Design Thinking Education
for Healthcare

Translating Information into
Ideas, Concepts and Solutions
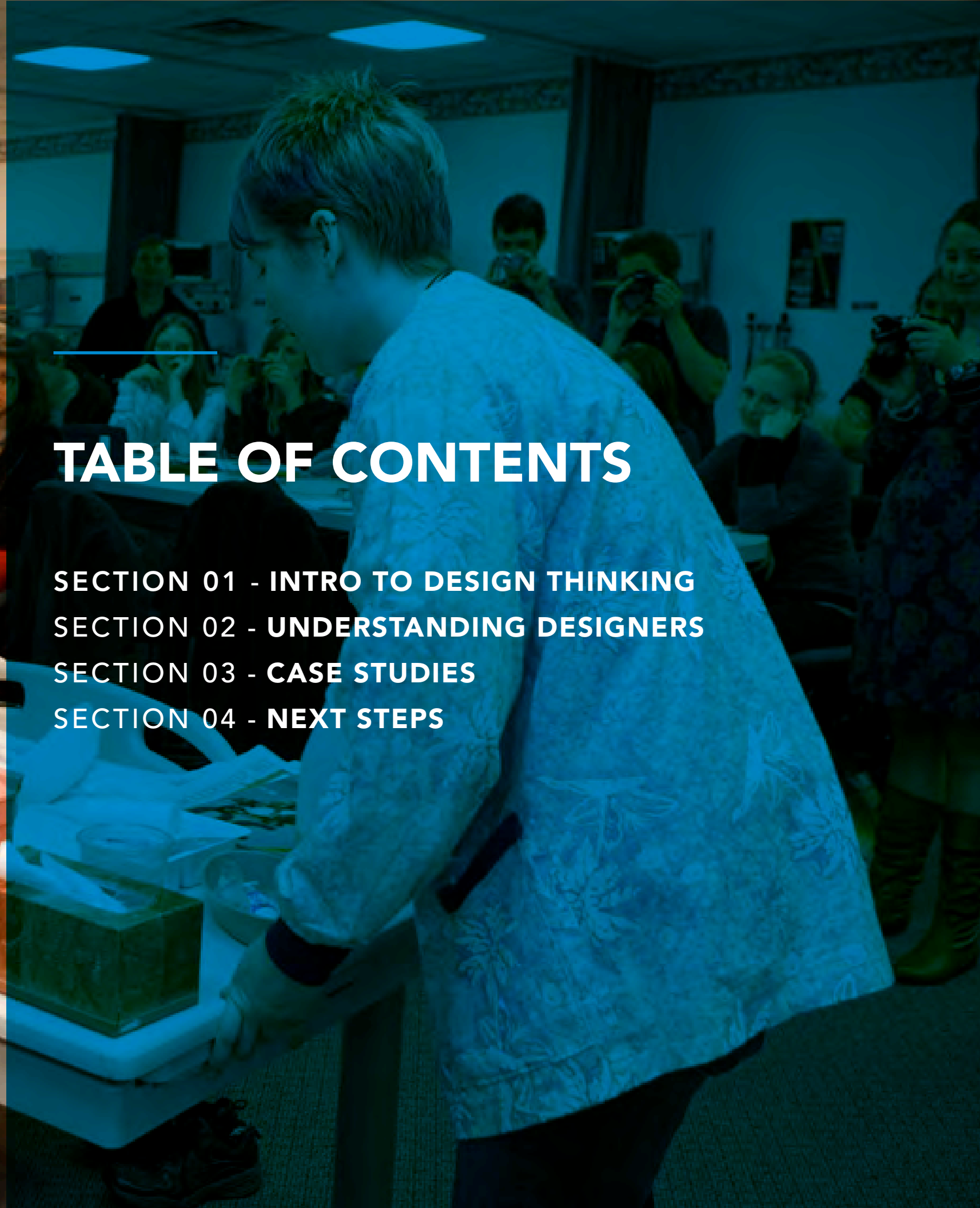
livewell
COLLABORATIVE

TABLE OF CONTENTS

INTRO TO DESIGN

SECTION 01

Design Thinking: Definition

Write your definition of **design thinking** on the card provided.

What is **design thinking** to you?

_____

_____

_____

_____

Design Thinking: Definition

We ask what can we do to change things? That question leads us to design which is **the act of changing existing situations into preferred ones.**

Herb Simon

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The appropriate blend of qualitative and quantitative thinking with the goal to produce positive change that responds to the needs of consumers.

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Helps institutions and culture evolve thoughtfully blending continuity and change.

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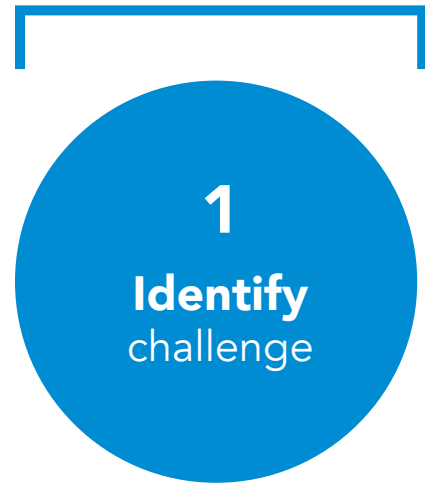Helps institutions and culture evolve thoughtfully blending continuity and change.

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6. Collaborative
It is inherently interdisciplinary.

Live Well Collaborative Design Studio Process Model

1
Identify
challenge

2
Research
understand
user

3
Ideate
conceptualize

4
Refine
test and detail

5
Debrief
follow up

Before the project
Project lead identifies the problem space and collaborates with the LWC on the project brief.

During the 15 week Semester
Research team focuses on obtaining knowledge about the topic, translating insights into concept ideas and refining concepts to meet the needs of the project sponsor.

After the Project
Discuss possible future opportunities regarding the project results.

Design Studio Process: 1, 2, 3 Device

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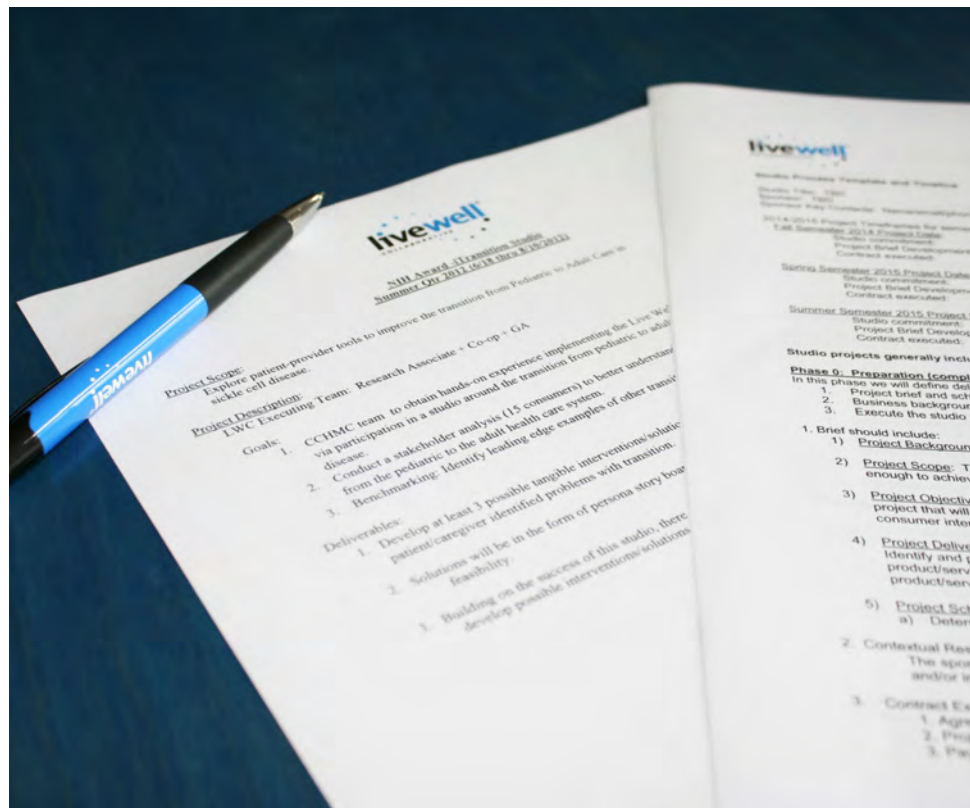
Agree on project
scope, objectives
and deliverables.

Design Studio Process: 1, 2, 3 Device

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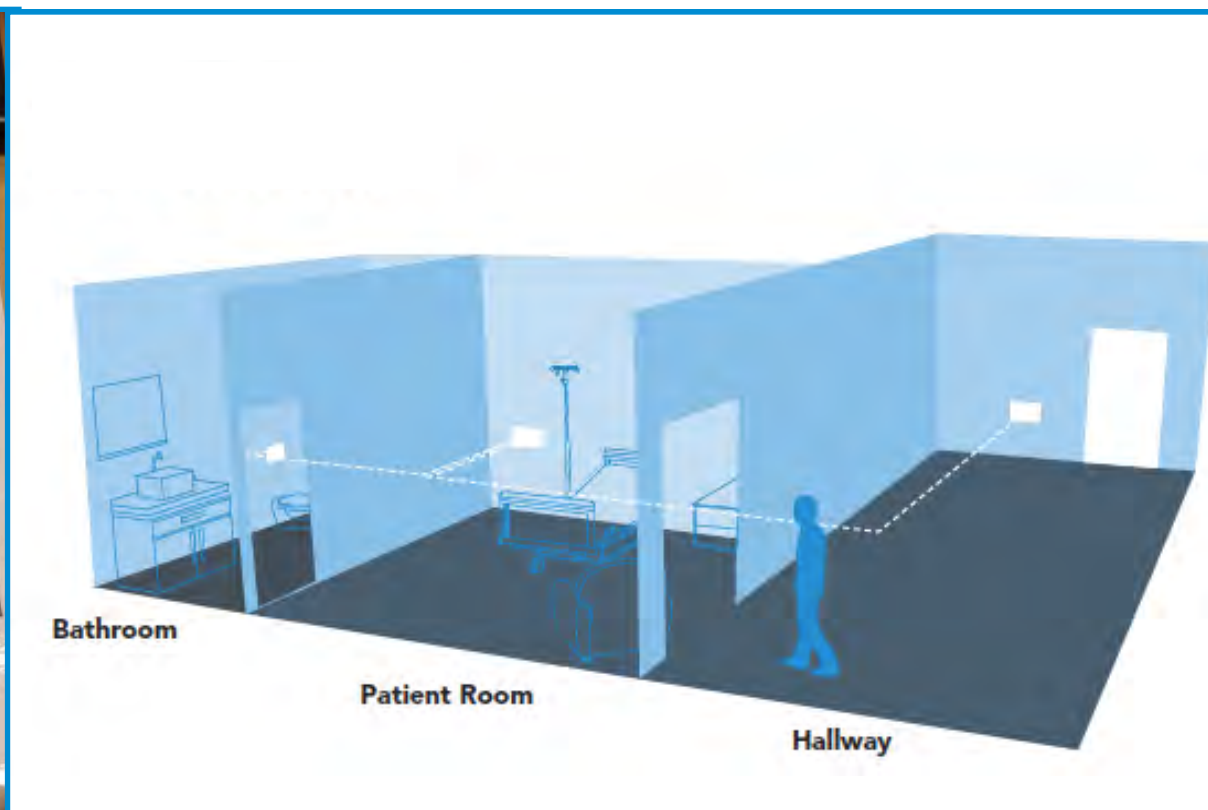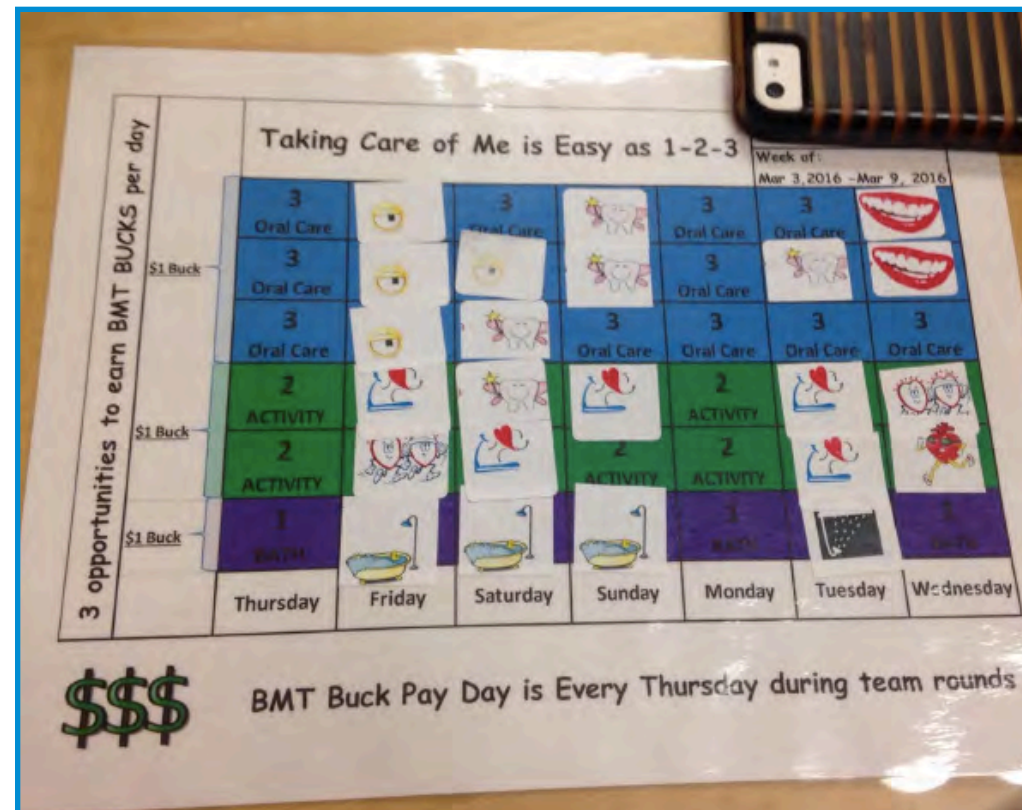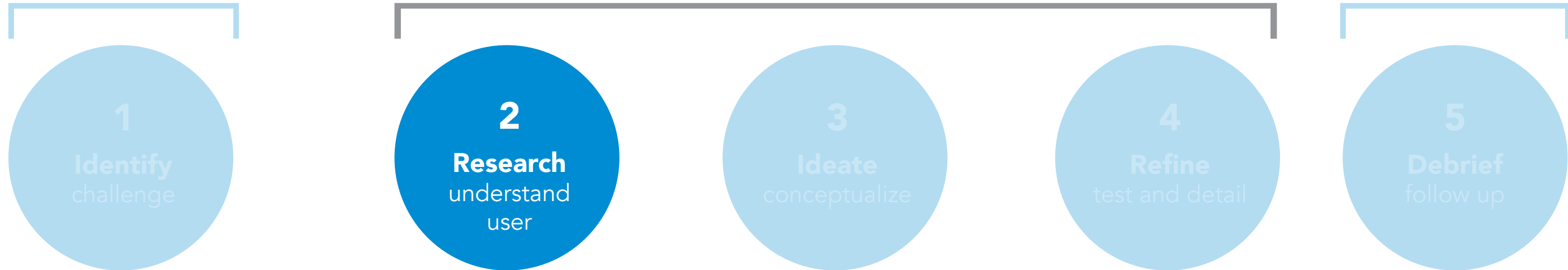
Map the existing situation.

Design Studio Process: 1, 2, 3 Device

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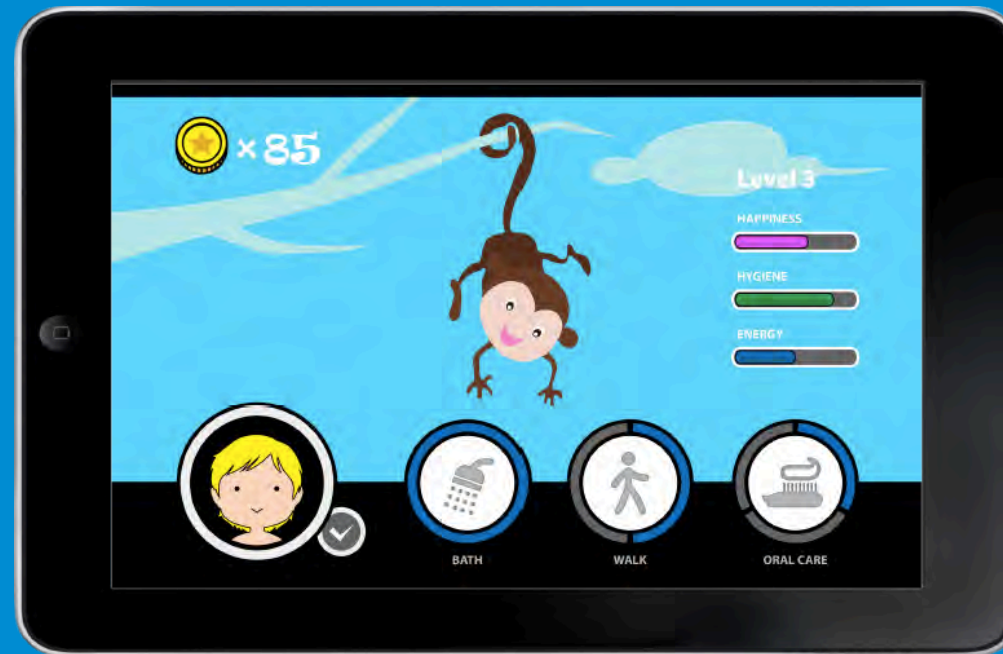
Generate ideas to serve the identified needs.

Design Studio Process: 1, 2, 3 Device

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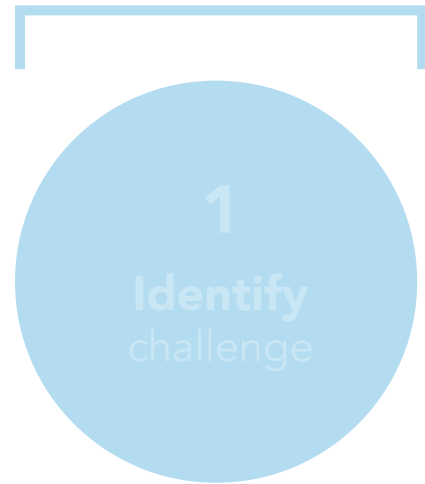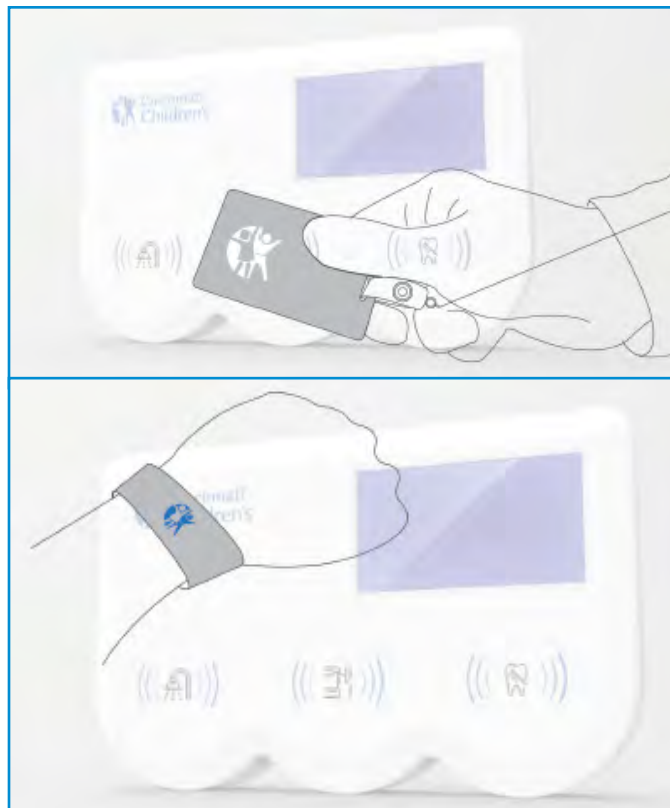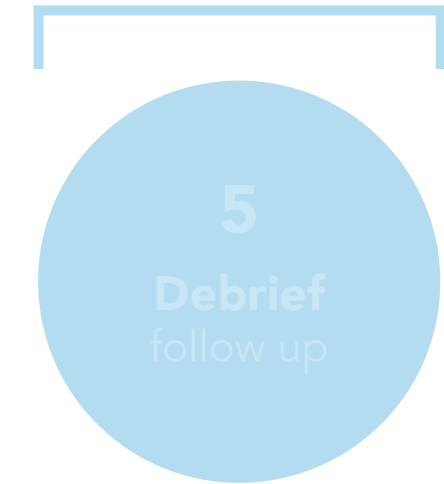
Combine,
expand, and
refine ideas.

Design Studio Process: 1, 2, 3 Device

1
Identify
challenge

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Research
understand
user

3
Ideate
conceptualize

4
Refine
test and detail

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Debrief
follow up

Assess if
results have
met deliverables.

Design Studio Process: 1, 2, 3 Device

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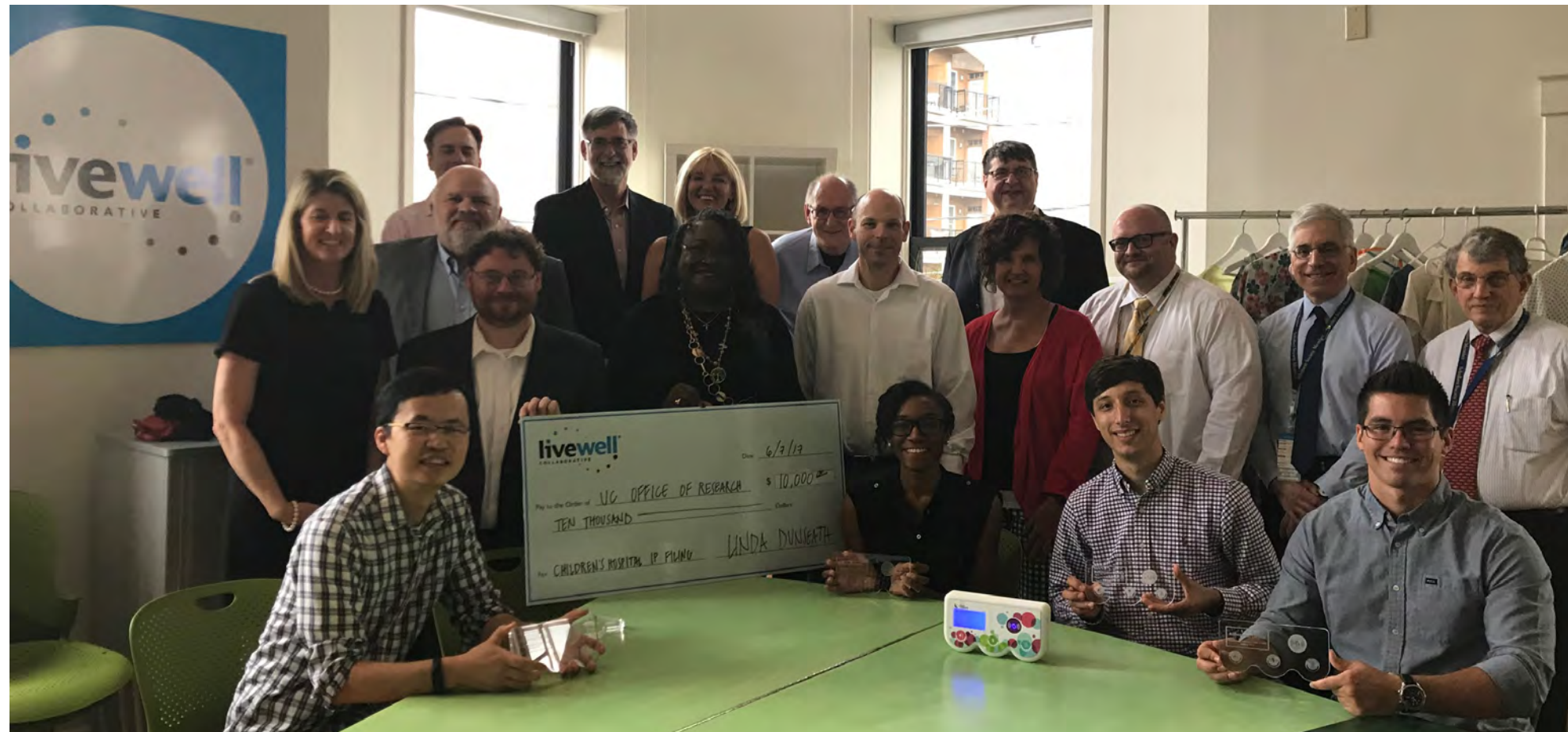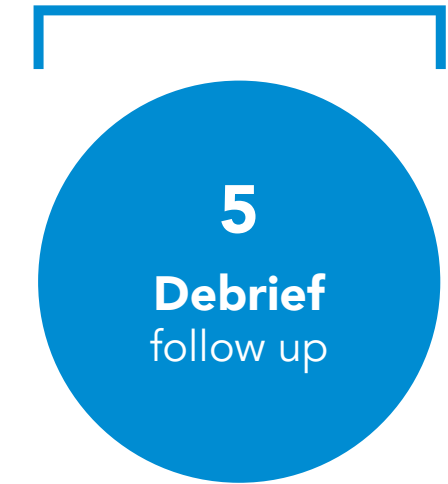
Activity: Framing Challenge

Identify team member roles.

Identify challenges.

Develop 3 milestones.
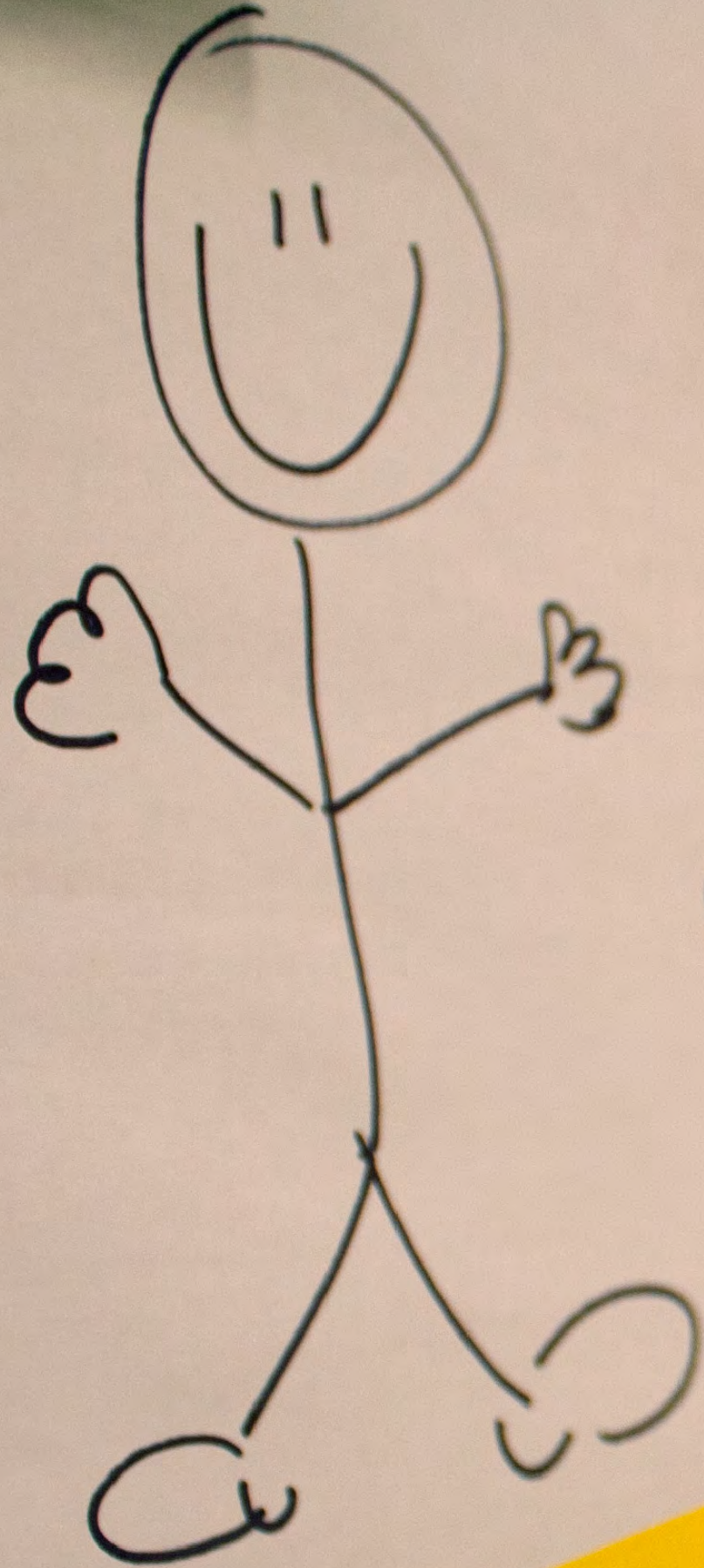
UNDERSTANDING DESIGNERS

SECTION 02

Understand The Design Process

uncertainty / patterns / insights

clarity / focus

opportunity areas

■ Strictly scientific process of exploration
■ Design process of exploration

Understand The Design Process

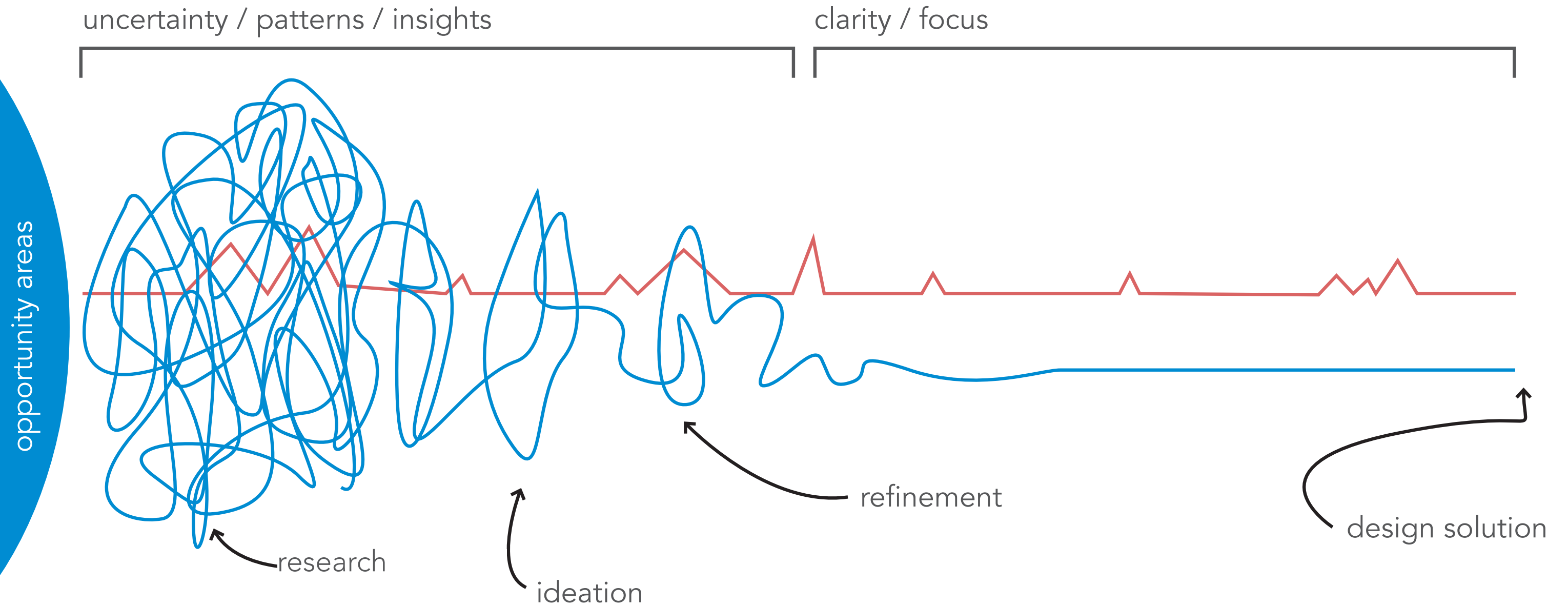uncertainty / patterns / insights

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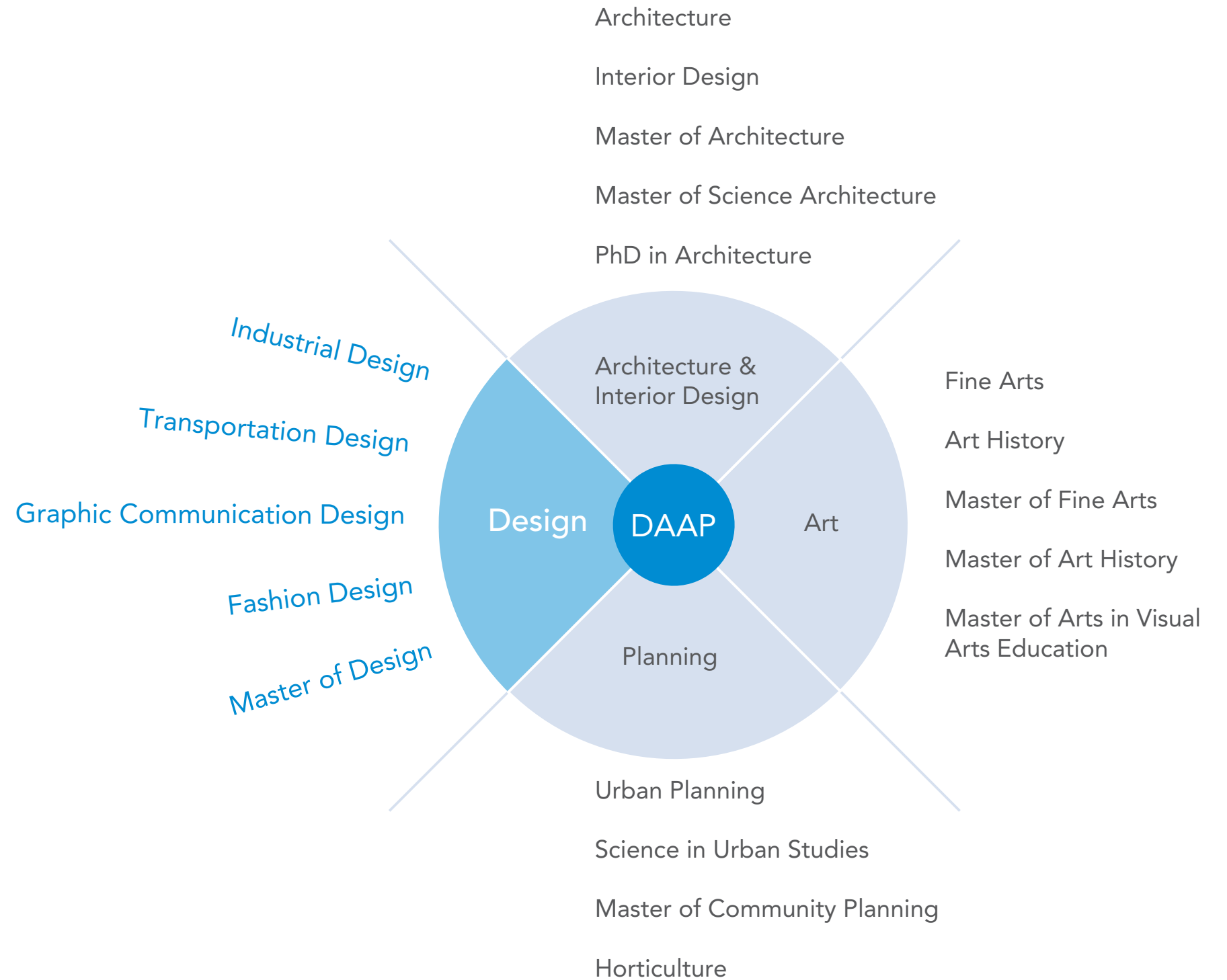■ Strictly scientific process of exploration
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Apapted from Central office of Design via Noise Between Stations
http://www.designcouncil.info/mt/red/archives/2006/05/a_better_diagra.html

Understand The Design Process

uncertainty / patterns / insights

clarity / focus

opportunity areas

research

ideation

refinement

design solution

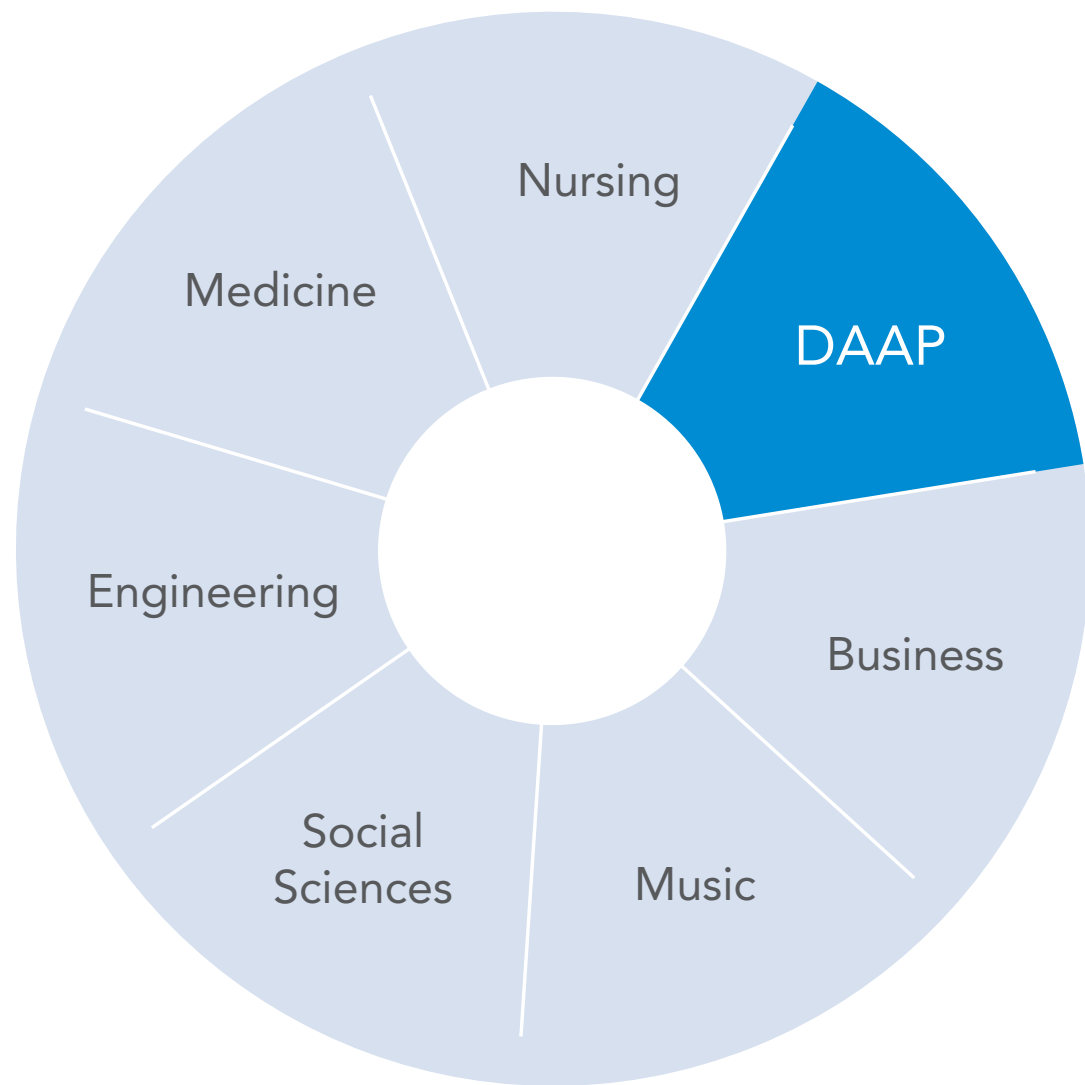■ Strictly scientific process of exploration
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# Understand: The Design Process

University of Cincinnati: Ecosystem

Left diagram (outer ring, clockwise): Nursing, DAAP, Business, Music, Social Sciences, Engineering, Medicine

Right diagram — DAAP breakdown:

Design:
- Industrial Design
- Transportation Design
- Graphic Communication Design
- Fashion Design
- Master of Design

Architecture & Interior Design:
- Architecture
- Interior Design
- Master of Architecture
- Master of Science Architecture
- PhD in Architecture

Art:
- Fine Arts
- Art History
- Master of Fine Arts
- Master of Art History
- Master of Arts in Visual Arts Education

Planning:
- Urban Planning
- Science in Urban Studies
- Master of Community Planning
- Horticulture

# Design Disciplines: Product Design

Fashion

Fashion Design

Fashion designers create dimensional finished garments that may appear on the runway or in retail stores. They are also able to apply their expertise in forecasting trends in other industries.
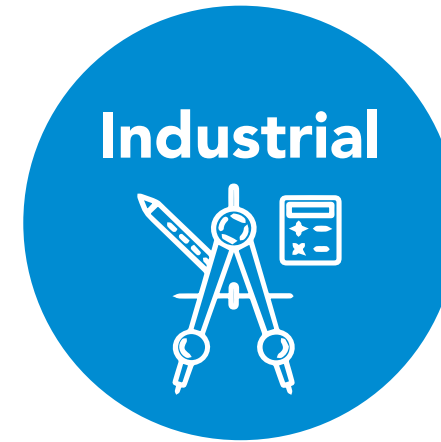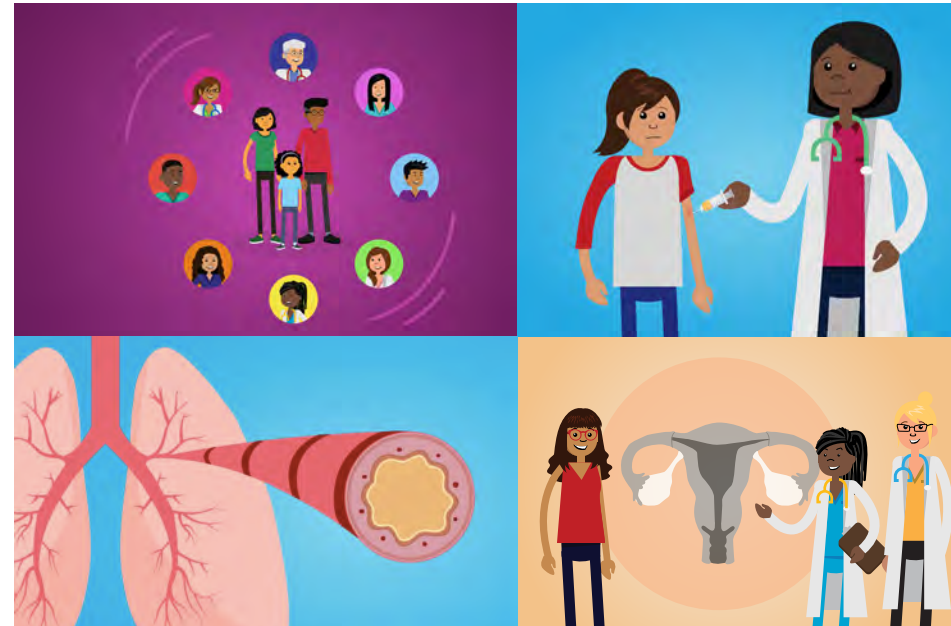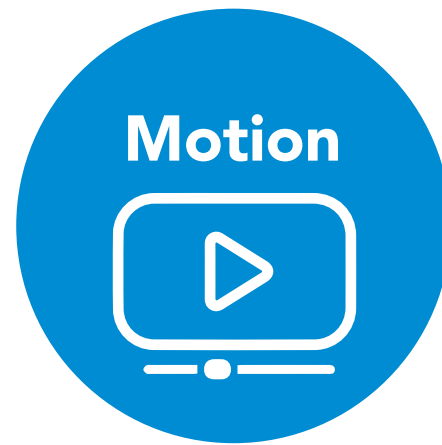

Industrial

Industrial Design

Industrial design is concerned with the appearance and usefulness of manufactured goods.

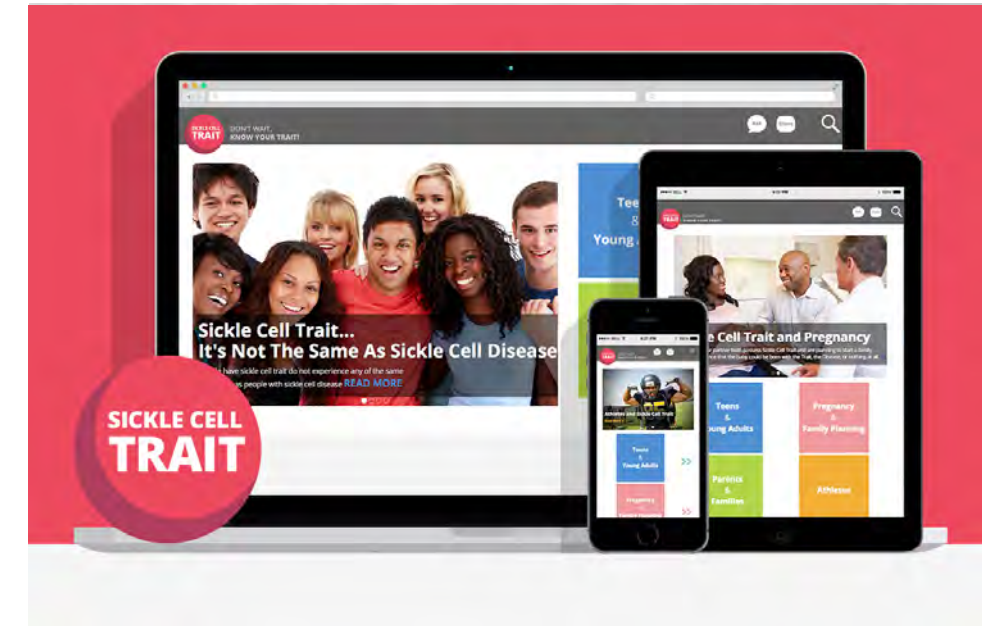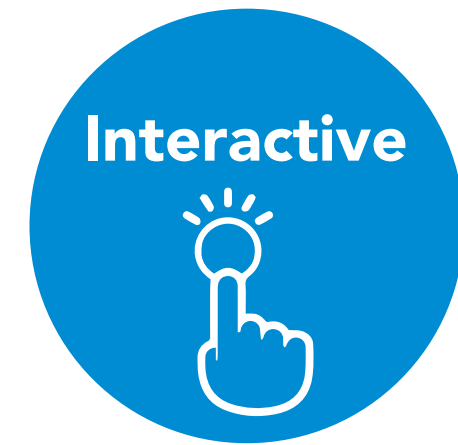# Design Disciplines: Graphic Design
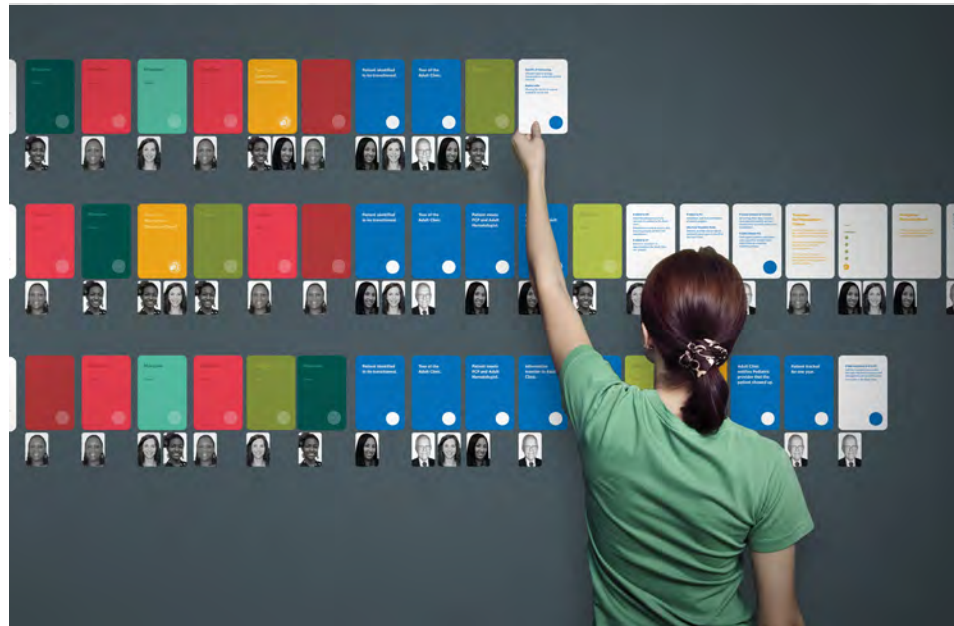
Print

Print

Graphic communication designers give concrete vision to information, ideas, and feelings by utilizing typography, color, images, layout, animation, editing, and digital interfaces.

Motion

Motion

Motion design approaches film-making and video production with graphic design principles. It creates animations and visual effects.
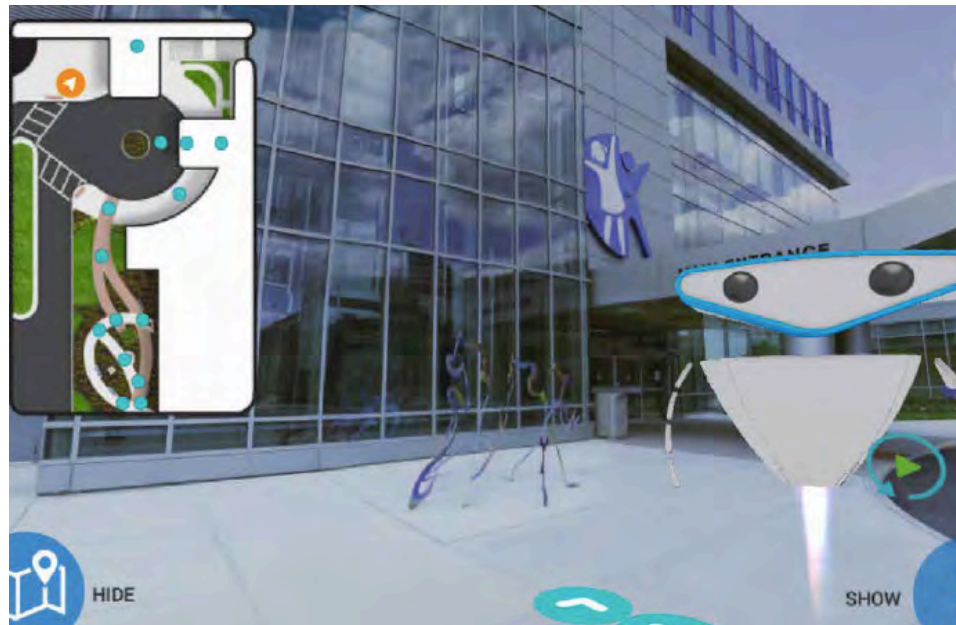
Interactive

Interactive

Interactive design leverages graphics and technology to create engaging web interfaces with logical and thought out behaviors and actions.

Design Disciplines: Spatial Design

Architecture

Architecture is the culturally responsible design and production of buildings that are useful, durable, meaningful, and responsive to their physical and social contexts.
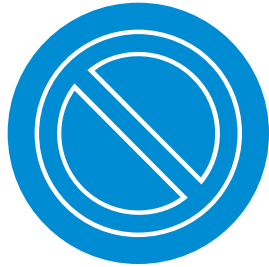
Interior Design

Interior Design focuses on the interior spaces of buildings, emphasizing the physical, psychological, and social needs of people at work and leisure.

© Live Well Collaborative

Activity: Keys to Success
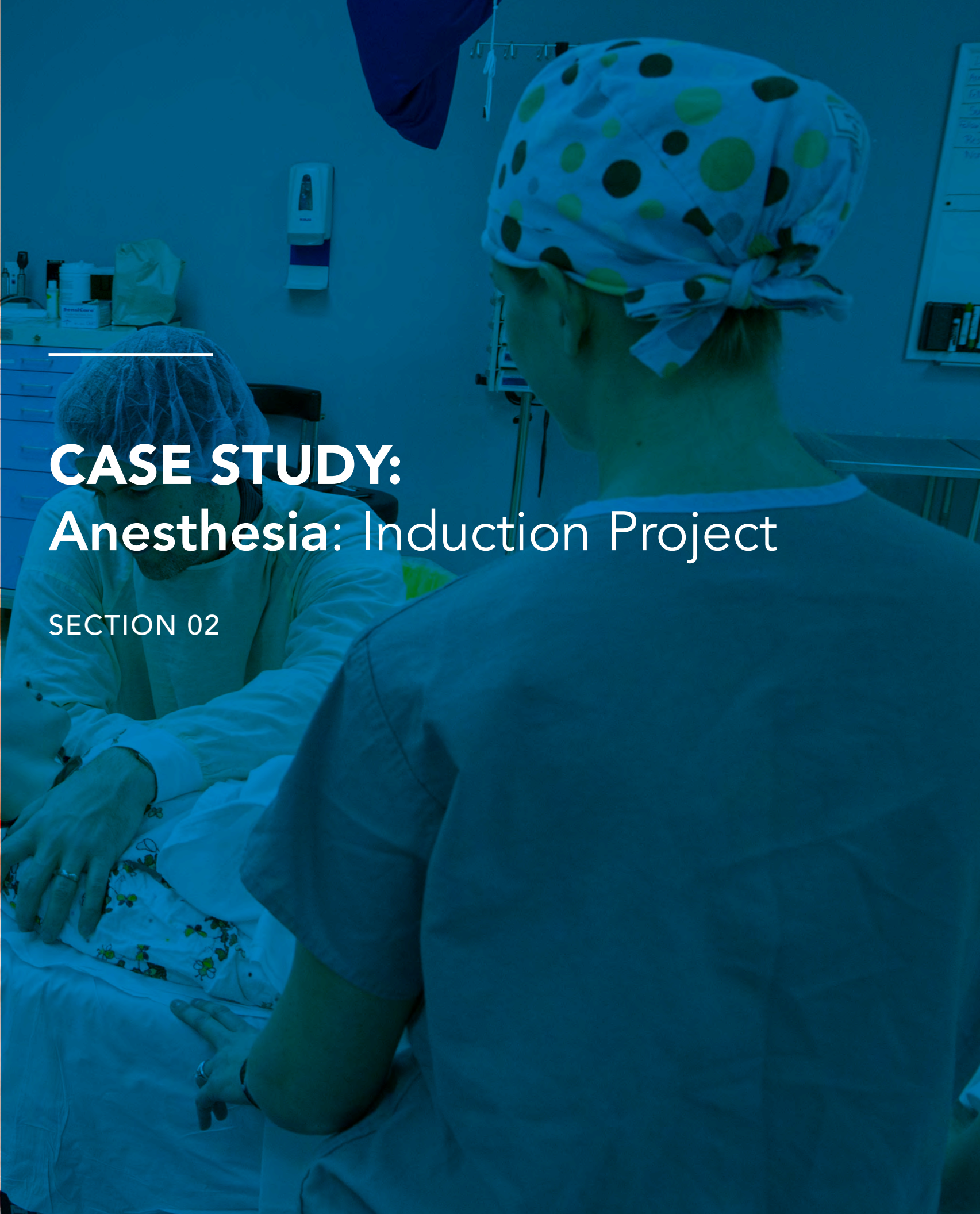
Inhibitors

Activators

Skills

Super Powers

CASE STUDY:
Anesthesia: Induction Project

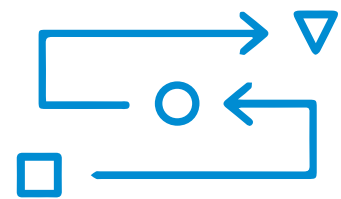SECTION 02

Anesthesia: Overview

Problem Statement:

Anesthesia and surgery can produce high levels of anxiety for patients and their families.

Anxiety and poor compliances during anesthesia inductions have been associated with many negative outcomes like - emergence delirium, increased reports of post-op pain, maladaptive behaviors at home, and chronic hospital-related anxiety/phobias.
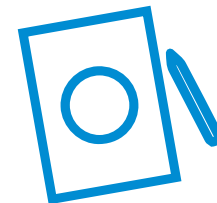
Deliverable:

The goal of the project is to **create a fun, interactive and sustainable method for providing distraction to children** during a time of high fear and anxiety.

Milestone 1:
To understand the current induction experiences.

Milestone 2:
To ideate actionable opportunities.

Milestone 3:
To create sustainable and implementable solutions.

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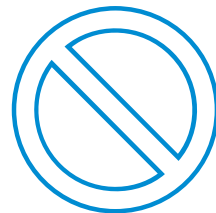
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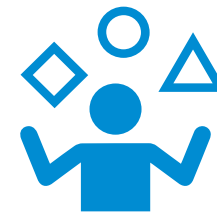
Activators

Clinical Staff
Families
Base & Liberty Campus
Induction Nurses
Anna Device
Time Limit

Inhibitors

Time Constraints
Limited Funding
IRB Restrictions
Family Schedules
Technology Restrictions
Infectious Disease Control Standards

Skill Sets

Qualitative Research Methods
Benchmarking and Trend Analysis
Rapid Prototyping
Awareness of Technology
Data Visualization
Empathic Understanding

Super Power

Mind Reading
Time Travel
Unlimited Wealth

Anesthesia Phase 1: Research

Research Questions:

Who are all the stakeholders involved in the process?
What interventions are currently being used for children during the process?
What are the primary moments of stress throughout the induction process?
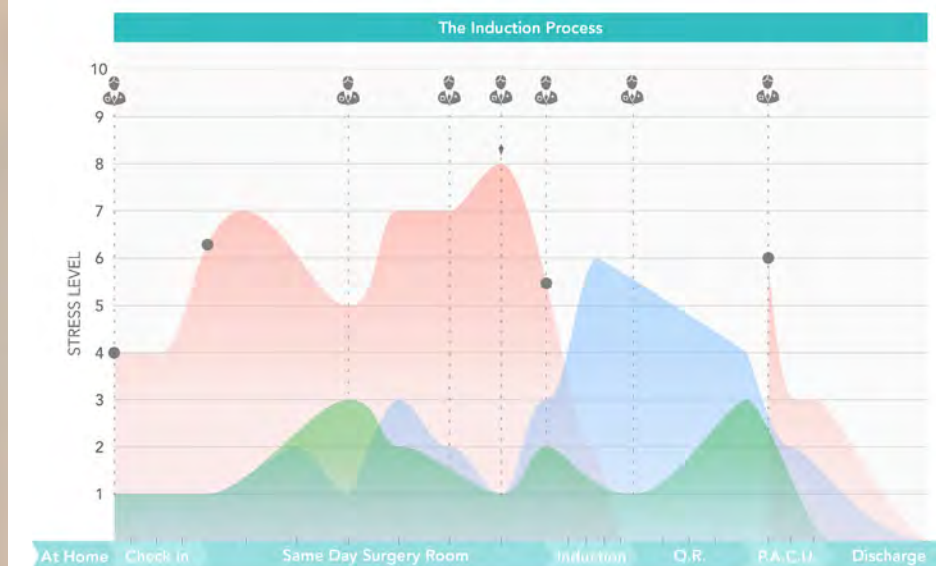What does the macro induction journey look like?
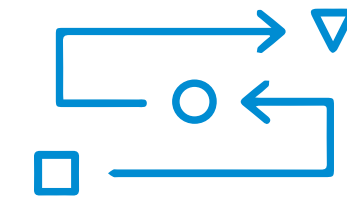
Milestone 1:
To understand the current induction experiences.
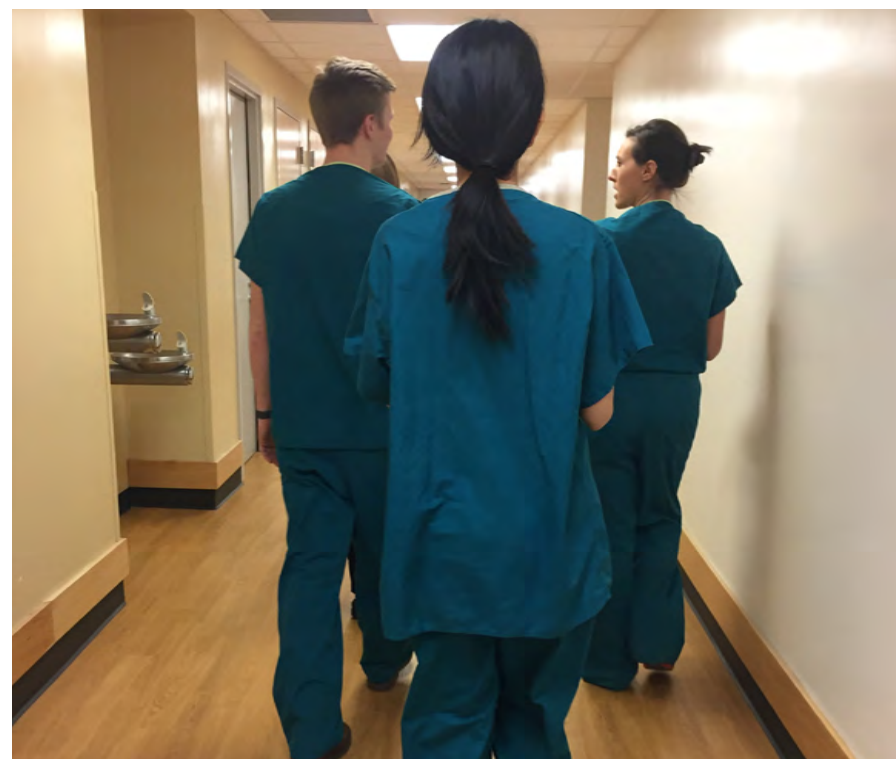
Scenario Mapping Returning Patient

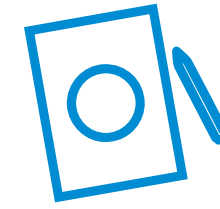Based on a child having a poor prior induction experience.

Anesthesia Phase 2: Ideation

Ideation Questions:
What are the micro processes of the induction journey?
How do we change distraction to engagement?
What design opportunities are most engaging and interactive for children, parents, and staff?

Milestone 2:
To ideate actionable opportunities.

1 Key Points of Stress

There are specific touch points that consistently bring about stress and anxiety for the patients.

2 Understanding the Process

Breaking down the macro journey into micro processes helped the LWC team understand how an intervention would fit into the clinical induction routine.

3 Opportunities for Innovation

The micro processes of the journey created opportunities for innovation to occur across the induction process.

Key Touchpoints

At Home	Check In	SDS Room	Induction	O.R.	P.A.C.U.	Discharge
	Arrive at Hospital	Check Vitals	Flavor Choice		Patient Wakes Up	Check Out
	Waiting Room	Patient Prep	Mask Placement		Parents Arrive	Transport to Car
	Check-In Desk	Normalization	Family Interaction		Recovery Time	Leave Hospital
	Height & Weight	Family Questions	Distraction		Family Questions	
	Arrive at Room	Transport				

Anesthesia Phase 3: Refinement

Refinement Questions:
How can solutions be implemented?
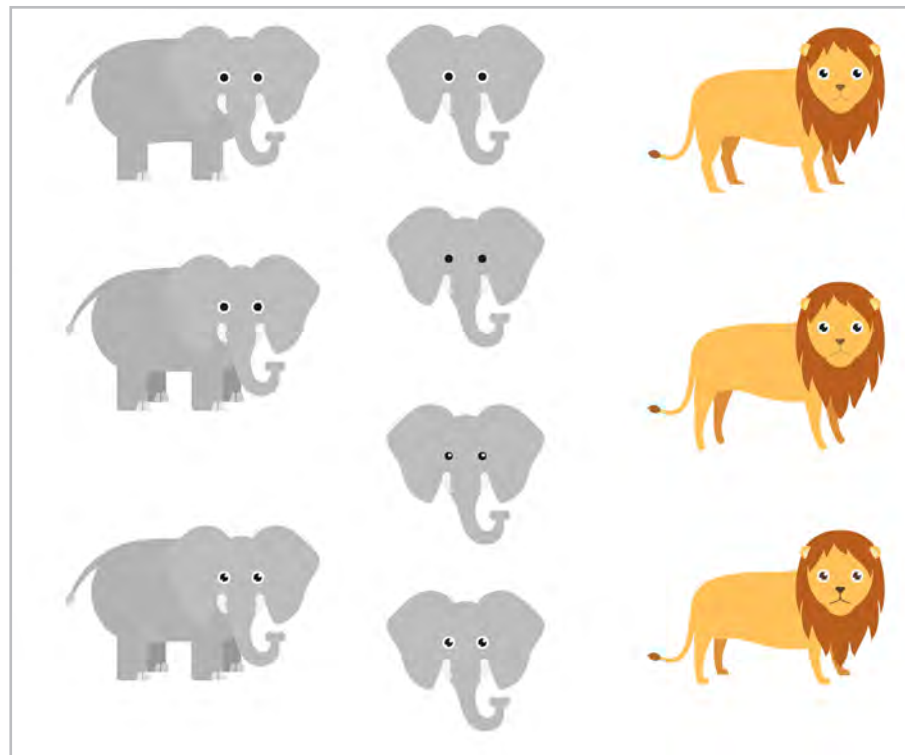Who should we partner with to create solutions?
Who maintains the solutions?
How will the solutions be sustained from a process and economic perspective?

Milestone 3:
To create sustainable and implementable solutions.

Anesthesia: Final Deliverable

Problem Statement:

Anesthesia and surgery can produce high levels of anxiety for patients and their families.

Anxiety and poor compliances during anesthesia inductions have been associated with many negative outcomes like - emergence delirium, increased reports of post-op pain, maladaptive behaviors at home, and chronic hospital-related anxiety/phobias.

Deliverable:

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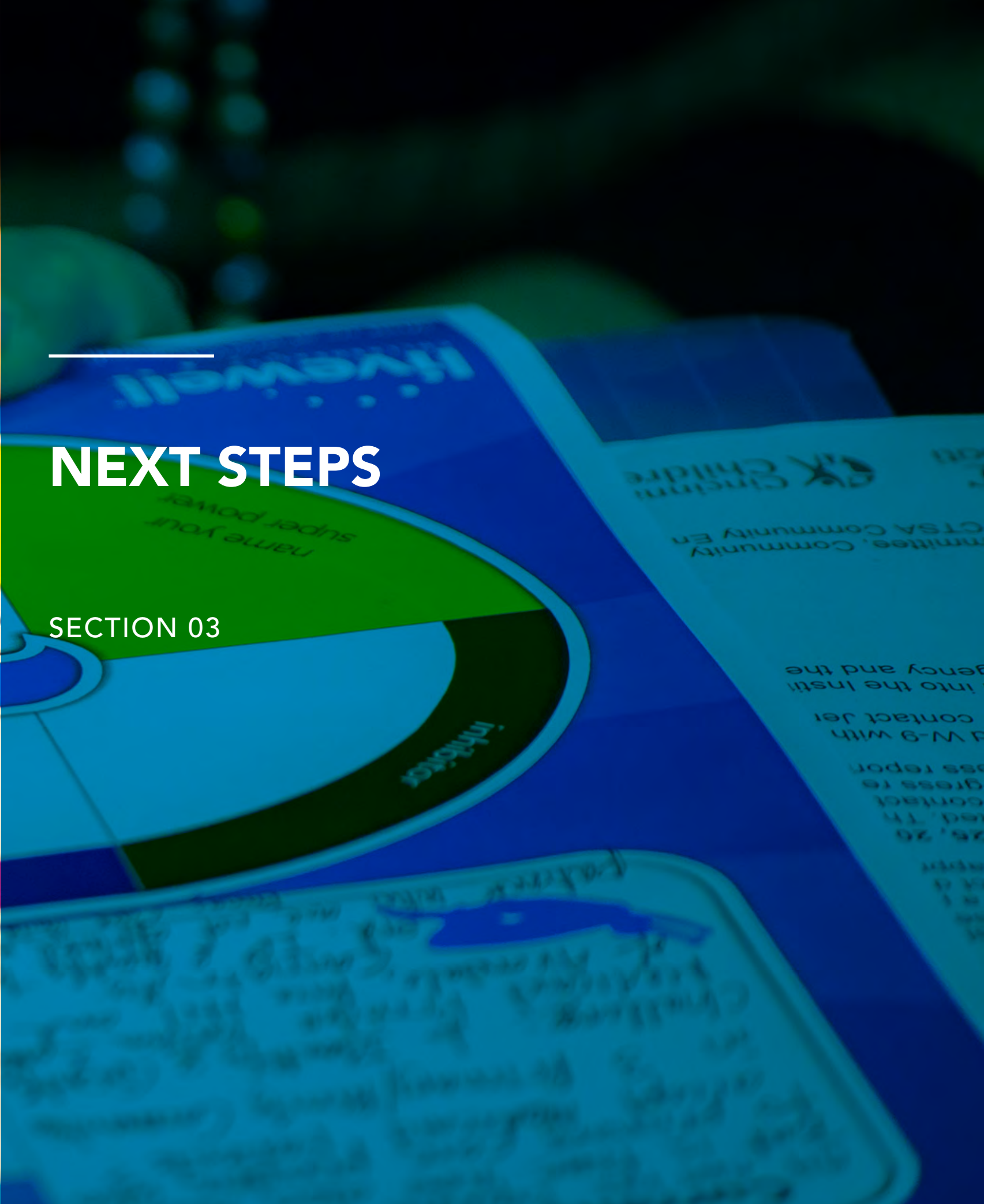
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NEXT STEPS

SECTION 03

Activity: Your Journey

Clear milestones

Clear action plans

Clear time frames

Share your action plan across groups!

Thank you