Getting Children Outdoors

Anna Marie Golden, Nina Shahriaree, Zhuxiaona Wei, Rijuta Trivedi, Yamini Venkataraman

Design Question

How can we motivate **children (6-10) in urban areas** to engage in the outdoors to promote physical & mental well-being and a long-term active lifestyle?

WHY

Current State

Health issues stem from a decline in outdoor activity.

In the past 30 years, childhood obesity has **DOUBLED** in children, and **TRIPLED** in adolescents.

88% of children reported using a computer every day while only **11%** reported visiting a local park or nature area every day.

Current Products

Many tech games simulate the outdoors, but the kids don’t actually play outdoors. The focus is on technology, not physical activity.

Dora the Explorer

Disney Pixar Adventure

http://www.bigfishgames.com/blog/games-for-young-kids/ http://up4review.blogspot.com/

Current Products

Some games encourage kids to be more active, but they are sponsored by big companies that market unhealthy products to kids.

The Athlete Polar Bear “Jack” - CocaCola

http://designtaxi.com/news/361744/Concept-Virtual-Pet-App-For-Coca-Cola-Encourages-Kids-To-Be-More-Active/

Current Products

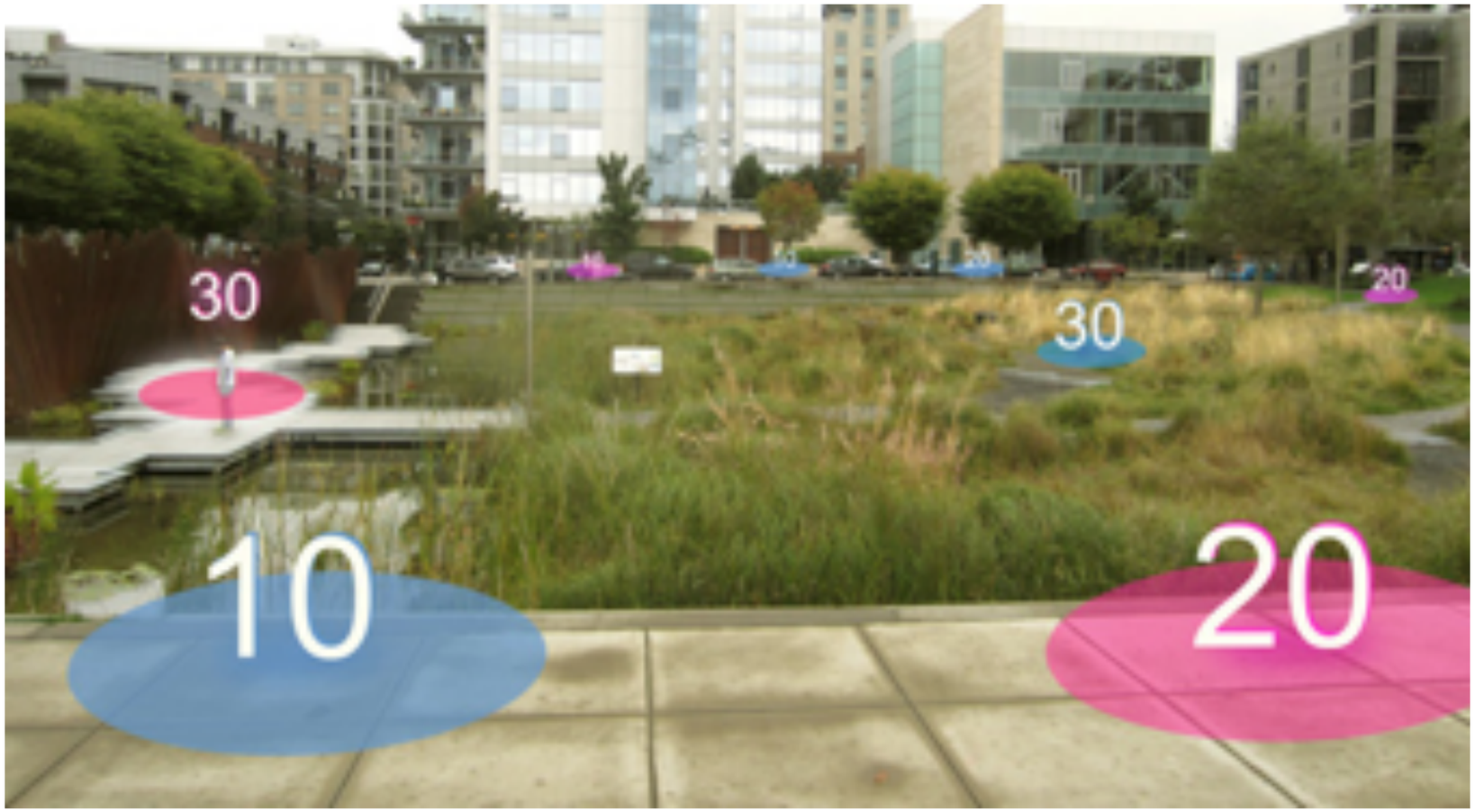
Some games are all about the advertising and not really about what is best for kids at all.

The Online McDonald's Game

http://www.happymeal.com/en_US/index.html#/Games

Current Products

Some games may lead kids too far from home, where parents cannot always supervise them.



MapAttack's real-life Pac-Man

http://popupcity.net/technology/mapattack-turns-the-city-into-a-real-life-pac-man-board/

Current Products

Some games do not encourage interaction with other kids.

Kids are isolated, even when they are playing together

http://www.brandchannel.com/home/post/2012/04/04/Families-Kids-Technology-040412.aspx

Current Products

Some games are played while kids are participating in unhealthy behaviors.

Like eating junk food.

.aspx http://www.sheknows.com/parenting/articles/964581/unplug-your-kids-this-summer

WHAT

Constraints

Interactive

Unstructured

Unobtrusive

Non Immersive

Physical Activity

Our Design

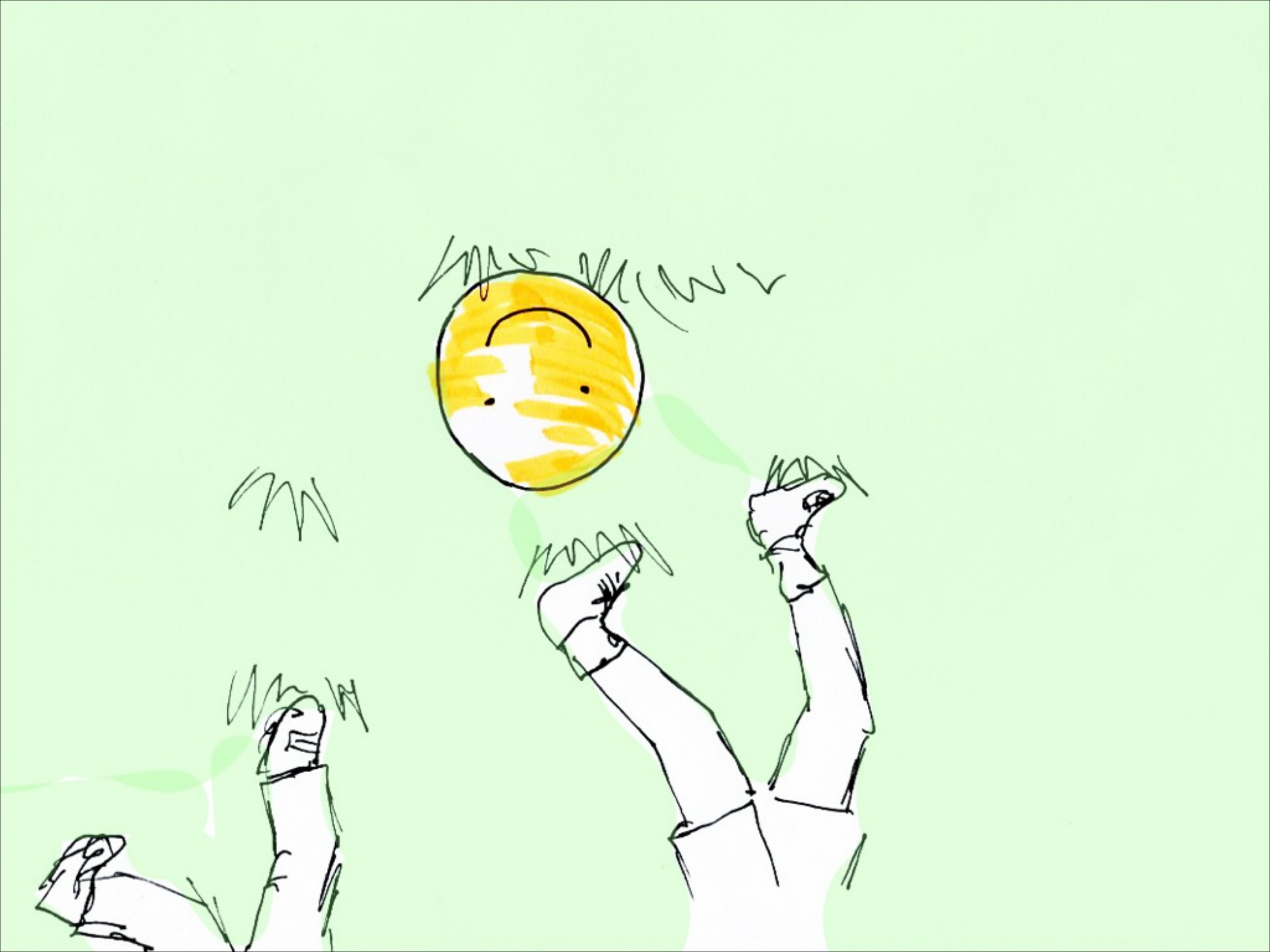
Futureball

Interactive

Activate Button

Color Change Lights Up Motion Sensor

HOW



NEXT

Technology

Futureball

Materials: Flexible Silicon

Radio Frequency Identification Tags

Light Emitting Diodes

Kinetic Energy Sensors

Activate Button

Materials: Metal

Radio Frequency Identification Tags

Light Emitting Diodes

Pedometer

Prototype

Step 1: Paper Prototype

We will walk **parents/caretakers** through the basic design and determine if they are comfortable with all aspects of the design. Safety, obtrusiveness will be assessed here.

Prototype

Step 2: Rapid Prototyping

The layout of the internal structure with LEDs, and sensors.

Prototype

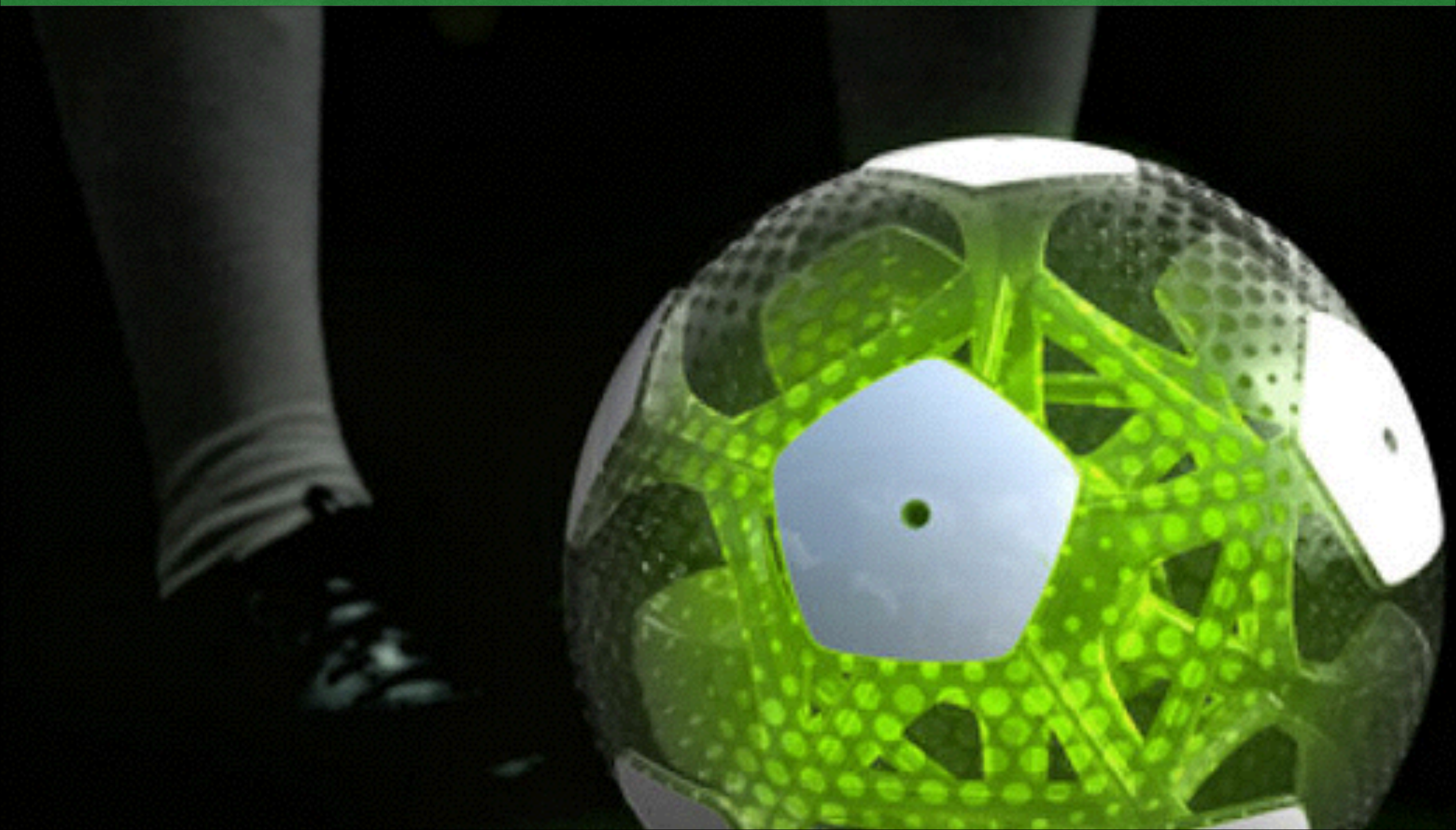
Step 3: Low Cost Design Recreation

Create a low cost, physical model of the device. Color change will be simulated with physical color change.

Prototype

Step 4: High Fidelity Prototype

Recreate each phase of the design individually (one for material of the ball, one for color change, one for vibrations etc.)



Test

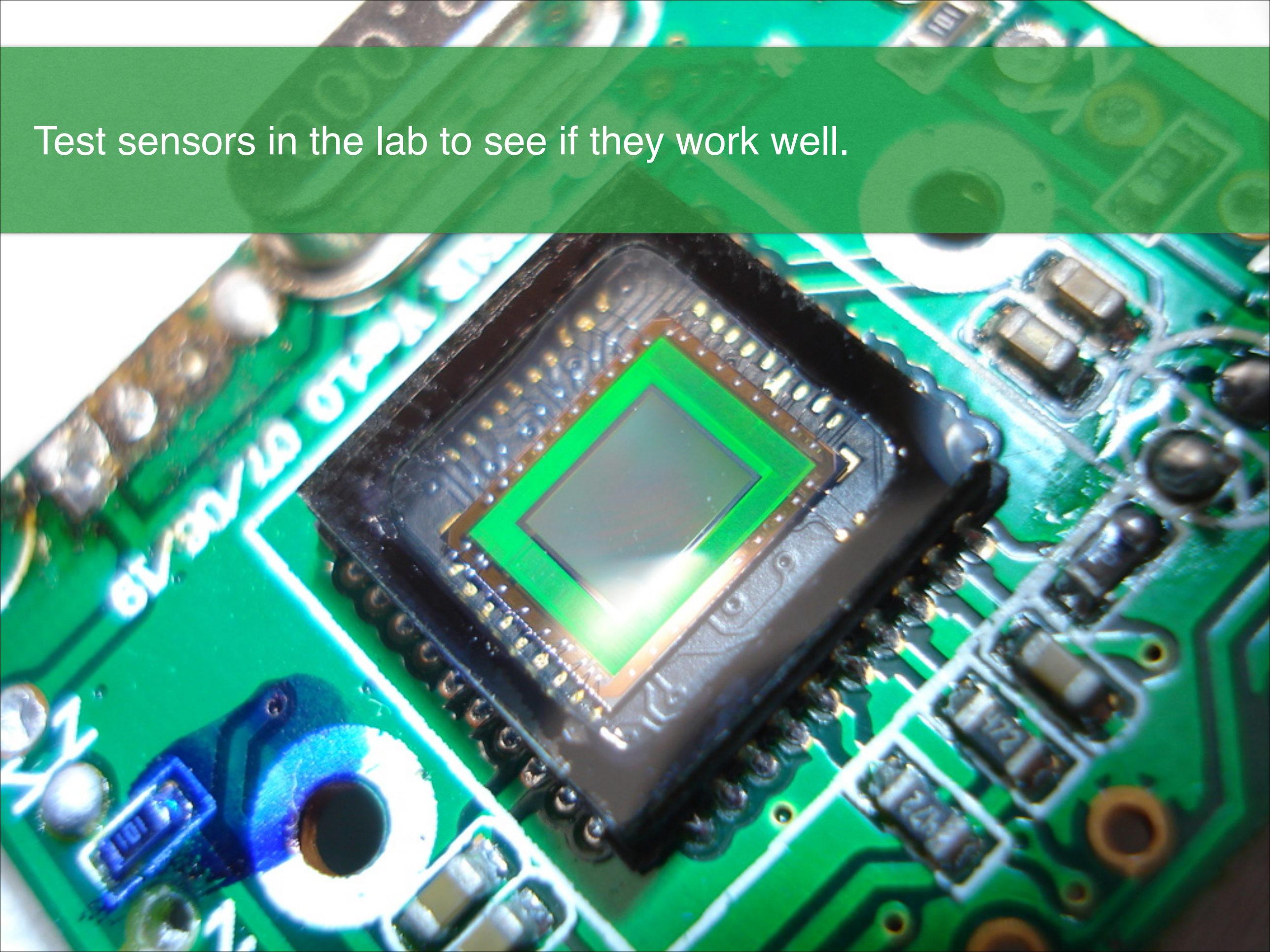
Step 1: Test Different Stress Conditions

Test in the lab to see if the ball would withstand different stress conditions.

Test

Step 2: Test Sensors in Lab

Test sensors in the lab to see if they work well.



Test

Step 3: Field Testing

Test in a playground, in different game conditions.

Test

Step 4: Final Testing

Test with children and families (target audience).

Product Team

Product Managers
User Researchers
Child Development Psychology Experts
Toy & Game Designers
Product Designers
Interaction Designers
Industrial Designers
Production Technicians
Engineers
Material Science Experts
Marketing & Sales Experts