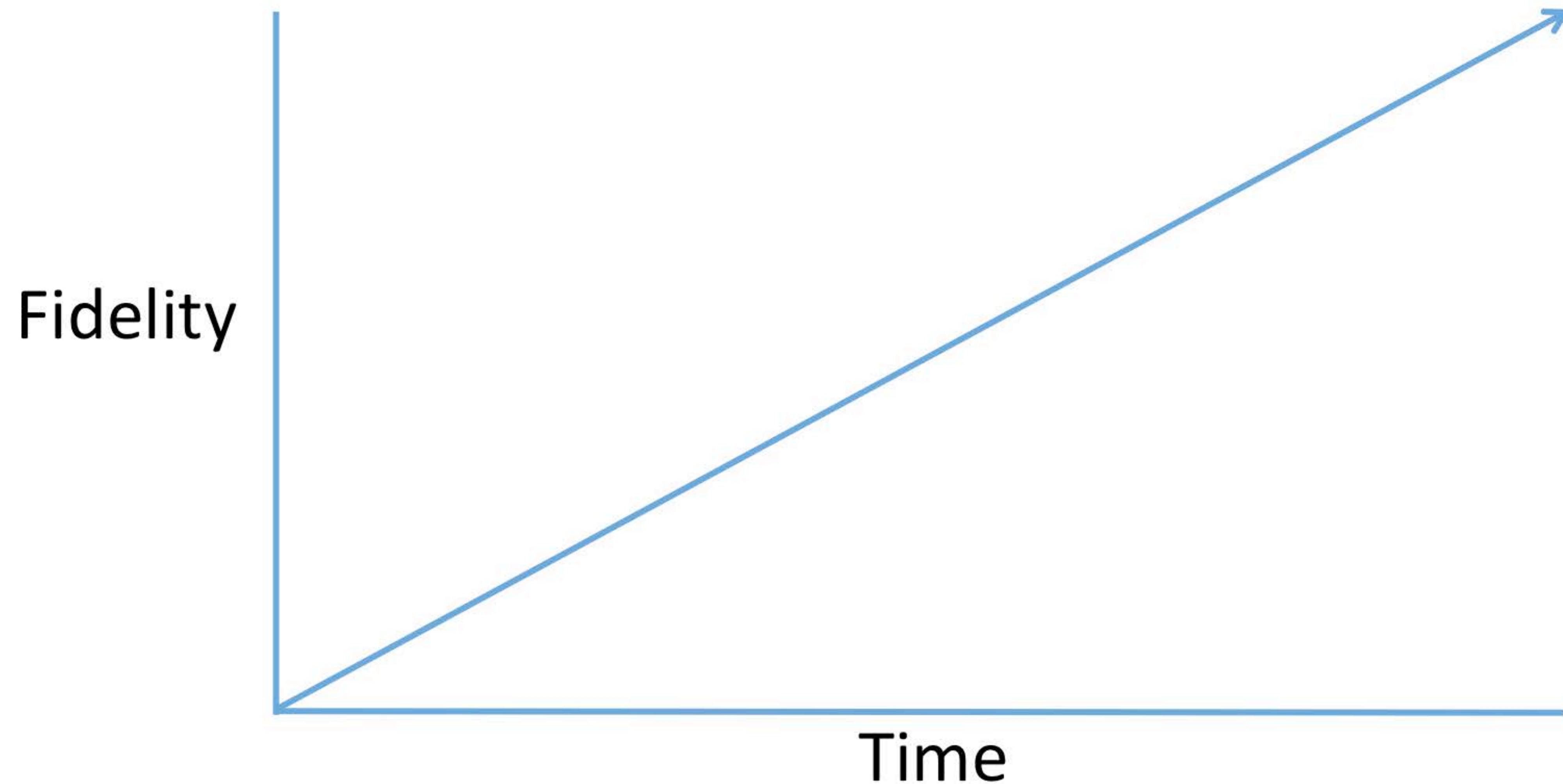


\$5 3

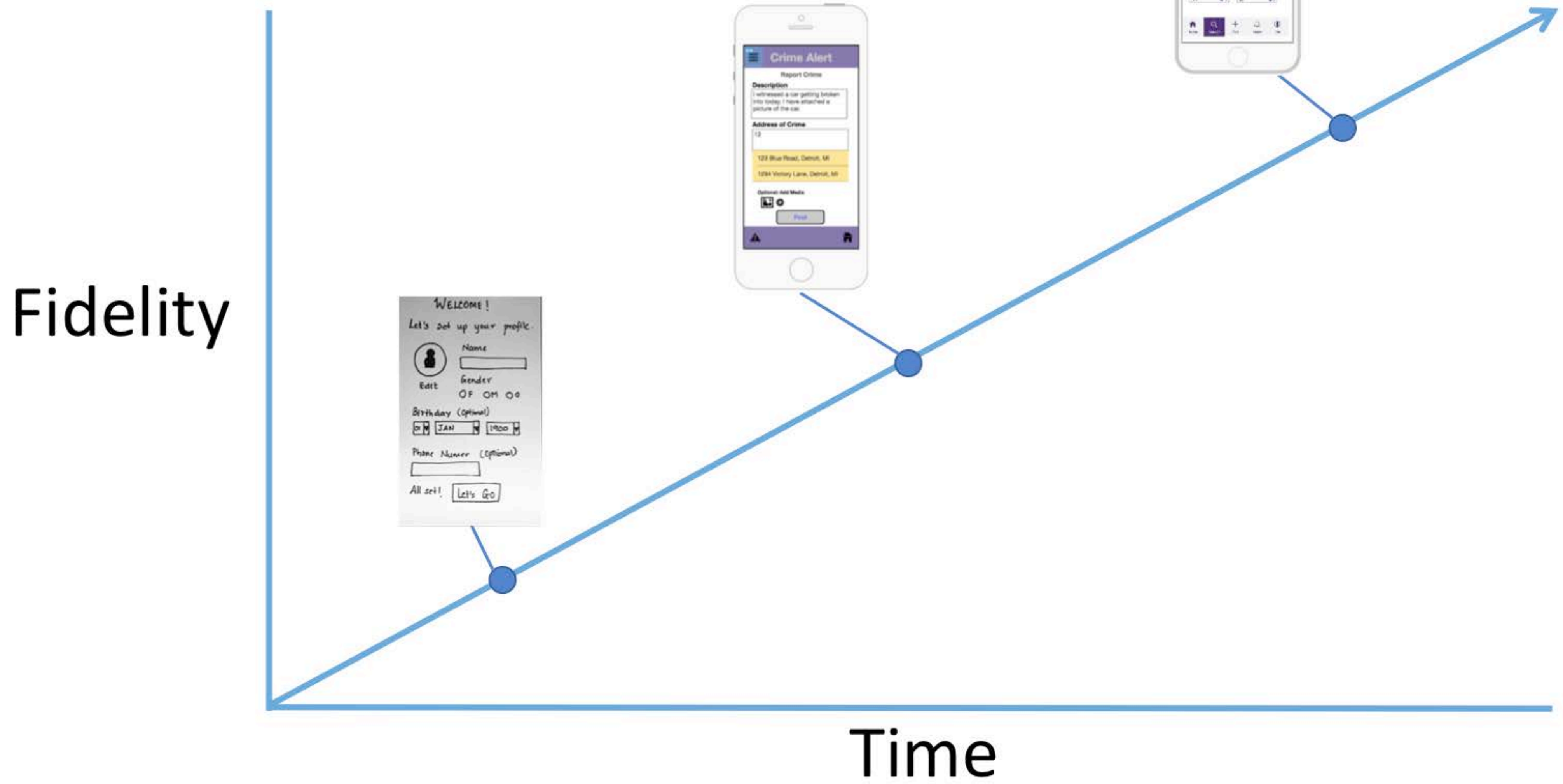
Home Search Sell Alerts Me

Hi-Fi

Progression of prototypes

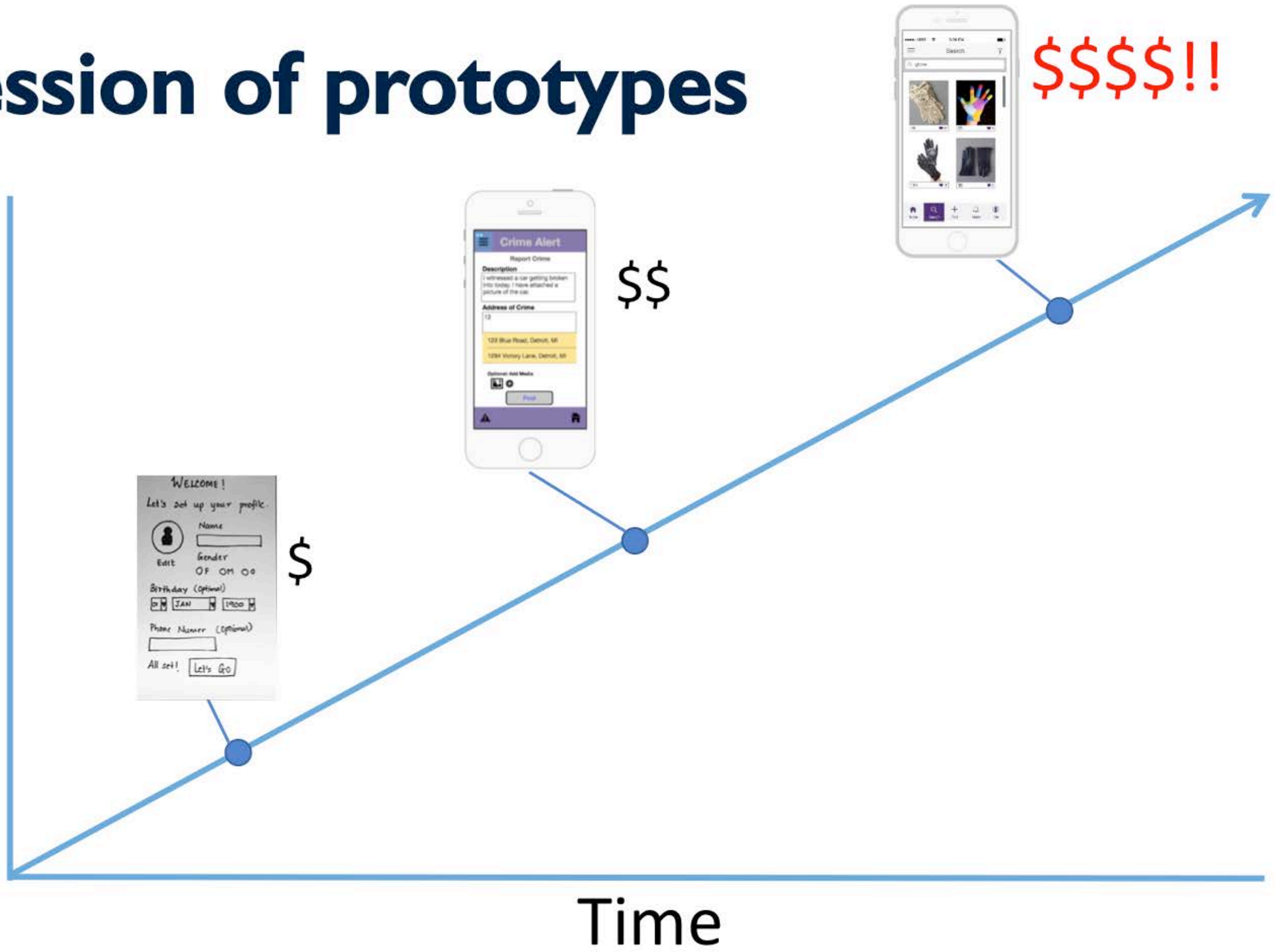


Progression of prototypes

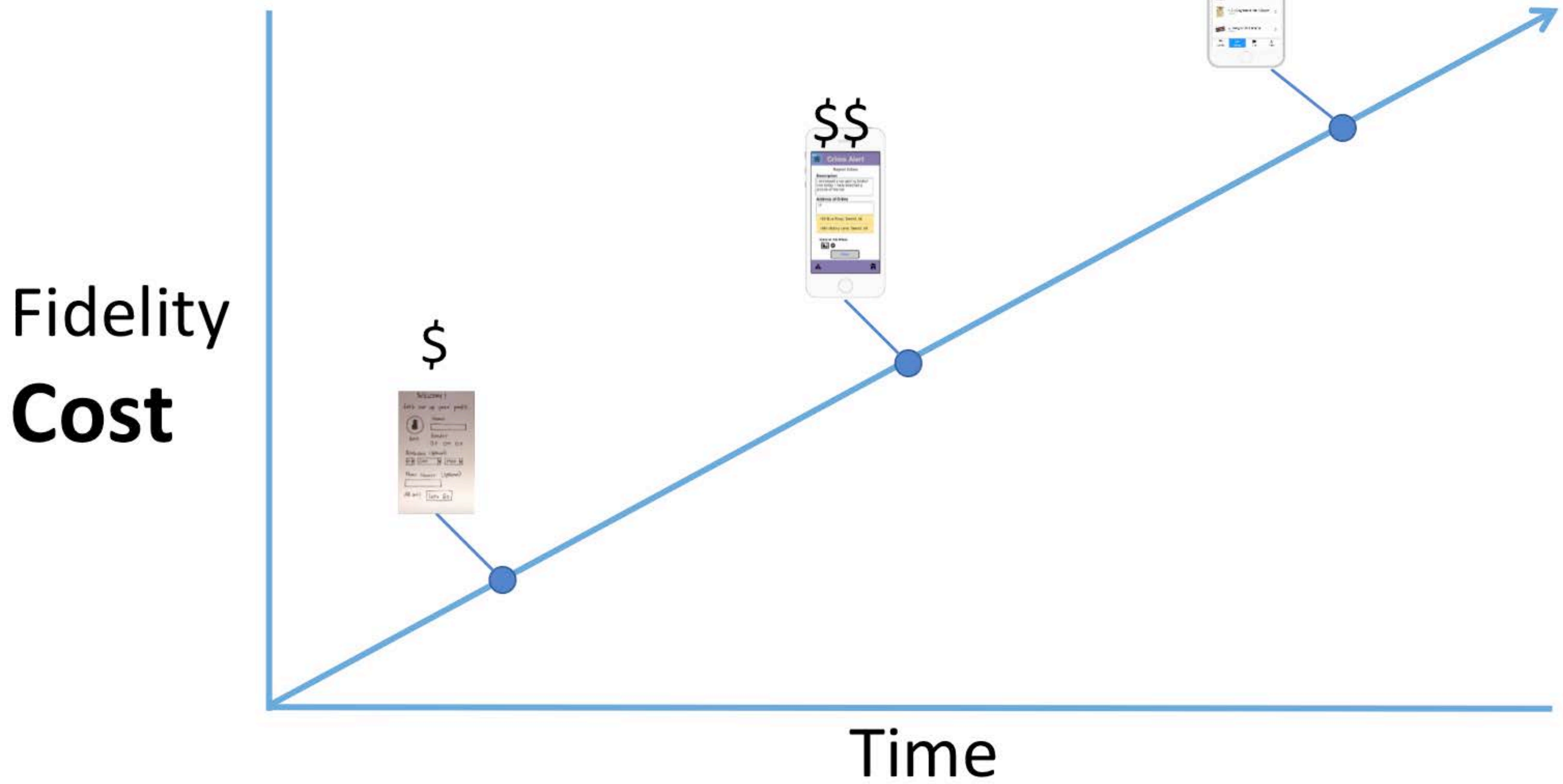


Progression of prototypes

Fidelity
Cost



Progression of prototypes




Lo-fi prototypes

A hand-drawn lo-fi prototype of a user profile setup screen. The screen is titled "WELCOME!" and "Let's set up your profile." It features a profile icon with the word "Edit" below it. The form includes fields for "Name", "Gender" (with radio buttons labeled "OF", "OM", and "OO"), "Birthday (Optional)" (with three dropdown menus showing "01", "JAN", and "1900"), "Phone Number (Optional)" (with a text input field), and a "Let's Go" button at the bottom.

WELCOME!

Let's set up your profile.

 Edit

Name

Gender
OF OM OO

Birthday (Optional)
01 JAN 1900

Phone Number (Optional)

All set!

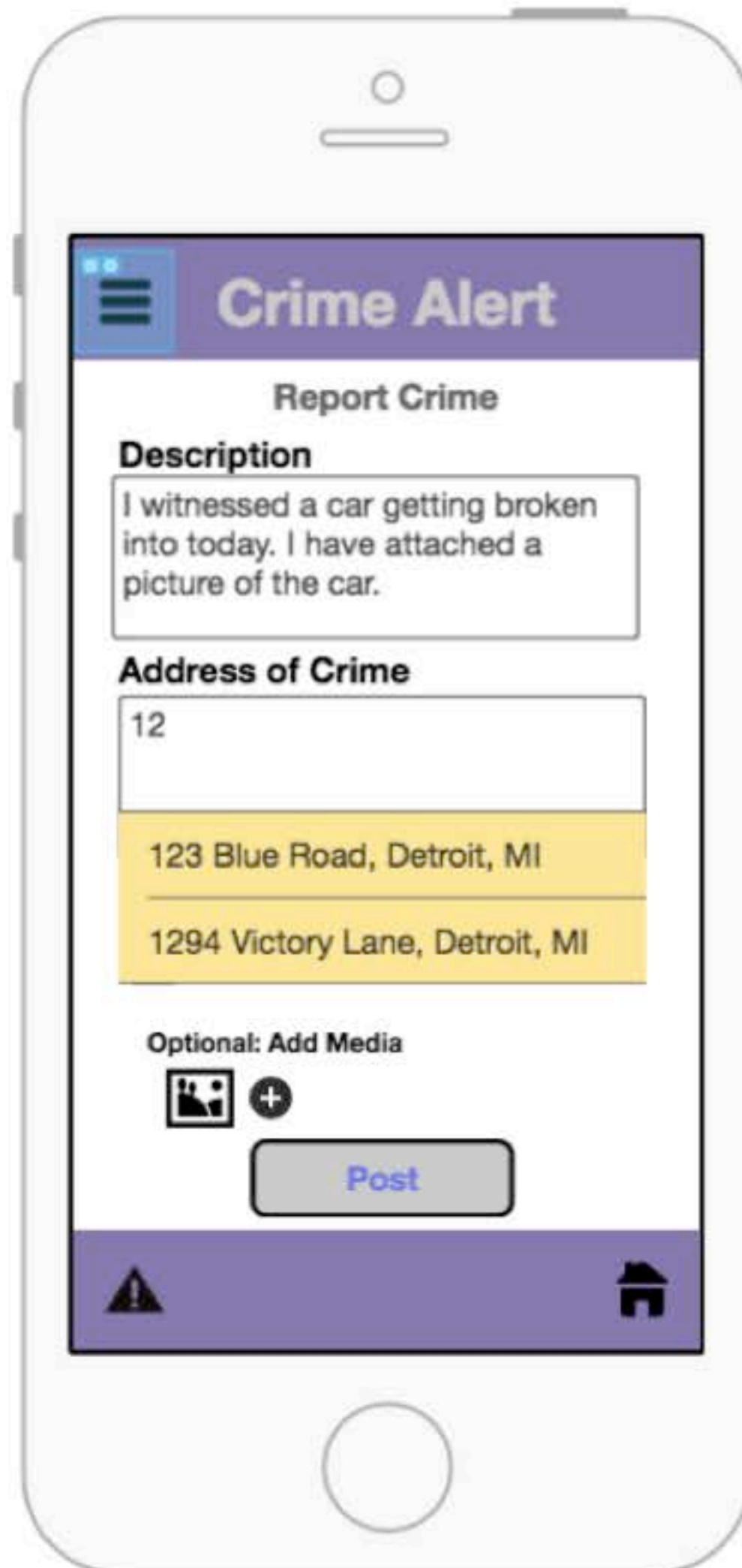
Address

- **Functionality**
- **Basic organization**
- **Task flow and coverage**

Ignore

- **Graphics**
- **Programming**
- **Real data**

Mid-fi prototypes



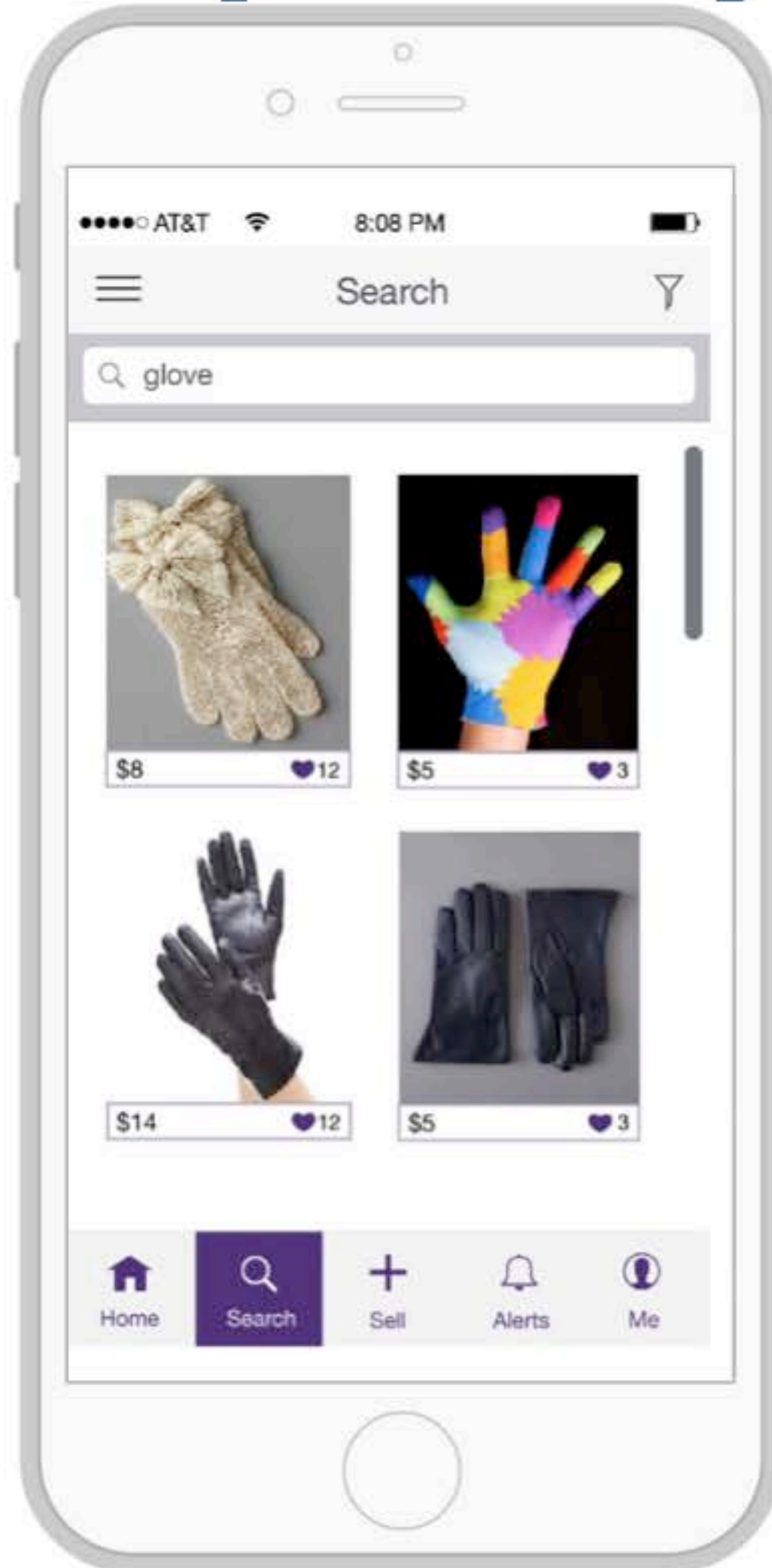
Address lo-fi concerns, plus

- **Layout**
- **Interactivity**
- **Navigation**

Ignore

- **Graphics**
- **Programming**
- **Real data**

Hi-fi prototypes



Address lo-fi concerns, plus

- **Graphic design**
- **Interaction details**
- **Realistic data**

Ignore

- **Backend programming**
- **Complete functional coverage**

Economic principle of prototyping

The best prototype is the one that, in the simplest and most efficient way, makes the possibilities of a design idea visible and measureable.

- Lim, Stolterman, and Tenenberg

Premature commitment

- Investing resources (time, money) in a dead end
- Problems
 - Waste money and effort
 - Exhaust project resources/timeline, stuck with a bad design
 - Cognitive and emotional commitments hard to undo

Lo-fi prototyping maximizes the number of times you get to refine your design *before you commit to code*

(or manufacturing, etc.)

**Lo-fi prototyping uses lightweight materials that are
*quick, cheap, and easy to change***

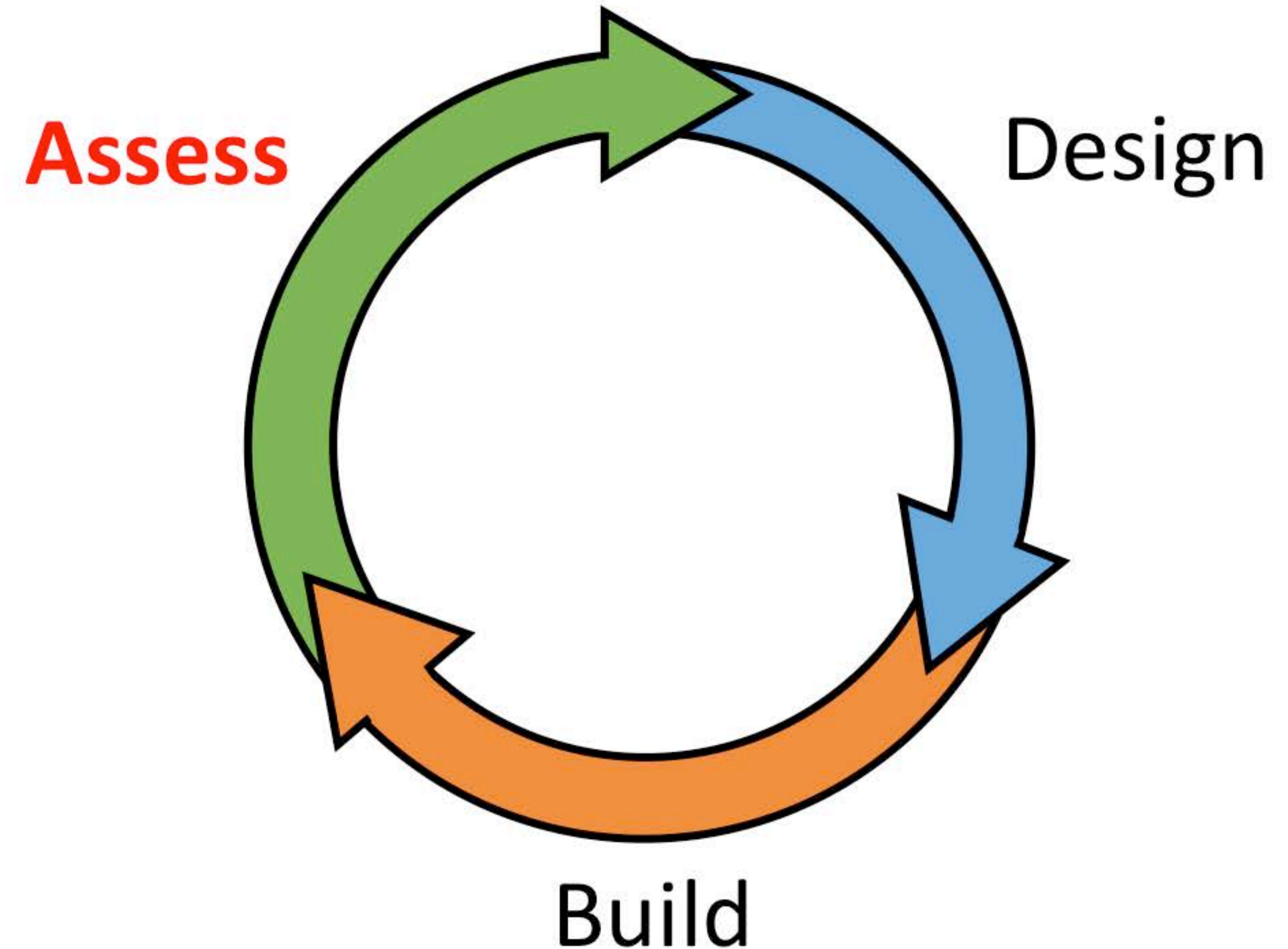
**lo-fi prototypes are
not precious, and
therefore invite more
*honest critique***

-Bill Moggridge



What happens before prototyping?

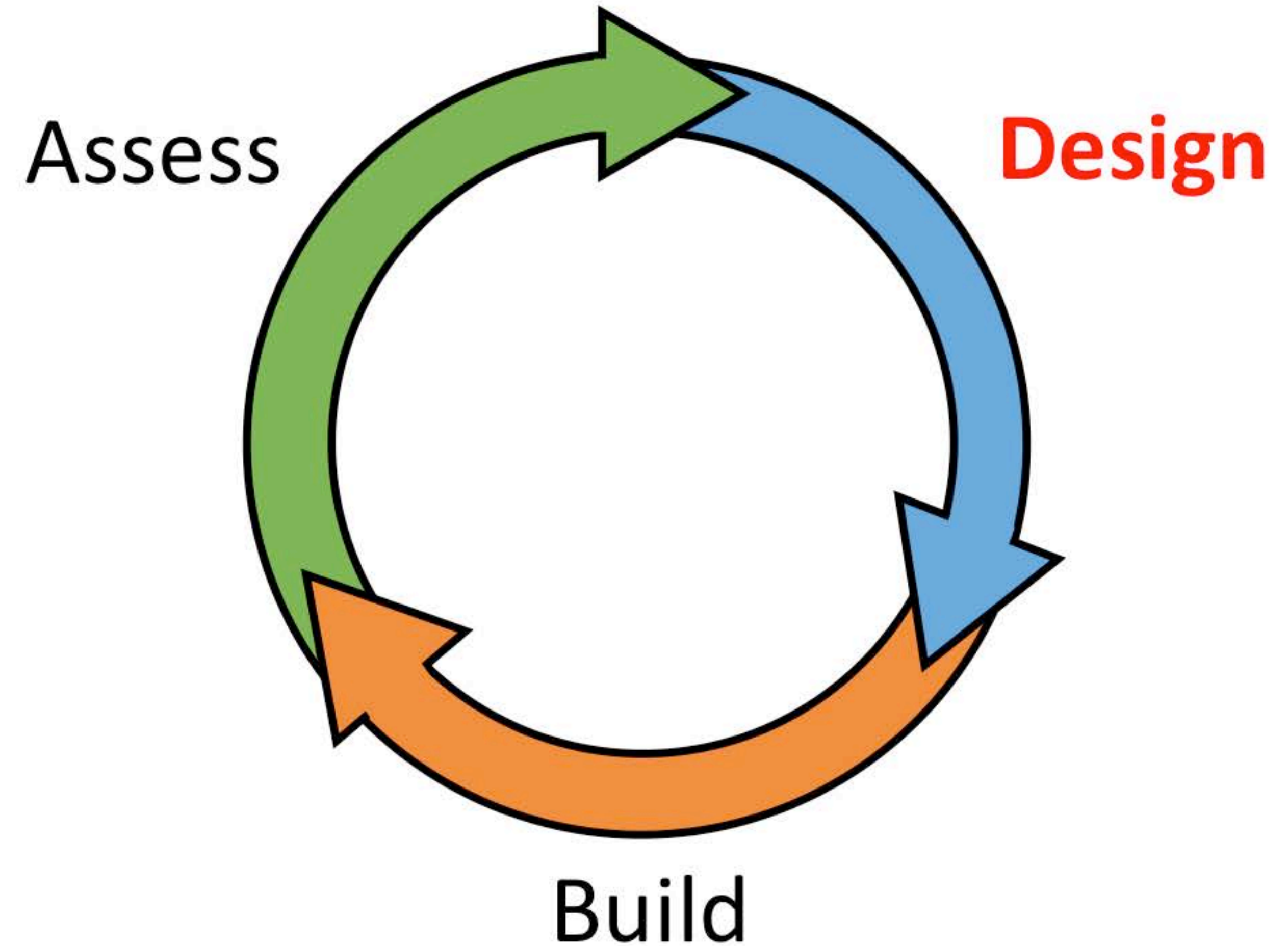
- **Assess current needs**
- **Establish guidelines and constraints**
- **Personas, scenarios, user stories, requirements**



What happens before prototyping?

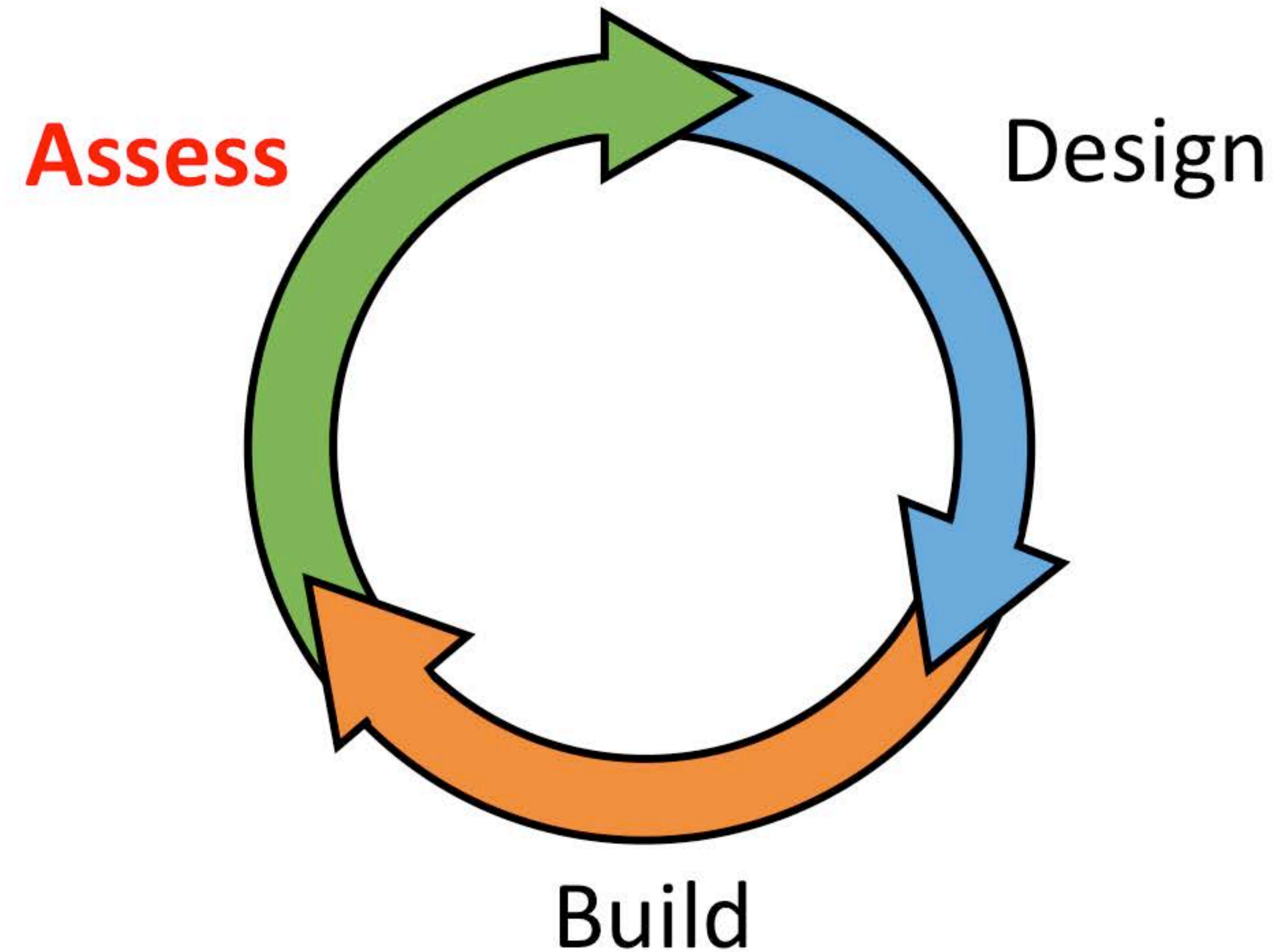
Design!

- Ideation
- Sketching
- Selection
- Synthesis



What happens after prototyping?

- **Assessment**
- **Redesign**
- **More prototyping**



Prototypes

- **Embody design concepts**
- **Facilitate**
 - **Thinking**
 - **Communication**
 - **Assessment**

Attributions

“[Bill Moggridge at CIID](#)” by [Mayo Nissen](#) is licensed under CC BY-NC

“[Storyboard Sketch](#),” “[Video Sketch](#),” and “[Fireshot Capture](#)” are provided by Je Seok Lee

“[Lofi Screenshot](#)” and “[Hifi Example](#)” are provided by [Jaee Apte](#)

“[Midfi](#)” is provided by Micaela Hunter