

Iterative Design

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COMS 4170

Goal 2

When the needs and abilities of users are unclear, design systems by **learning from iteration** and experimentation.


Part 3: Editing the Party Planning Committee

The interface to edit the party planning committee (PPC) is a drag and drop direct manipulation interface as described below.

1. The PPC UI needs to display two lists:
 - 1) a list of all the [employees seen here](#), and
 - 2) a list of people on the party planning committee.In its default state, the party planning committee list must have a div at the top of the list to serve as a drop target.
3. Using JQuery Draggable and Droppable, make the PPC list to the head of the of the PPC list, and make it also be true: names from the PPC list must be implemented in the Module.
4. To cue that an element is draggable, its background turns light yellow, and the background turns light blue when it is being dragged.
5. While the item is being dragged, the background turns light blue, and the background turns light yellow when it is being dropped.
6. While the item is being dragged, it should have a light blue background.
7. While the item is being dragged, the background turns light blue.
8. When the item is dragged over the drop target, the background turns light yellow.
9. If an item is "dropped" anywhere other than the drop target, the background turns light blue.

Note:
When the user toggles between the Logging and the Party Planning Committee, the state should be stored in a javascript variable that is available to both. However, for this implementation, it is not necessary.

Please submit your HTML, CSS, and JS files, a screenshot of the interface, and a video of the interface in action.



Keep a list of the
party planning committee

Clear needs, abilities, goal

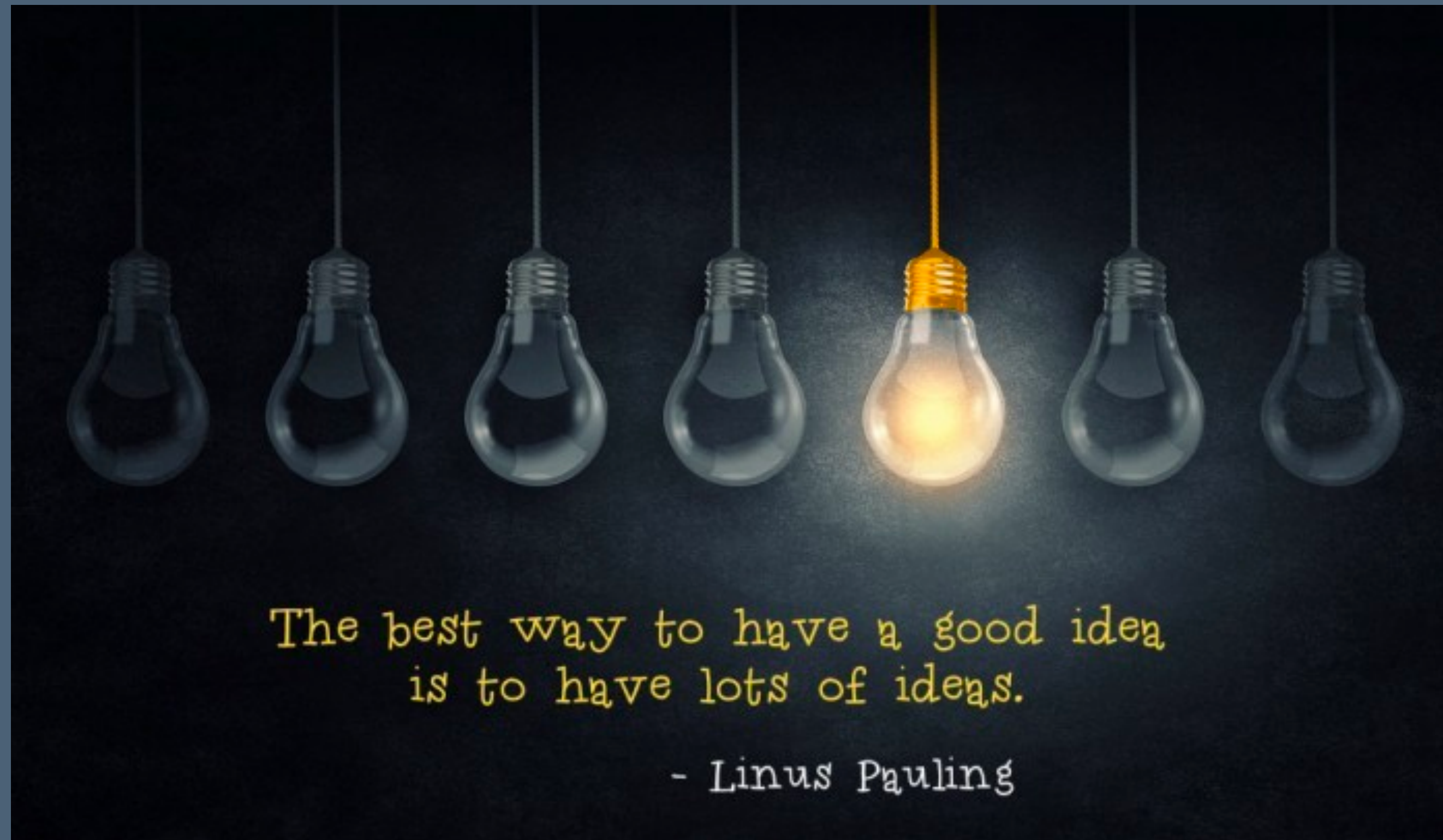
Unclear needs, abilities, goal

Milestone 2

What are domains and specific needs that involve:

**Interact with multiple videos on a page
in a way that brings more value
than simply watching them?**

So far, you have brainstormed ideas



- Ideas are a good starting point.
- But ideas are cheap
- Let people steal your ideas.
- **Execution** is all that matters.

Design process: How do we get from Idea to Product?

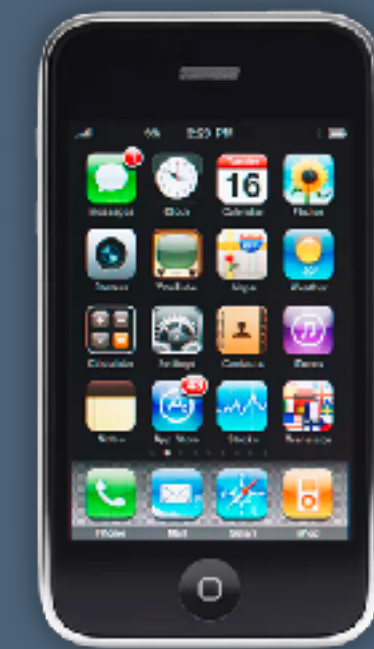


Idea



Product

What we expect design to be:



Idea

Product

What design is:



Idea

Product

The Waterfall Model

Idea

Requirements

Design

Implement

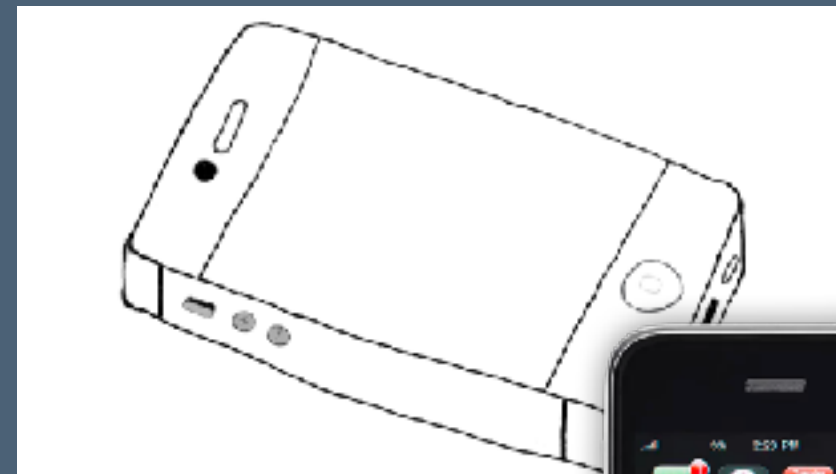
Fix bugs

Finished Product!

The Waterfall Model

Phone + iPod + Internet

- * One button
- * Touch Screen
- * Soft keyboard



Idea

Requirements

Design

Implement

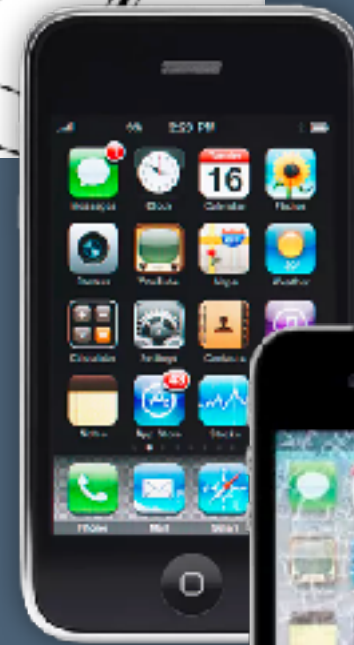
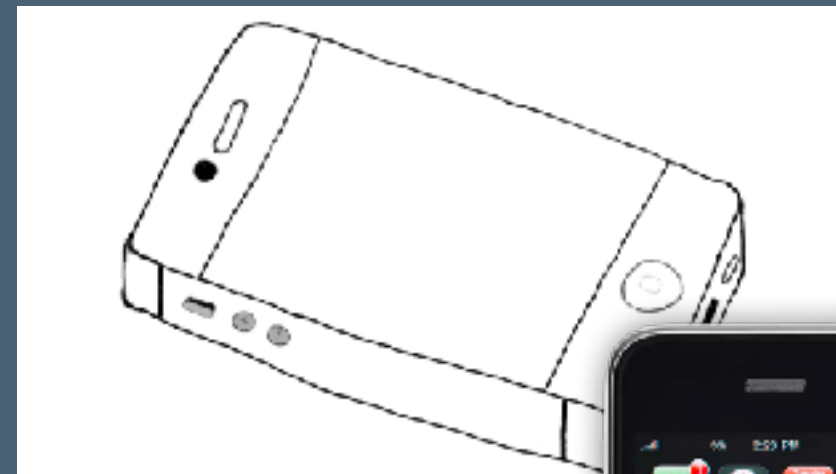
Fix bugs

Finished Product!

Problem: The Waterfall Model is linear. It cannot accommodate unknowns

Phone + iPod + Internet

- * One button
- * Touch Screen
- * Soft keyboard



Idea

Requirements

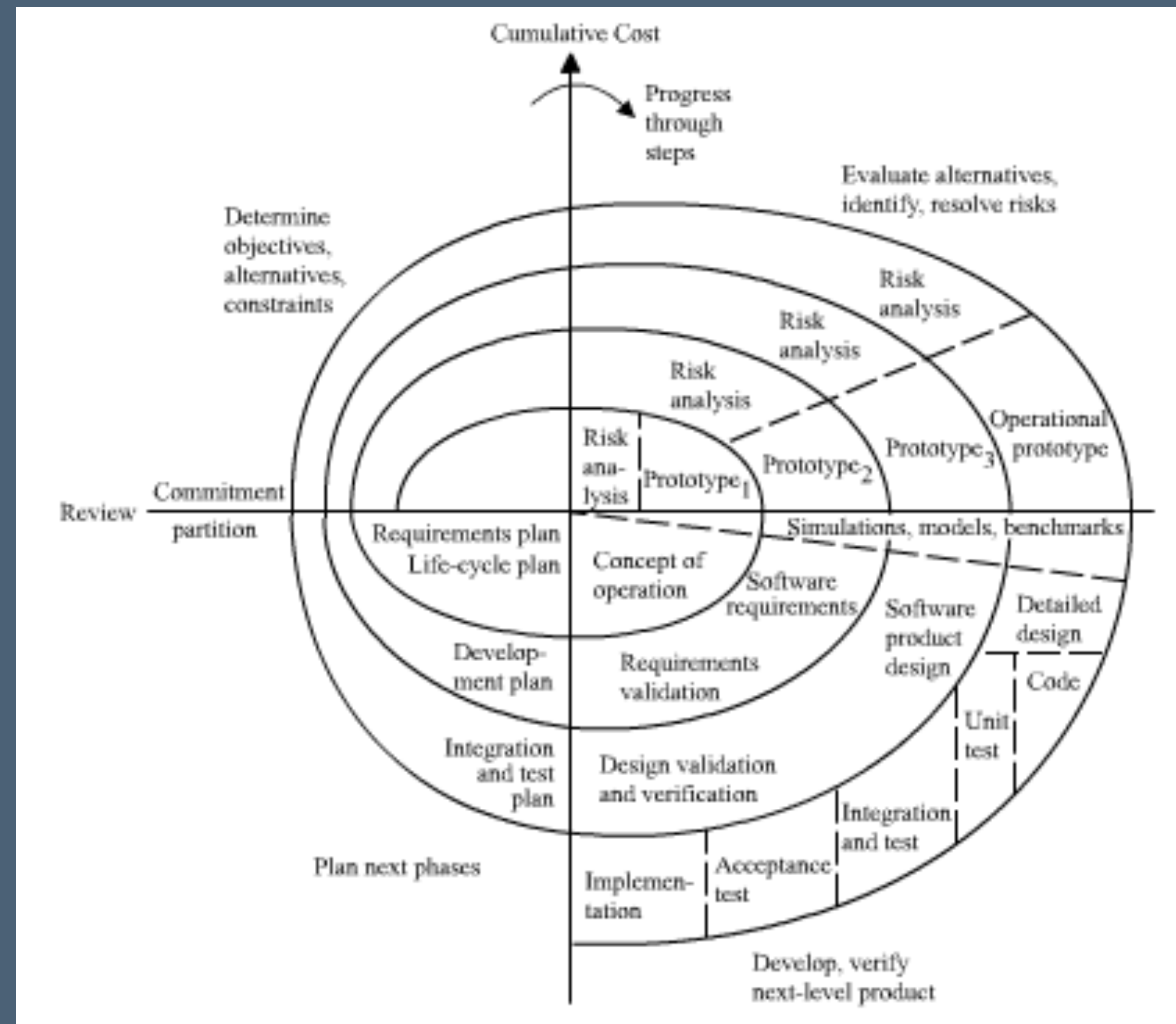
Design

Implement

Fix bugs

Finished Product!

Barry Boehm (USC) 1986: The design process should mitigate risk



Waterfall Model vs. Risk Mitigation?

Idea

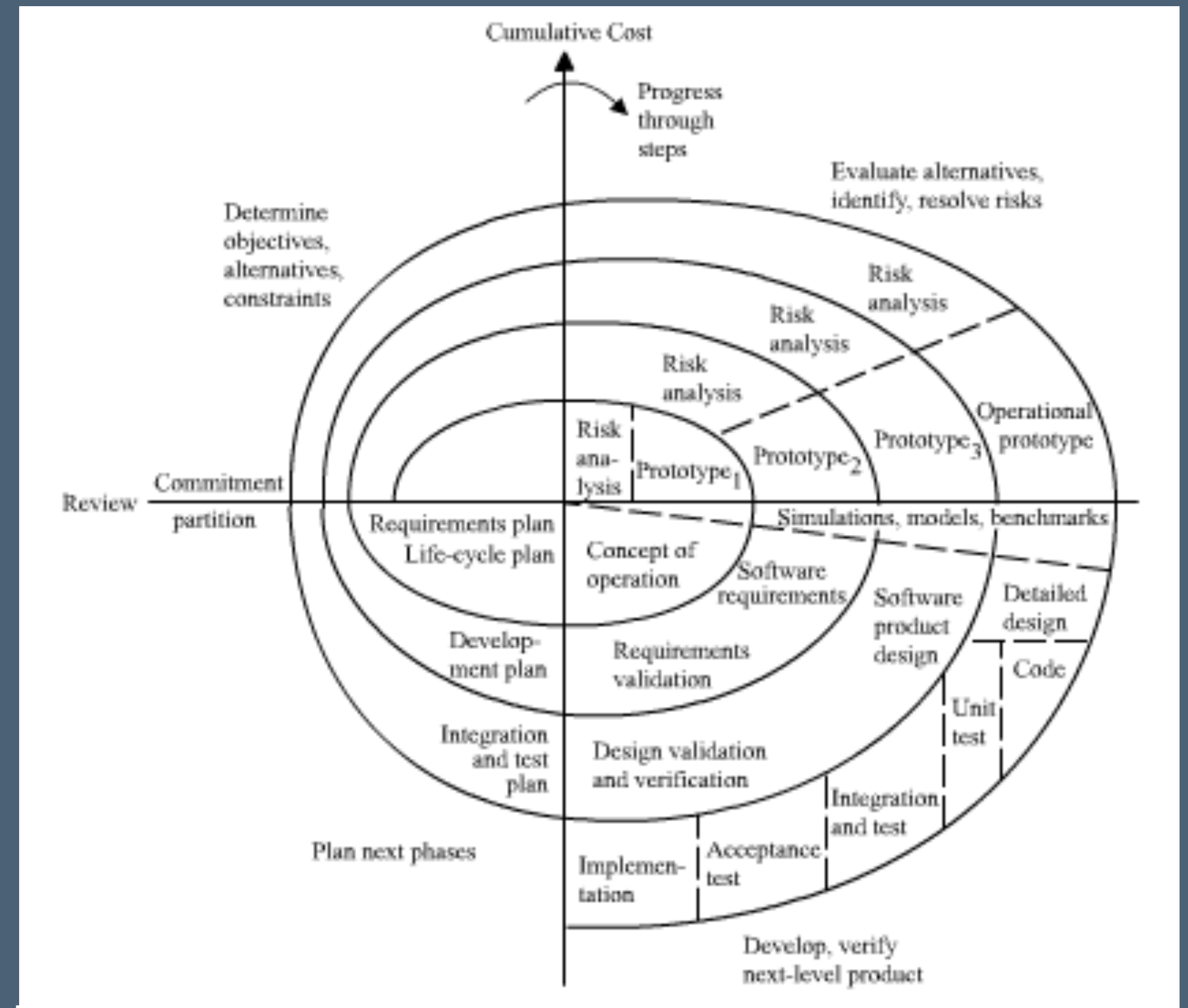
Requirements

Design

Implement

Fix bugs

Finished Product!



Waterfall Model vs. **The Spiral Model**

Idea

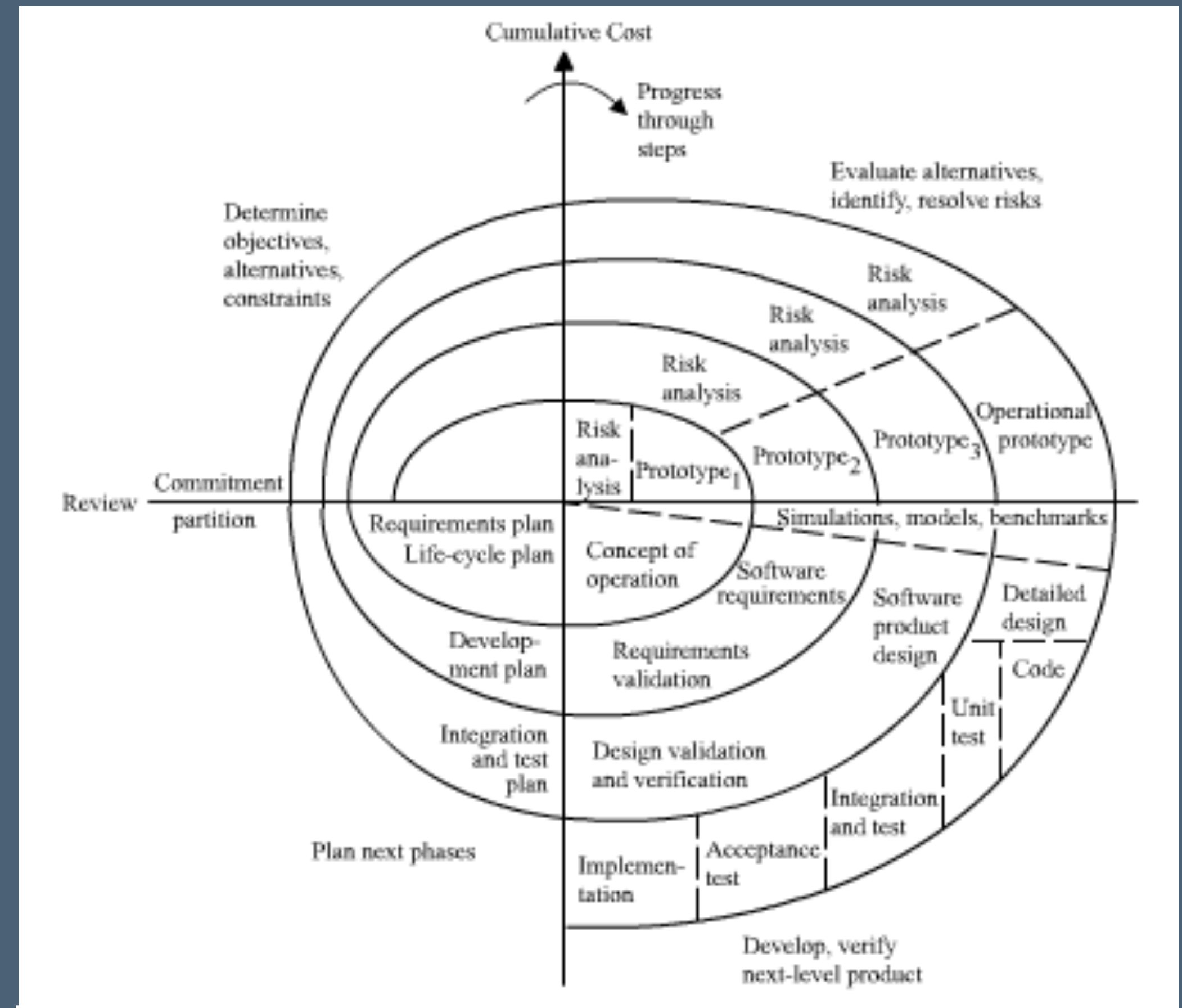
Requirements

Design

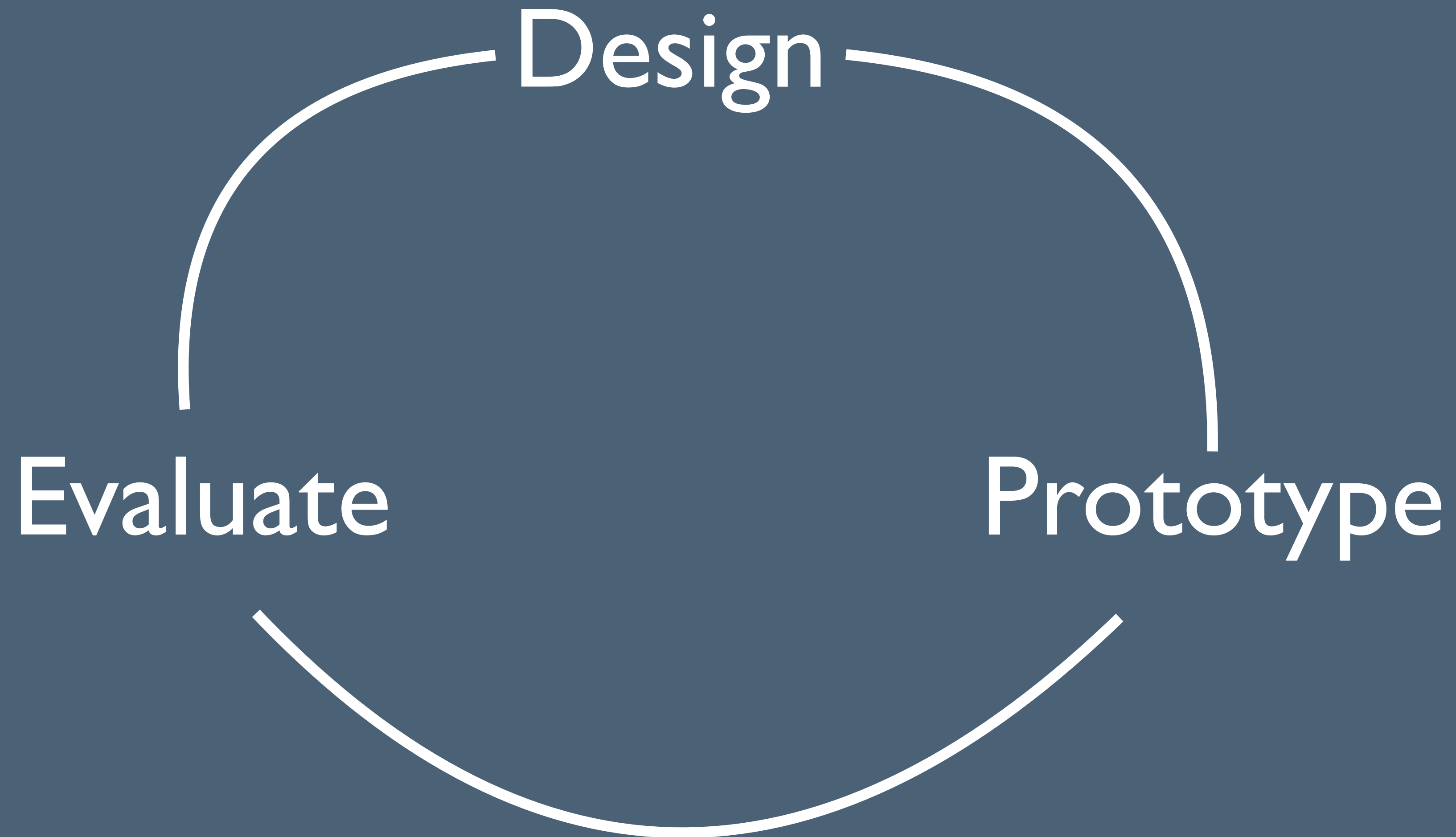
Implement

Fix bugs

Finished Product!



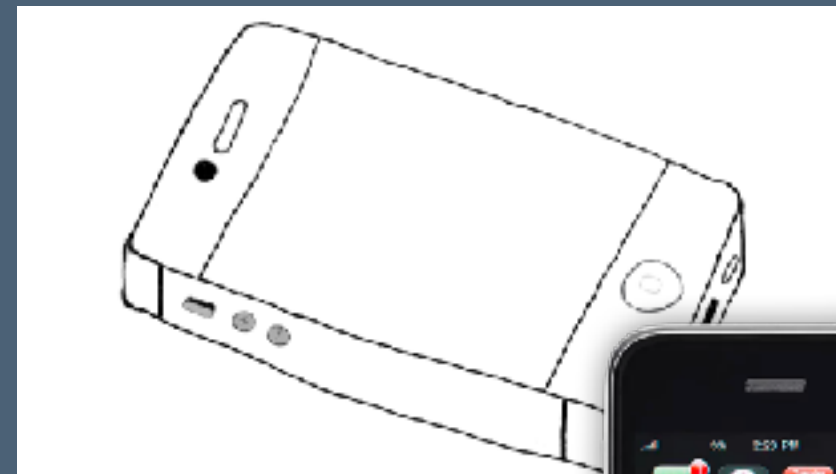
Iterative Design



Instead of the Waterfall Model...

Phone + iPod + Internet

- * One button
- * Touch Screen
- * Soft keyboard



Idea

Requirements

Design

Implement

Fix bugs

Finished Product!

Iterative Design:

Every new **concept** is a risk.
Every risk needs to be **prototyped**.



new concept



new concept

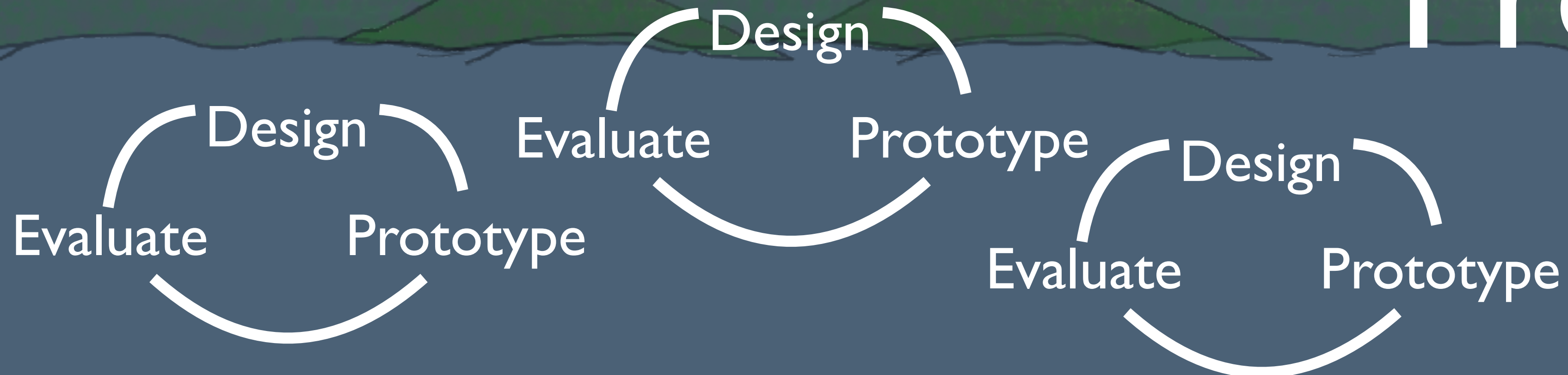


new concept



Idea

Product



Iterative Design:

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Touch screen



Soft keyboard

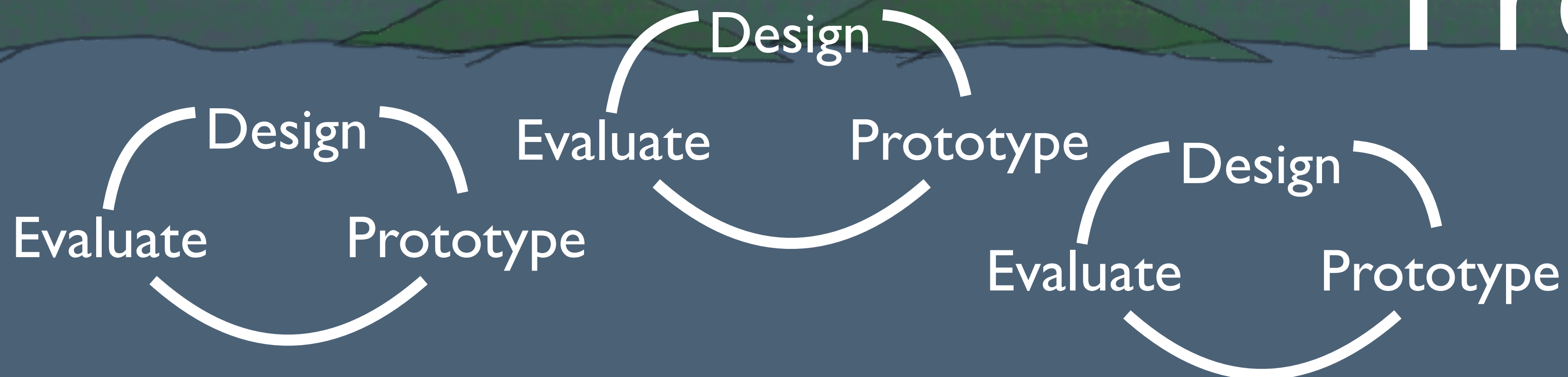


One button



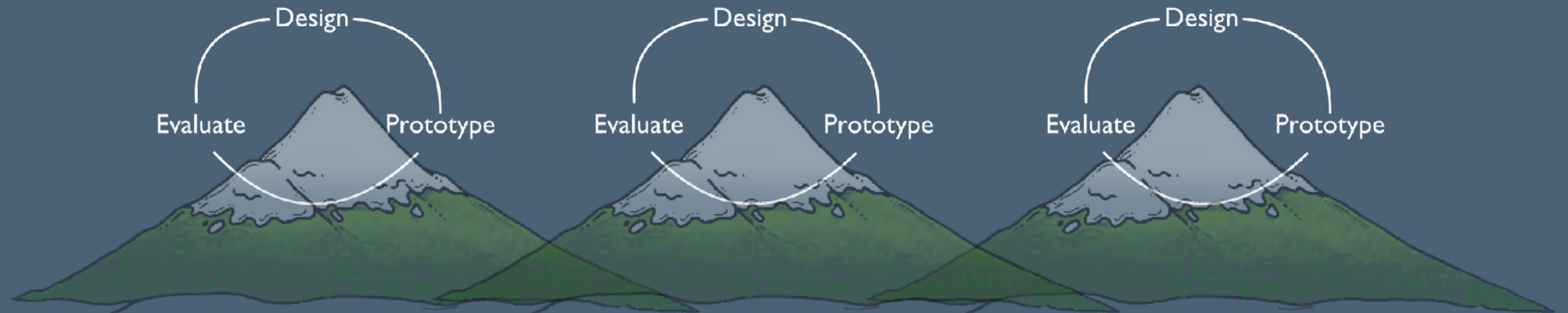
Idea

Product



When you design:

What are the new concepts you need to prototype?



Idea: Autonomous Wandering Interface



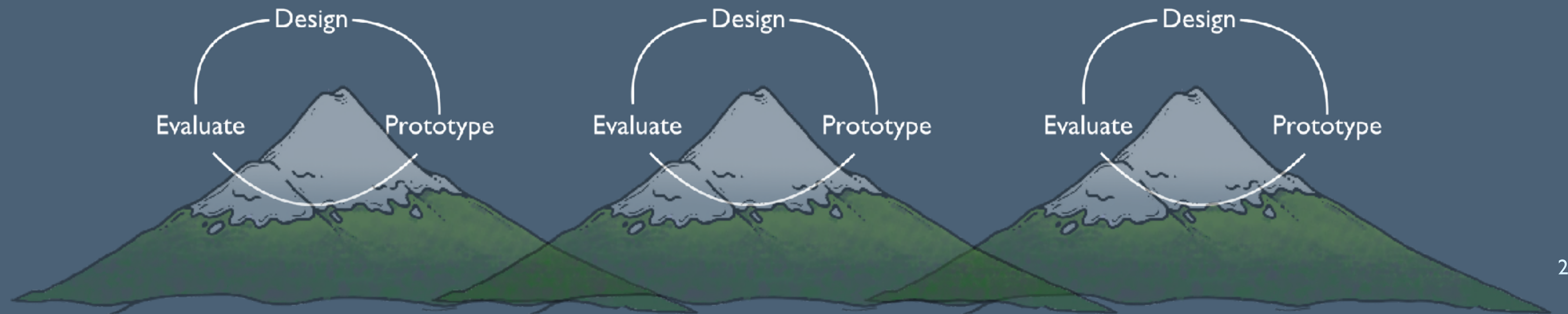
In the video:

**What were the new concepts
that we would need to
prototype?**

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**What were the new concepts
that we would need to
prototype?**

**Every new concept is a risk.
Every risk needs to be prototyped.**



**What concepts did they
prototype (and how)?**



**What concepts did they
prototype (and how)?**

Determine the risky new ideas



Prototype the risks

Can the drone carry the stuff?



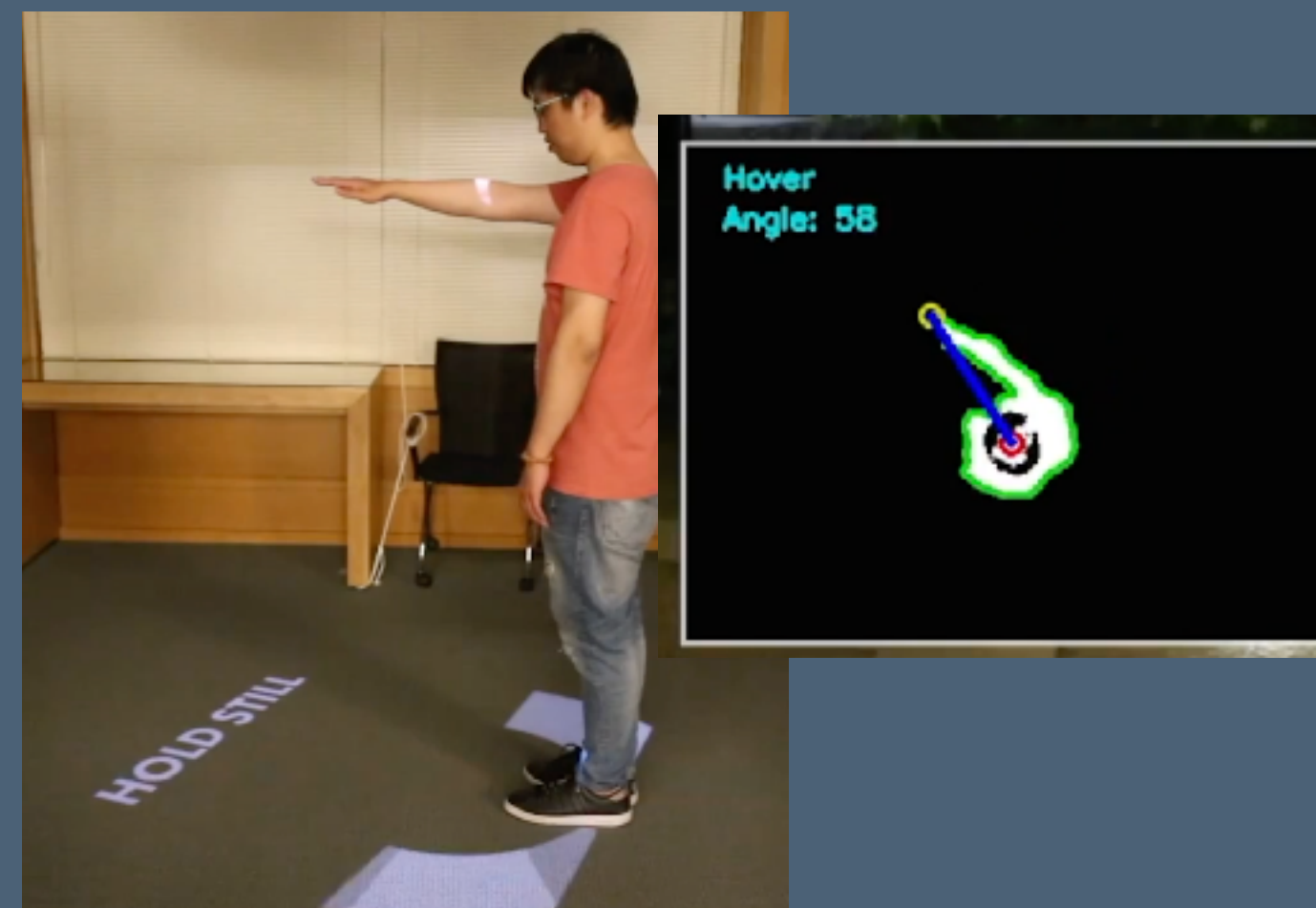
Can users select from menu?



Can users select symbols?



Can the camera detect hands?



User interaction with projection



Can users select outdoors?



**What new risks were learned
from instantiation?**

Drift: How do you think the prototypers felt?



Prototyping can feel like this:

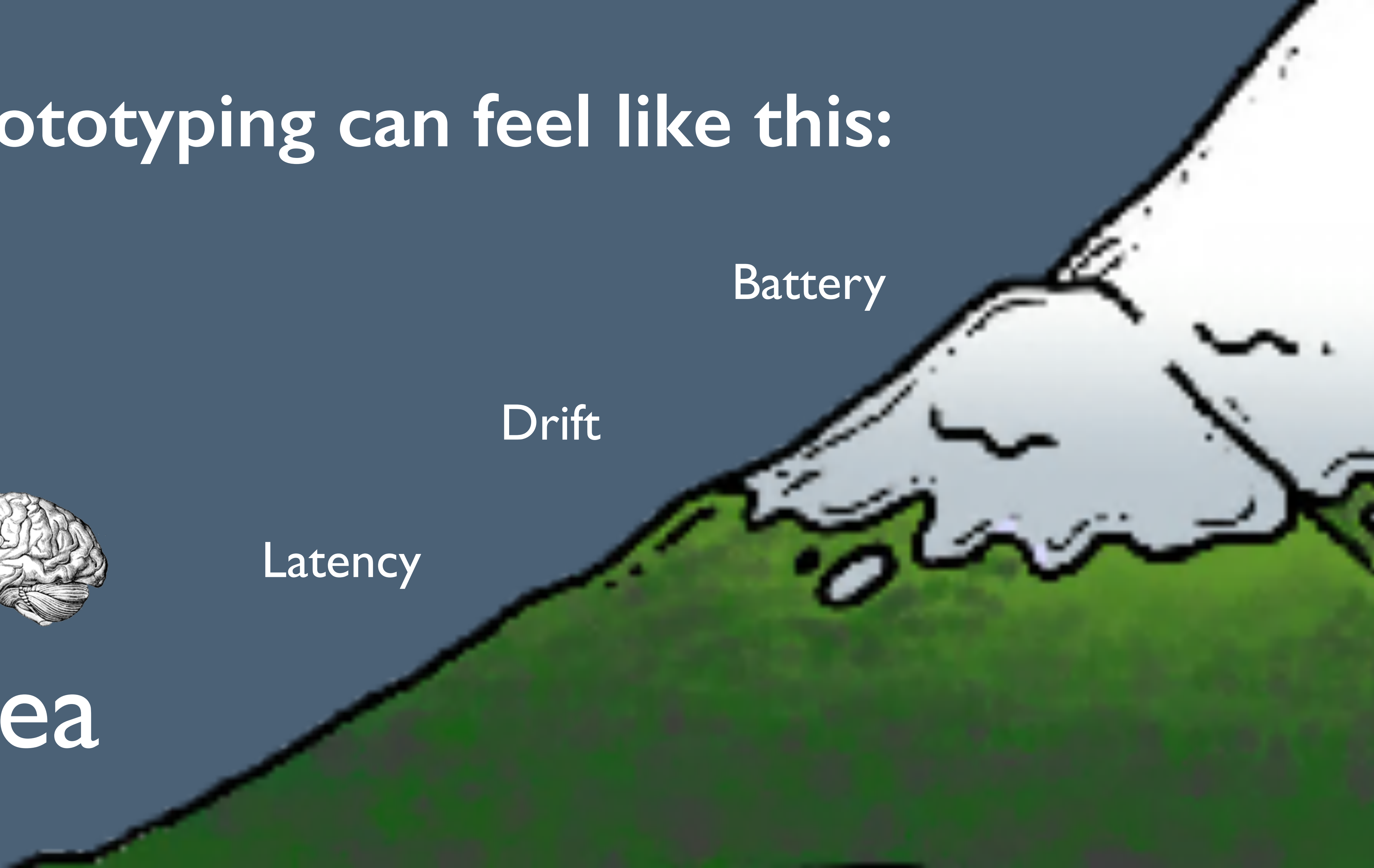


Idea

Latency

Drift

Battery



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new concept



new concept

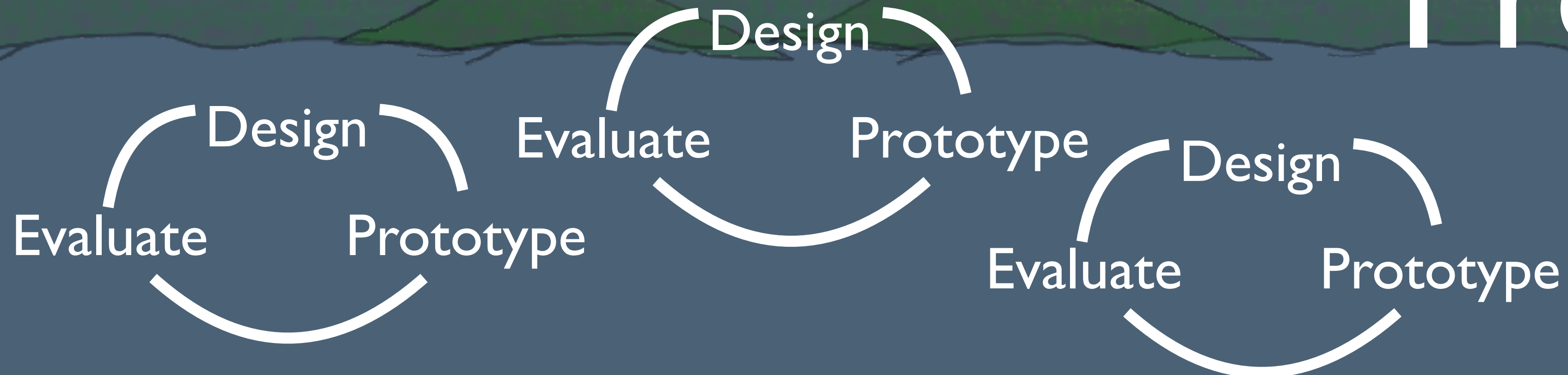


new concept



Idea

Product



Multiple Video project



Scal: a gate that shows who walked through it last
Bill: a gate that shows who walked through it last

Your examples

- For each idea, is it specific?
what person
uses what videos and
how they interact with it
to achieve a goal.

For all the ideas, what are the major risks,
and how should we prototype them?

Language learning

Tonal languages like Chinese and Vietnamese can be challenging to learners whose native languages don't have tones. For example, the Vietnamese *ma* means "ghost," but with different tones, *má* can mean "mother" while *mà* means "but." An interface can have videos for each of the different tones grouped by vowel to help language learners distinguish between tones. This can help students familiarize themselves with tones.

**what person
uses what videos and
how they interact with it
to achieve a goal.**

Fitness

For a person trying to create a regimented workout routine: allow the user to save workout videos to a calendar so that he/she can see each day of the month and select the folder on that day that will contain the exercises to be completed.
allow the user to add notes indicating the number of reps, amount of time, and weight to use for each exercise.

**what person
uses what videos and
how they interact with it
to achieve a goal.**

Health

Visualizing disease progression...

When user wants to share a video with other users, user may want to hide some sensitive parts of the video since health information is sensitive and should be protected. Allow user to blur areas of video for protection.

**what person
uses what videos and
how they interact with it
to achieve a goal.**

Dance class

For workout instructors trying to plan a class: allow instructors to drag/drop music videos to create a playlist for the class. The playlist should show the total time of the videos so that the instructor knows how many songs to add to make it the length of the class.

**what person
uses what videos and
how they interact with it
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Travel planning

Planning daily tourist itinerary by using video maps to chart out what is near one another (similar to google maps), having transportation automatically align it self to day schedule, and restaurant recommendations pop up in each area

**what person
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Musicians

Musicians learning a song that has been covered by multiple artists need to be able listen and compare each version at multiple sections without needing to restart the video each time in order to understand the different ways the track can be interpreted.

**what person
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Beauty

Show multiple videos side-by-side to demonstrate how eyeshadow/eyeliner techniques differ based on eyeshape and eyelid types

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GIF Creation

Finding the perfect GIF moment from several videos of the same thing

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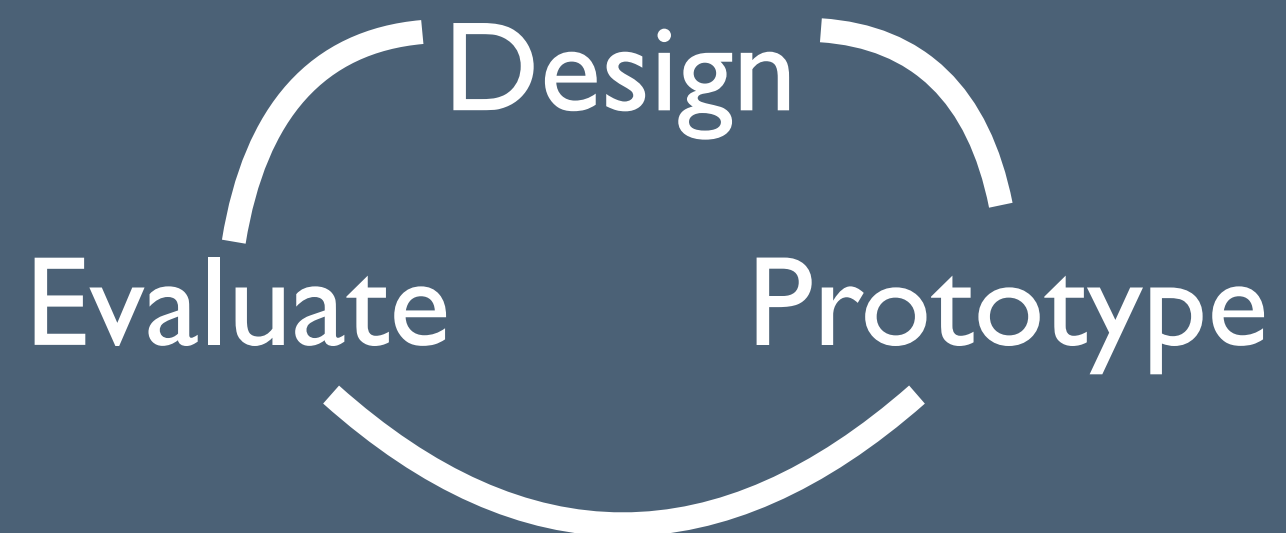
new concept



Idea



Product



What are some of the risks?

- Learn tones in Chinese and Vietnamese
- Video workout calendar
- Visualize disease progression
- Collaborative Workout mix
- Tourism videos near an area
- Compare song performances
- How to apply eyeliner
- GIF Creation

Iteration 1: Basic Concepts/Risks

- Do the videos exist?
- Can you get them on your own webpage?
- Can you press play programmatically?

Milestone #3: (due noon Wed)

- For 3 ideas:
 - State the problem in terms of :
 - Do the videos exist? (pick good videos)
- For any video:
 - How to get them on the screen?
 - Do do you press play programmatically?
- Reflection:
 - What unexpected things did you learn?
- Post it to piazza, with screenshots of your videos and implementation

what **person**
uses what **videos** and
how they **interact** with it
to achieve a **goal**.

Summary

Ottobrain & → see Stanford Pitt, professor
on other granular designs

crowns/claws pulled up
the middle

Alan's idea
about the wires to
the middle body

Bill: copyright
visualization of lines

Some slits mechanism
→ 2 screws/lens/slip
could work at it
→ 2 screws/lens

passing gate
array

Scot: a gate that shows
who walked through it last

Bill: a gate that shows

Goal 2

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People
2: Dwight
3: Oscar
4: Creed
5: Pam
6: Jim
7: Stanley
8: Michael
9: Kevin
10: Kelly

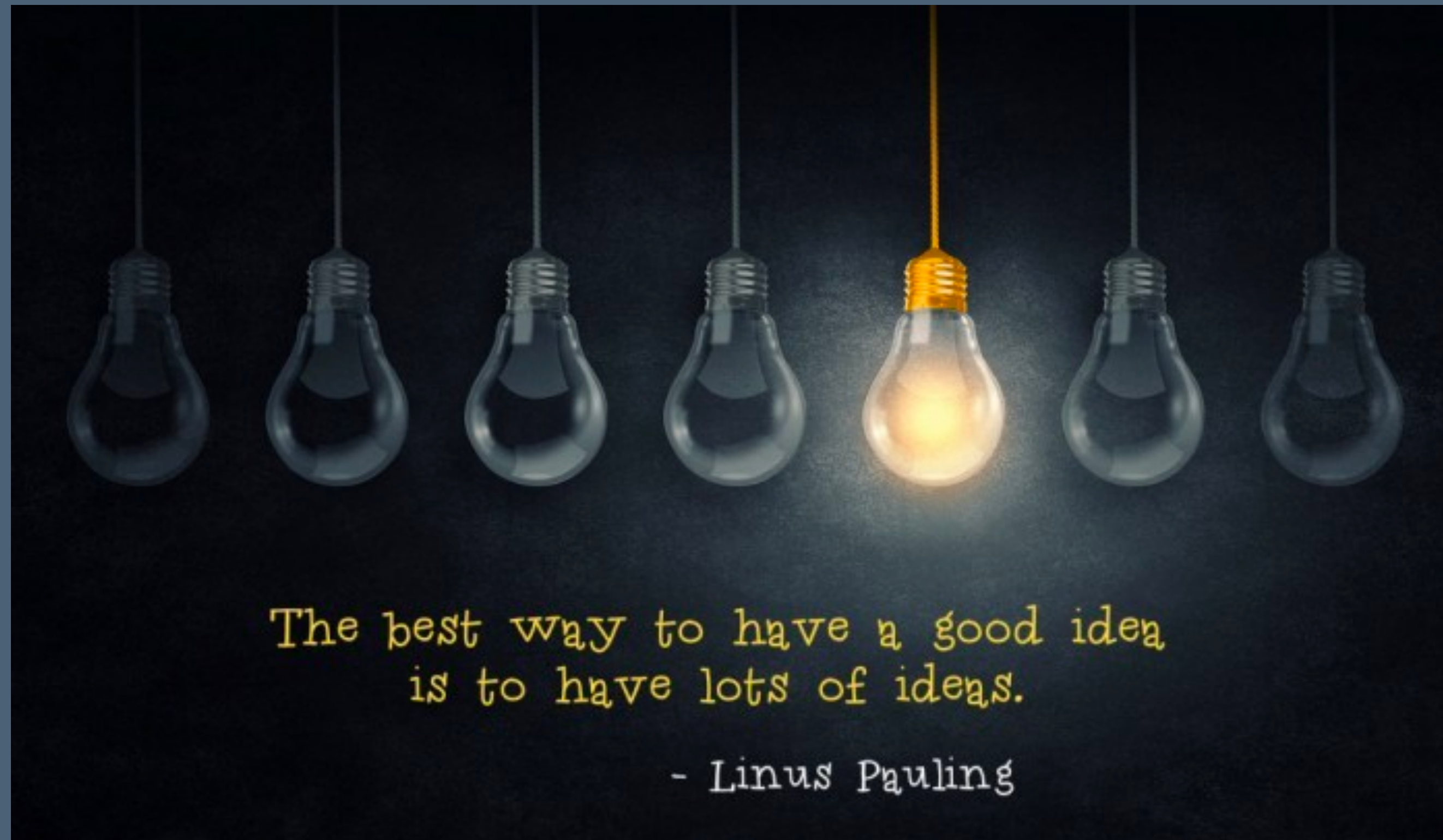
Party Planning Committee
1: Angela
1: Phyllis

Keep a list of the party planning committee

Clear needs, abilities, goal

Unclear needs, abilities, goal

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How do we get from idea to execution?



Idea

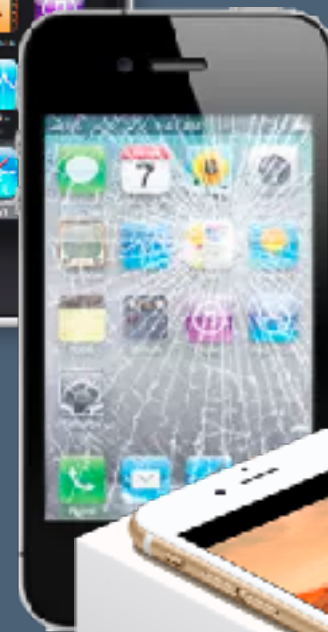
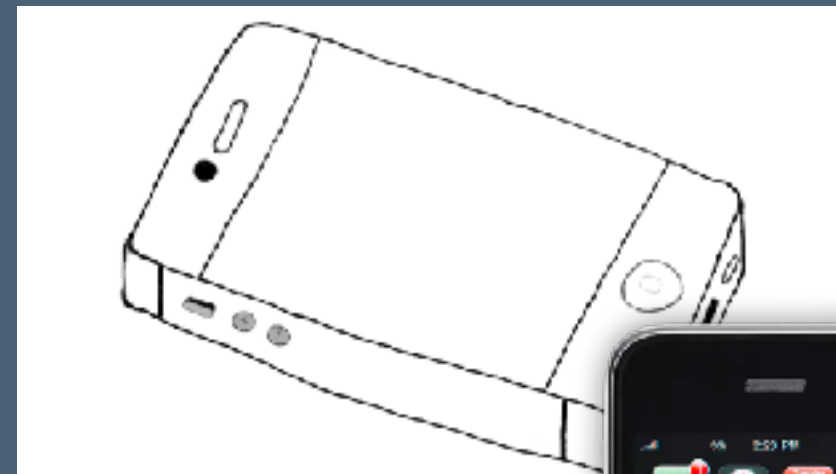
Product

The Waterfall Model is the intuitive execution process.

Problem: It cannot accommodate unknowns and risks

Phone + iPod + Internet

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Idea

Requirements

Design

Implement

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Finished Product!

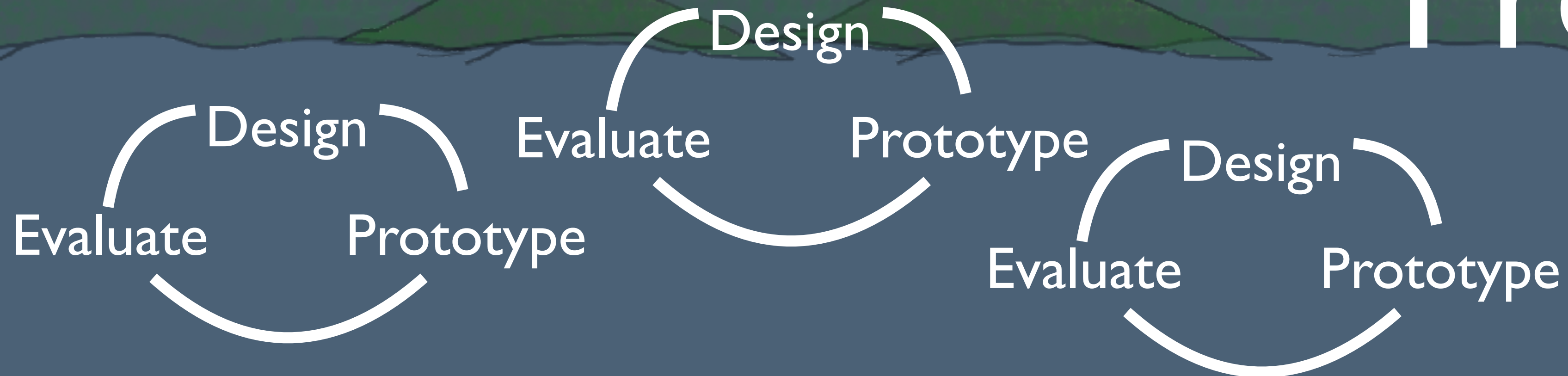
Iterative Design mitigates risk:

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Product



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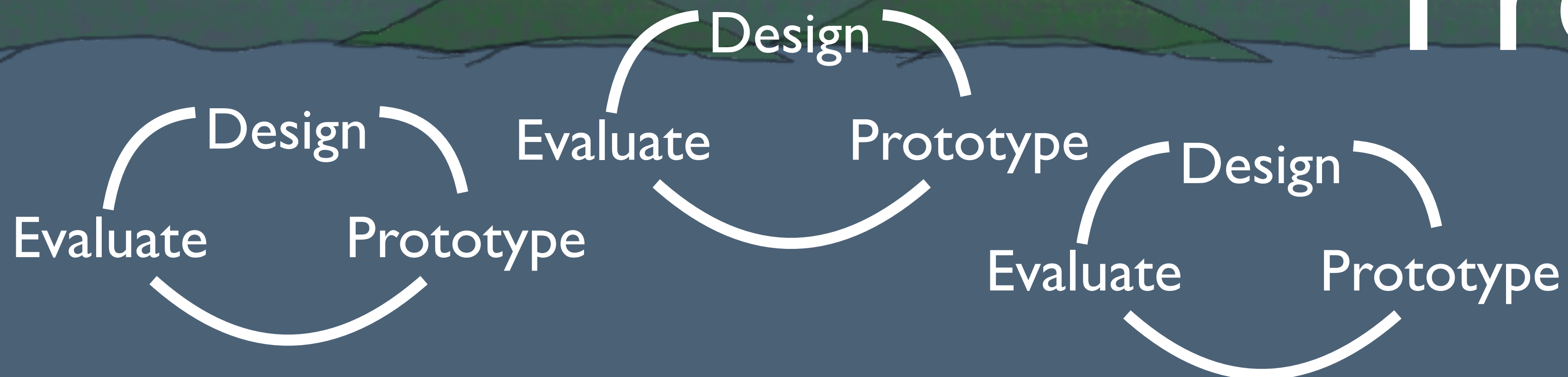


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Idea

Product



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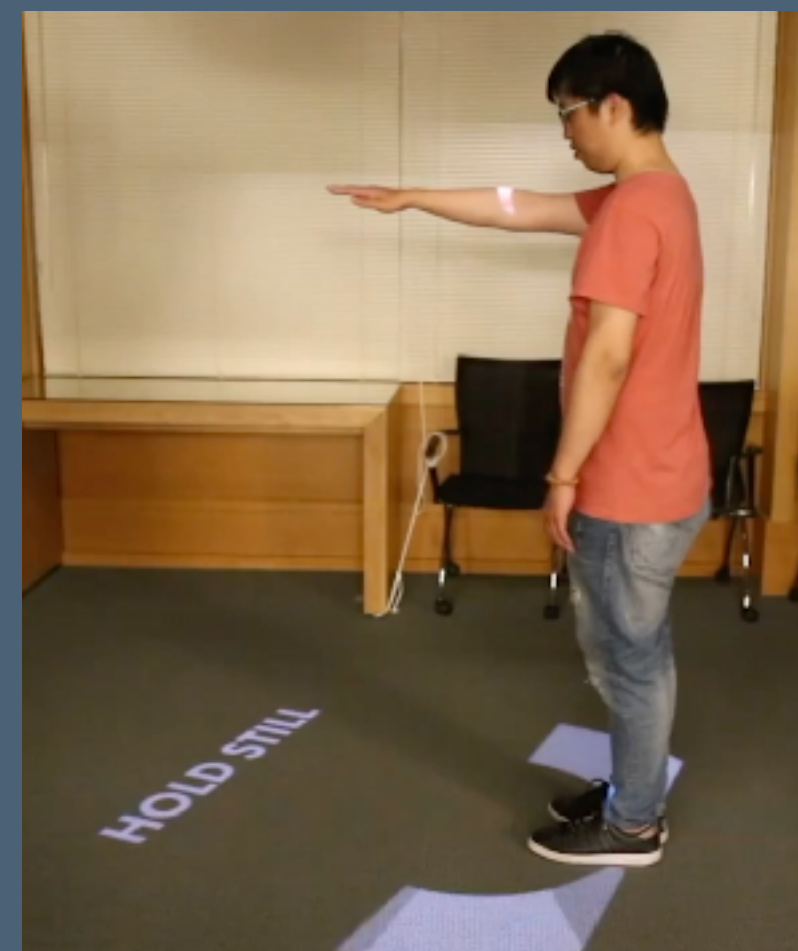
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