HARRIS POLICY INNOVATION CHALLENGE

INNOVATION TOOLKIT FOR PENSION REFORM

PROFESSOR WILL GOSSIN

FALL 2023

TODAY'S GOAL

Prepare you to think creatively and analytically

Establish a New Approach to the Challenge

Identify the Right Question to Ask

AGENDA

Asking The Right Questions

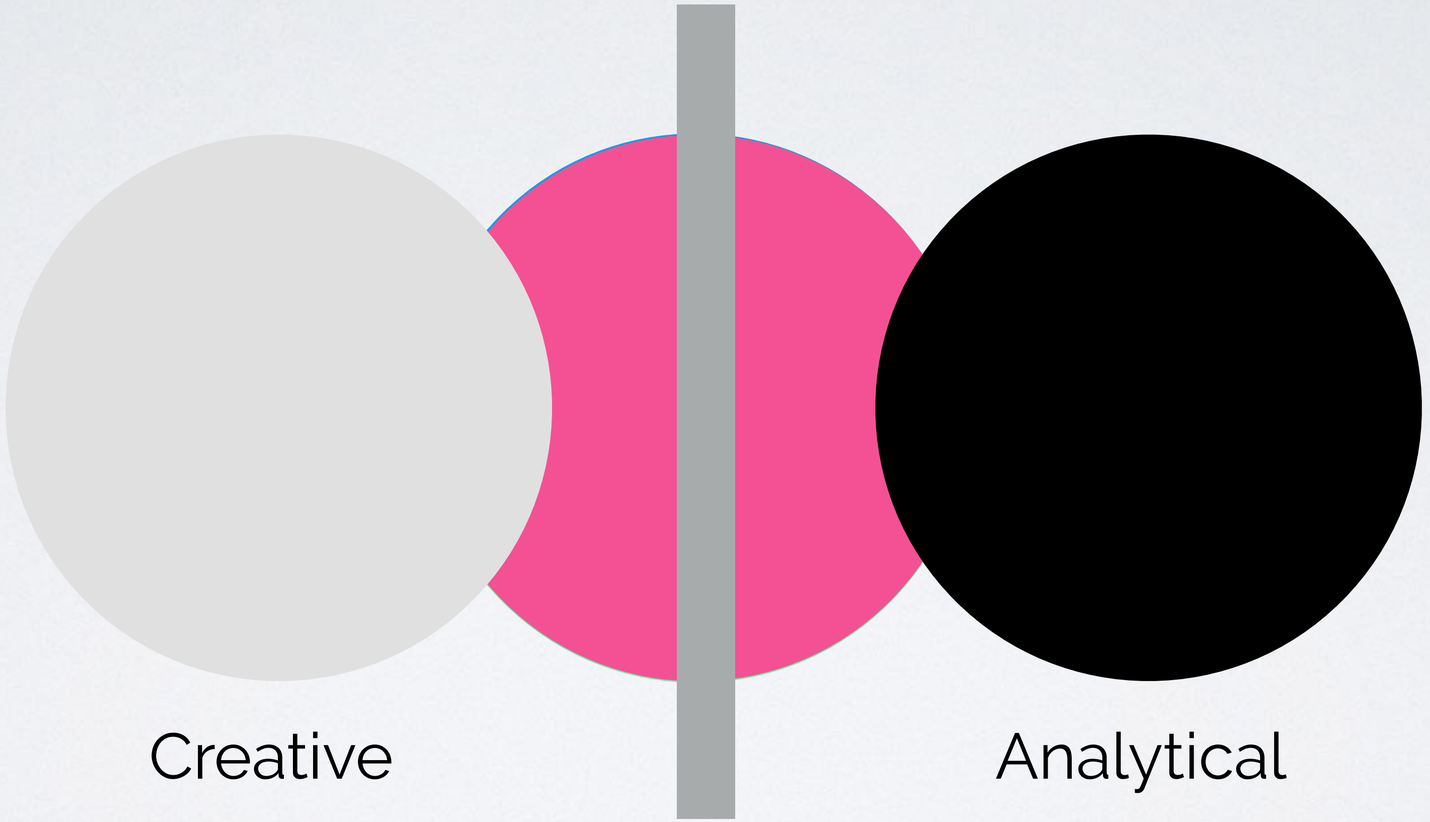
What Is Innovation?

MisMatches are Secrets

2 Skills

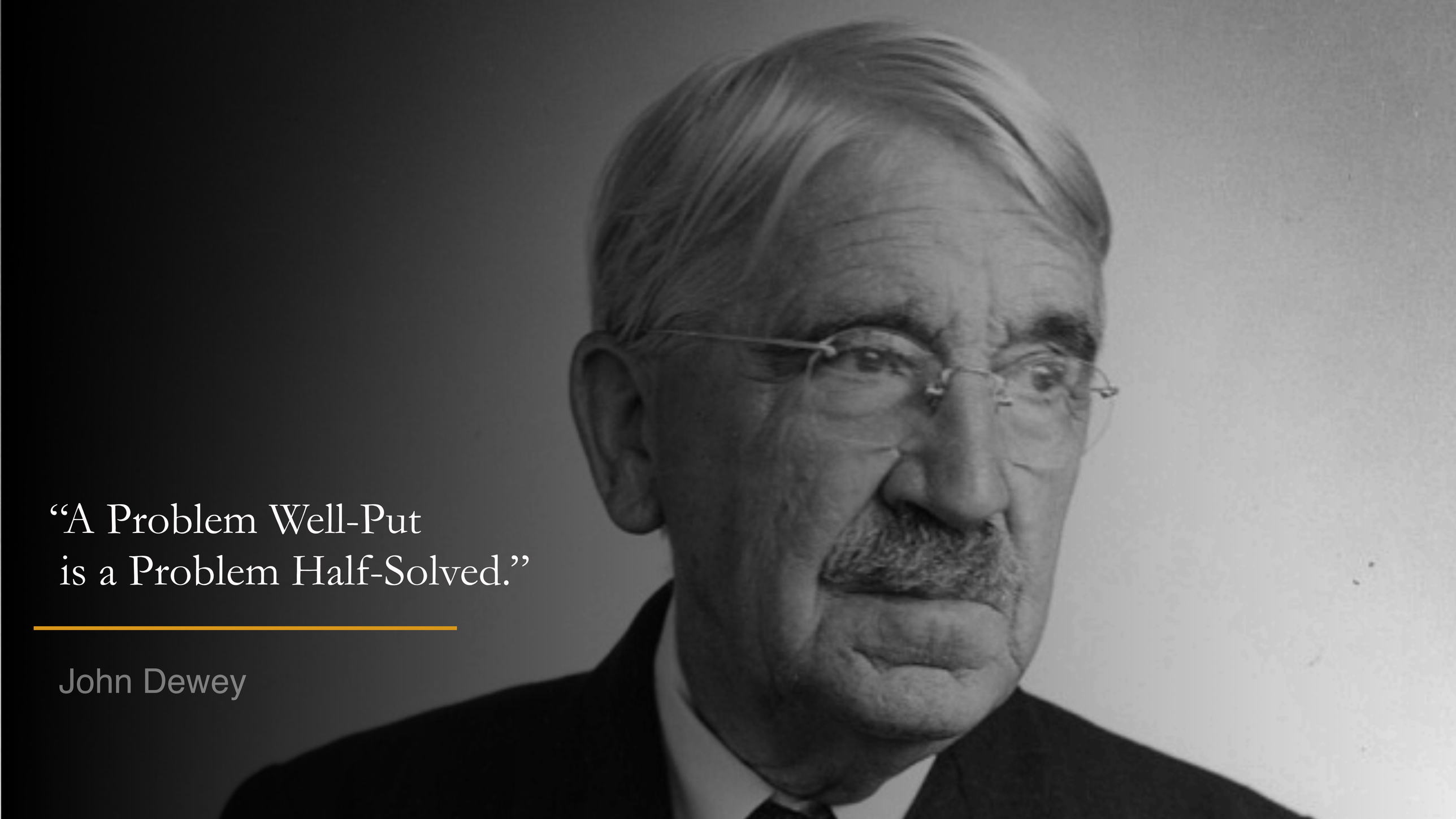
Analogic Simulations

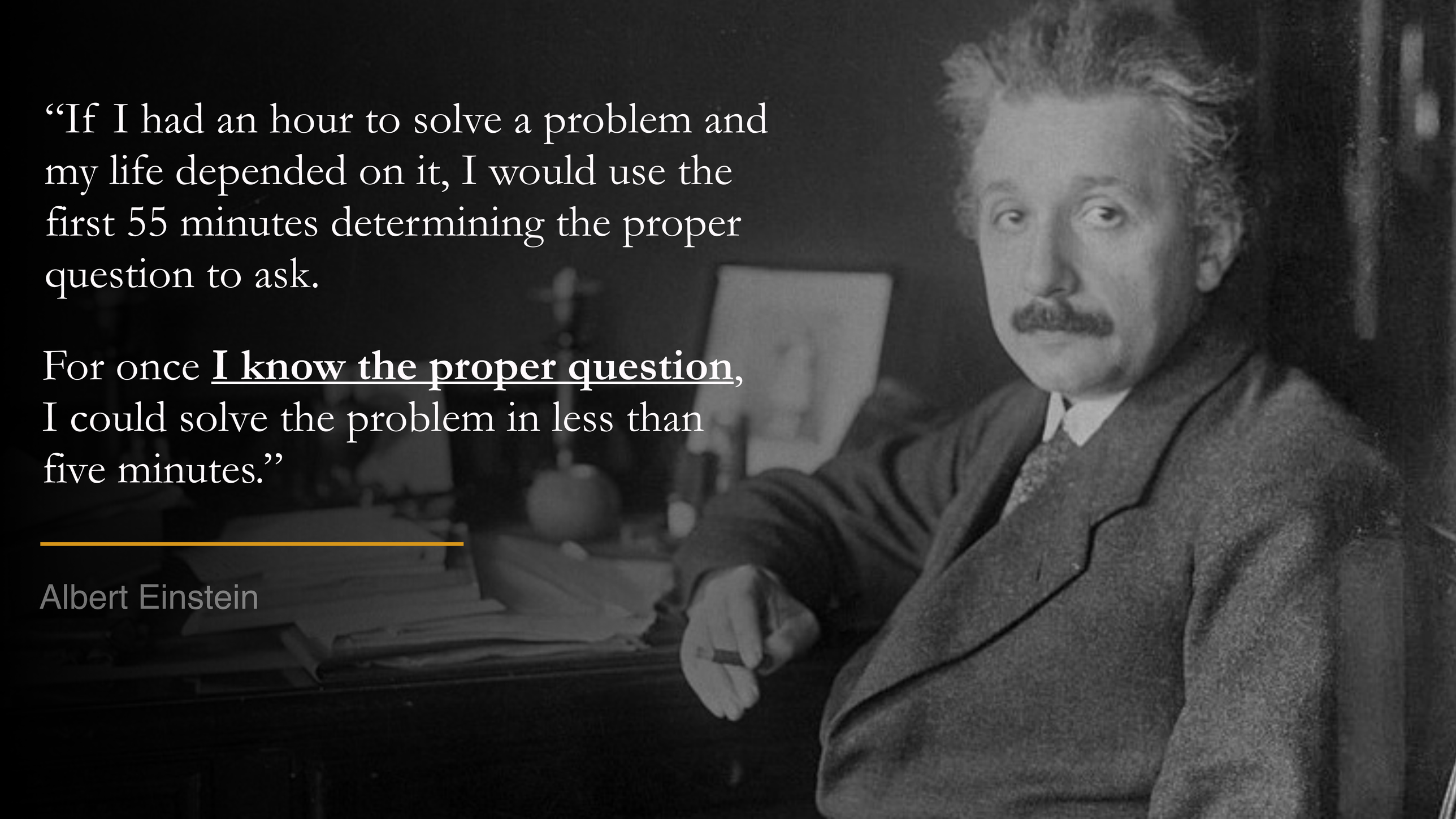
Risks to the Right Question



“There are so many people, working so hard, and achieving so little.”

Andy Grove, CEO of Intel


“A Problem Well-Put
is a Problem Half-Solved.”
John Dewey


“If I had an hour to solve a problem and my life depended on it, I would use the first 55 minutes determining the proper question to ask.
For once **I know the proper question**, I could solve the problem in less than five minutes.”
Albert Einstein

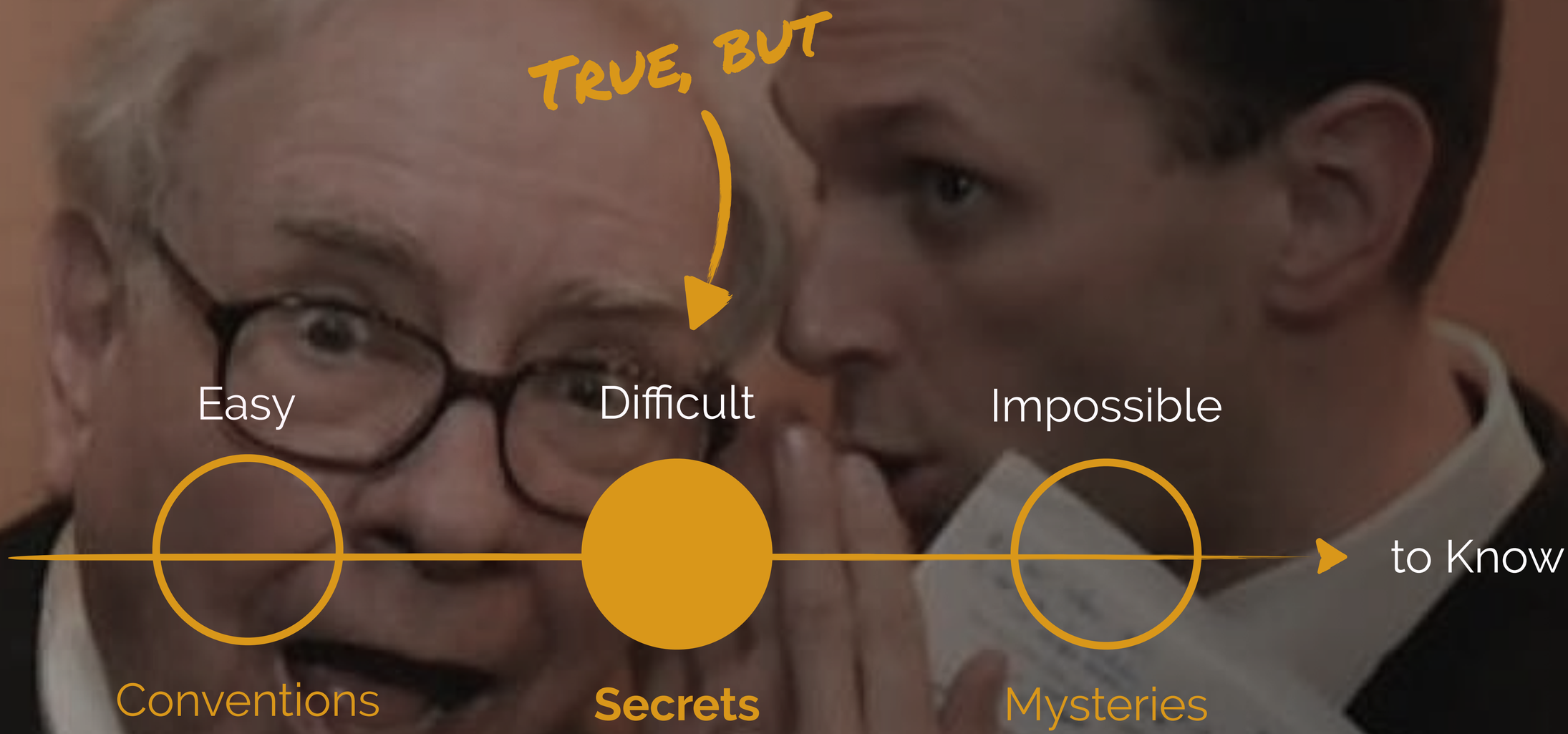
“When an Idea is Good Nothing Can Stop It.”

Eugene Meyer, Washington Post

Definitions

SECRET
Idea
Strategy
Plans
Execution

All Innovations are Secrets



Problem Solving

Interpretation/ Secret

Strategy

Planning

Execution

The Purpose of Innovation

Introduce and Scale the Adoption of a New Human Experience
Based on a Discovered Secret

INNOVATION RECIPE

1st: Who, in What Situation?	**Learn from the Extreme Users of a Situation (Mismatch)**
2nd: How to Interpret it?	**What is their experience and how should we frame it?**
3rd: How to Shape it to Fit?	**What behaviors should be changed in what sequence to deliver value?**
4th: How to Scale it?	**What adoption strategy is required?**

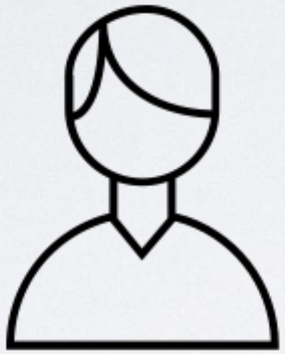
MISMATCHES ARE THE SECRET

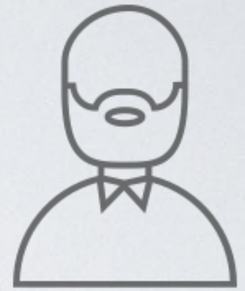
Innovations Exist to Change Behavior

Questions are: Who, Where, & to What End?

MisMatches

The Whole World is Designed





Behavior = (Person x Environment)

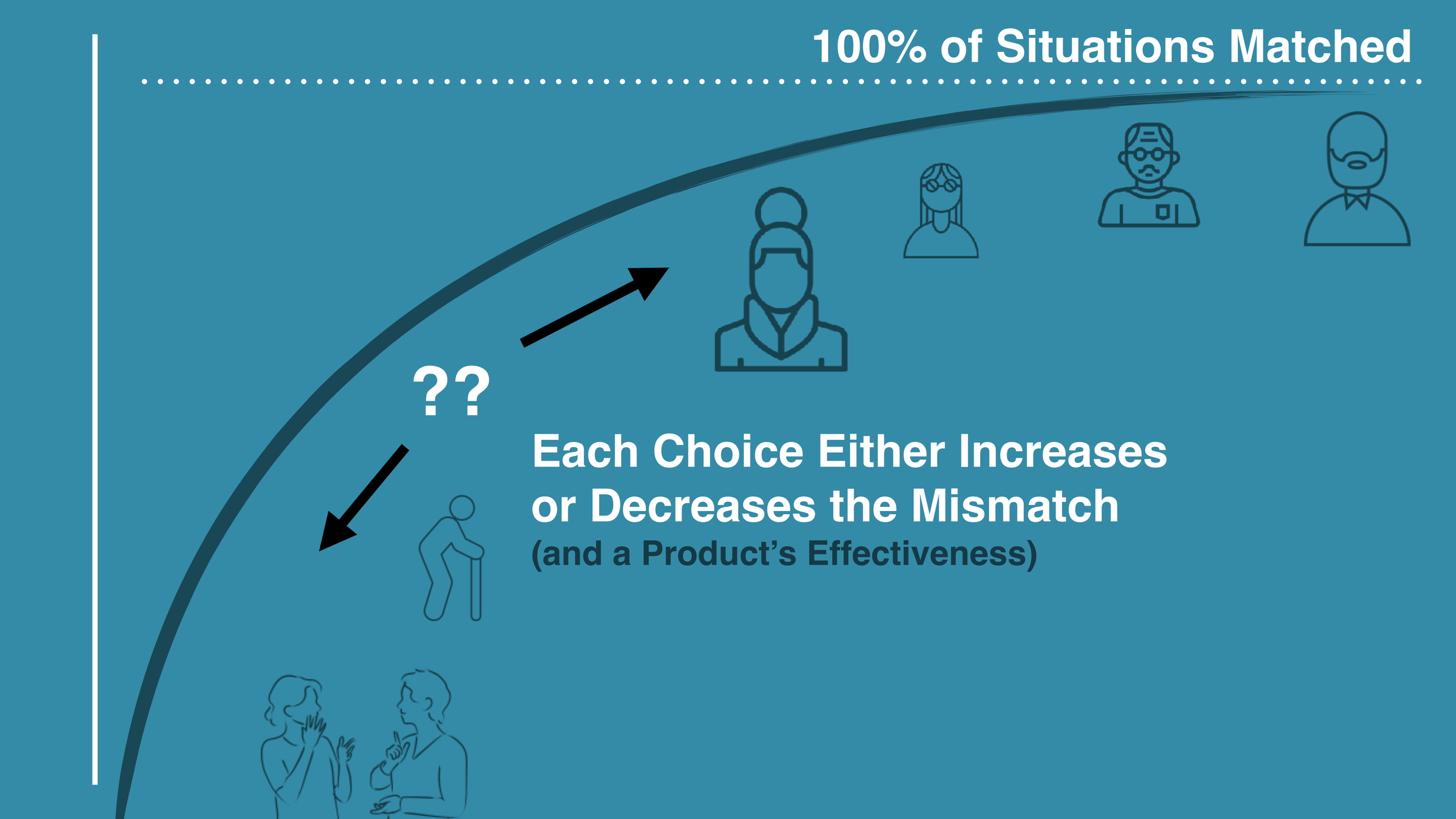
Experience

Outcomes

Barriers

Frictions

100% of Situations Matched



Each Choice Either Increases or Decreases the Mismatch

(and a Product's Effectiveness)

3 Mile Island Control Panel

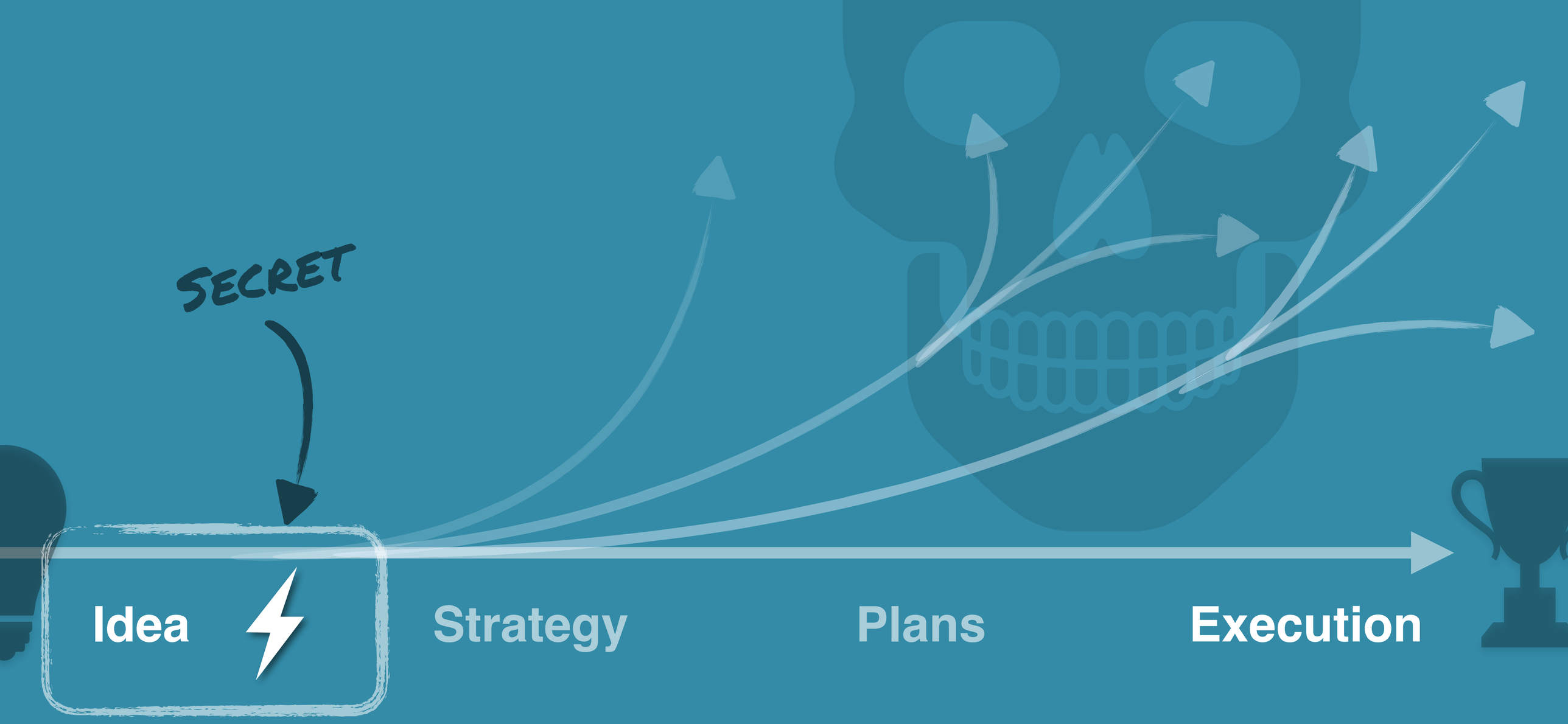
Achieving Failure

Great Solutions Reflect a Deep Understanding of What's Essential to the Right Situations

NEW INTERPRETATIONS ARE REQUIRED

The single hardest part of building…is deciding what to build.”

Software Design Pioneer, Fred Brooks


SECRET
Idea
Strategy
Plans
Execution

ZOOM INTO THE SECRET

Framing the Issue → **Insight into Structure** → **What to Build**

WHAT IS THE...

PENSION PROBLEM

**Feel Your Mind Leap to Radically Different Solutions

Political Discipline

To Fund Responsibly

To Not Overpromise

Actuarial Model Failure

Bad Assumptions

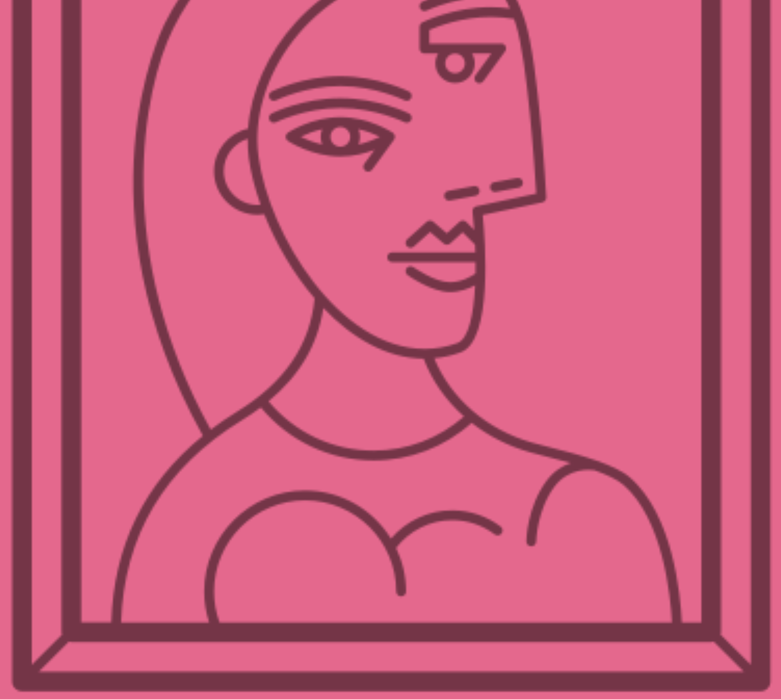
Not Insulated from Future Risk

Benefits too Generous

Population Shape is Untenable

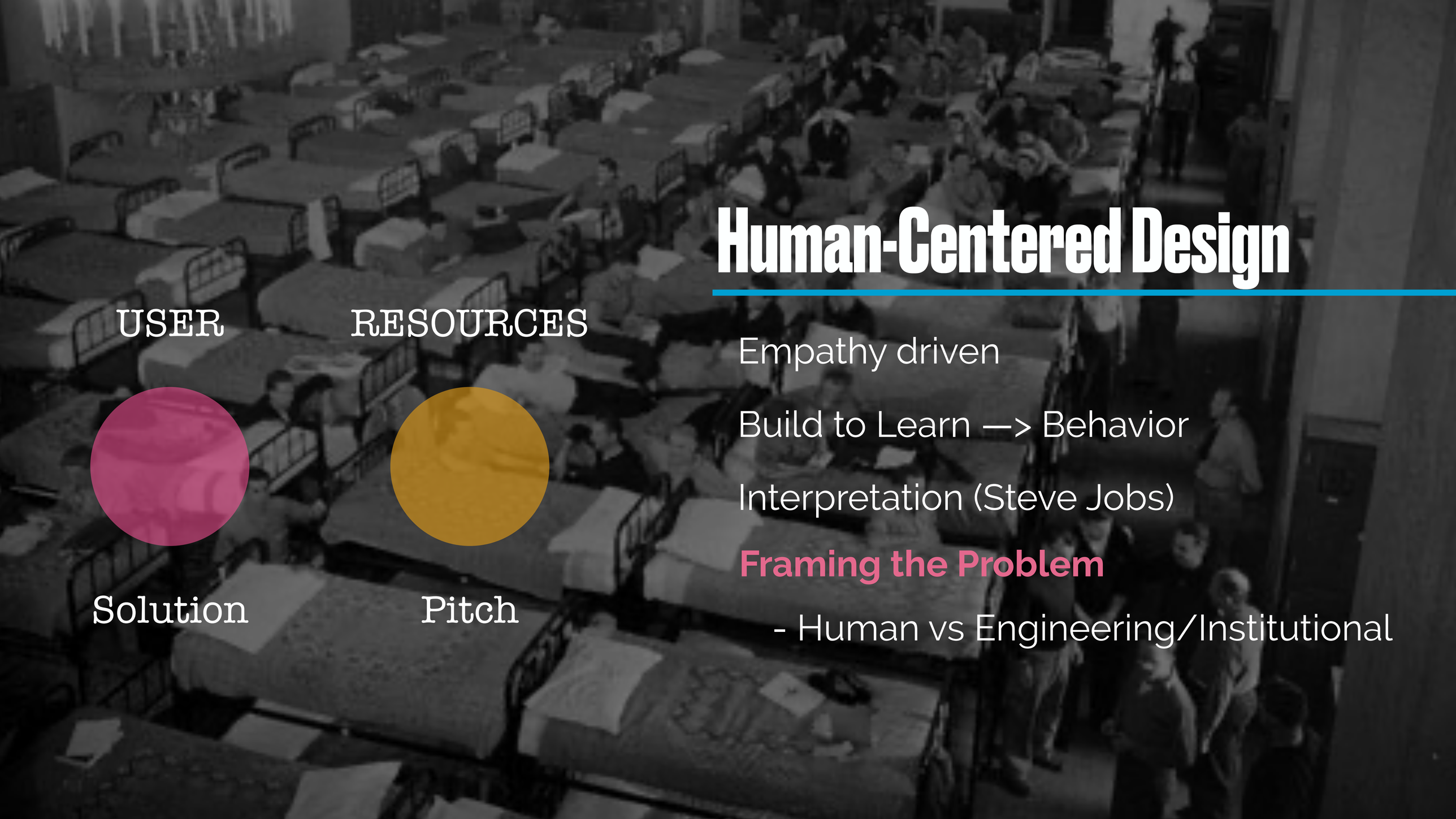
Need more Workers/Immigration

HOW DO WE ENSURE THAT WE DESIGN THE RIGHT SOLUTION?



The *Secret* is often in How You *Frame* It

What is this problem really about?



Human-Centered Design

Empathy driven

Build to Learn —> Behavior

Interpretation (Steve Jobs)

Framing the Problem

- Human vs Engineering/Institutional

The elevator is slow.

New motor

New algorithm

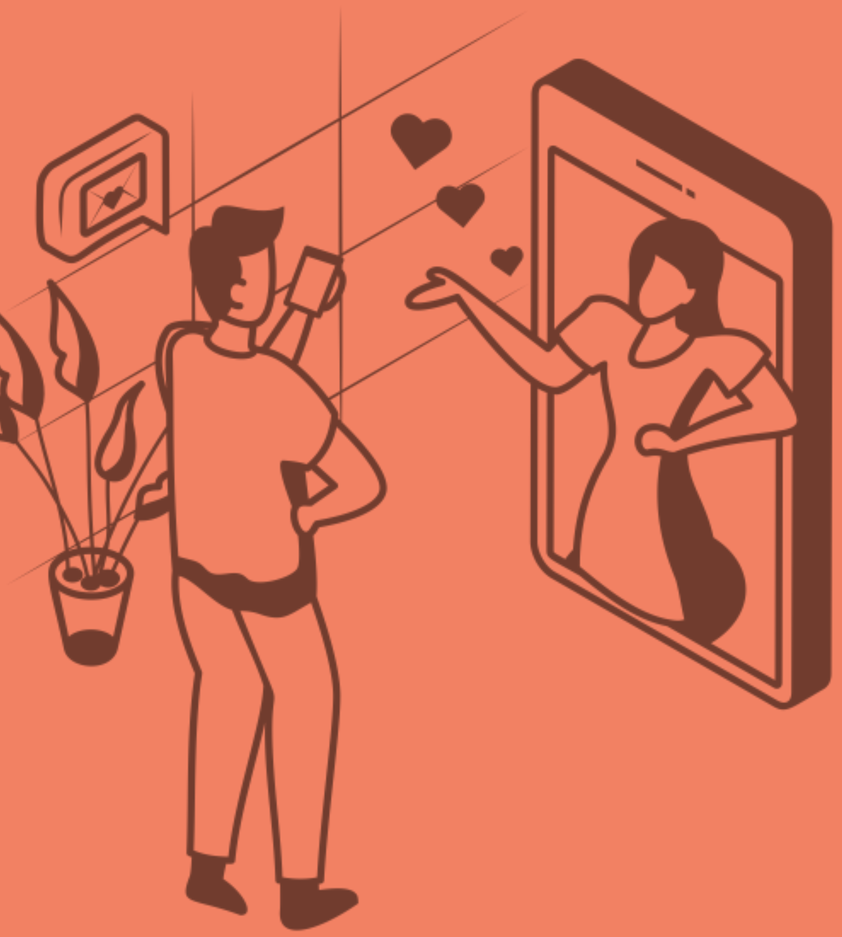
This wait is annoying

Install mirrors

Play music

Install hand sanitizer

Elevator Demo, Chicago World's Fair



BEGINNINGS ARE SPECIAL

ANALOGIC THINKING

Differentiate:

1. **Surface &**
2. **Structural Dimensions of the Problem**

Leverage Diverse Experiences (*Analogs)

INTERPRETATION
Idea
Strategy
Plans
Execution

HIGHLY CITED STUDY CONCLUDED:

Successful Problem Solvers Are Better Able to Determine the Deep Structure of a Problem Before They Proceed to Match a Strategy.

Reframe It!
- What is THE problem..really?

Problem Solving

Interpretation of Deep Structure

Strategy

Planning

Execution

OUTSIDE - IN THINKING

Inside View - (Kahneman) - Bounded Creativity

Analogical Thinking - Surgery Exp

Express & Identify: Structural Commonalities and How They Inform the Problem

Common Mistake

Picking Only 1 Analog & In the Same Industry

RESEARCH

MOLECULAR BIO LABS

- 1 year, 4 Labs (Large, Small, All men, All women)
- Exp: E.Coli - Proteins Stuck in Filter
  - Lab 1 - All E.Coli experts (months)
  - Lab 2 - Chem, Bio, MD, Genetics (minutes)
- Lab Meetings Were Key to Unpacking the Difficult Parts of Work
- More Analogies = More Breakthroughs (variety of domains)
- The Harder the Problem, The More Distant the Analogy Required (why?)

Even “Narrow” Diversity Transformed Teams

Midjourney

EXAMPLE

BOSTON CONSULTING GROUP

- Created Intranet to Facilitate Analogical Thinking
- Increase access to “reference classes”
- Exp: “Post-Merger Integration”
  - Will.i.am the Conqueror - (England with Norman Kingdom)
  - Sherlock Holmes - (small details)
  - Prussian Strategist - (momentum in victory)

Midjourney

ANALOGIC

SIMULATIONS

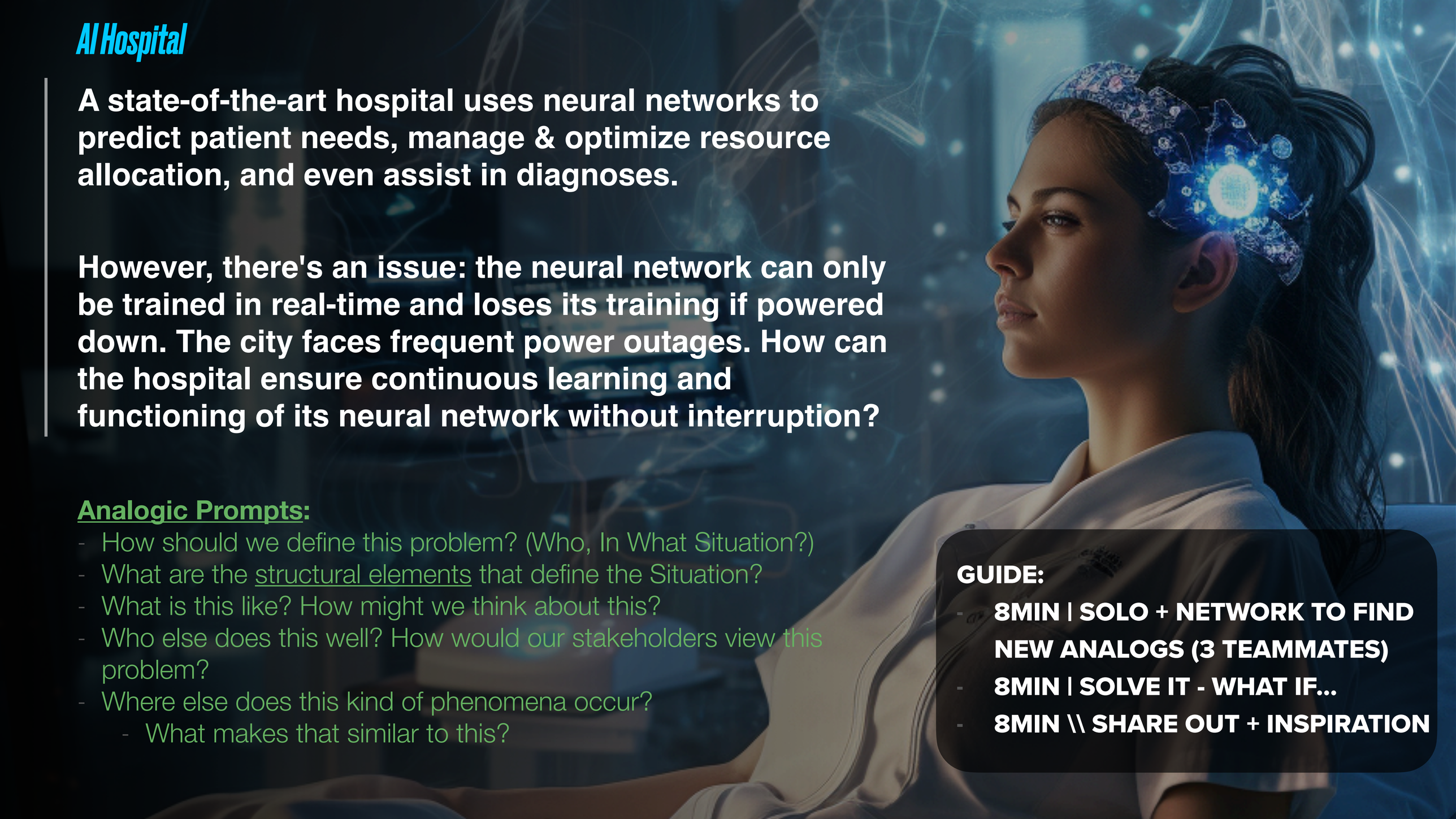
Health Care

Cryptography

AI Hospital

A state-of-the-art hospital uses neural networks to predict patient needs, manage & optimize resource allocation, and even assist in diagnoses.

However, there's an issue: the neural network can only be trained in real-time and loses its training if powered down. The city faces frequent power outages. How can the hospital ensure continuous learning and functioning of its neural network without interruption?



Analogic Prompts:

- How should we define this problem? (Who, In What Situation?)
- What are the structural elements that define the Situation?
- What is this like? How might we think about this?
- Who else does this well? How would our stakeholders view this problem?
- Where else does this kind of phenomena occur?
    - What makes that similar to this?

GUIDE:

- **8MIN | SOLO + NETWORK TO FIND NEW ANALOGS (3 TEAMMATES)**
- **8MIN | SOLVE IT - WHAT IF...**
- **8MIN \\ SHARE OUT + INSPIRATION**

Quantum Battlefield

In a future battlefield, all communication is encrypted using quantum cryptography, making eavesdropping virtually impossible.

However, the quantum encryption devices are bulky and can only encrypt messages at specific locations. Soldiers need to communicate securely while on the move. How can they ensure secure communication without always accessing the quantum devices?

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Take-Aways

Innovations Are Secrets About MisMatches

Effective Problem Solving Depends on Your Interpretation of the Problem (the right question)

Discover the Deep Structure of Problems: Framing, Analogs

Analogies Reveal Structural Dimensions

Thank You
WILL GOSSIN