

INNOVATION@AIRPORTS

January 15 - 16, 2019
San Diego, CA



INNOVATION@AIRPORTS

DESIGN THINKING: A People-Centered Approach to Innovation



Scott Robinson
President/CEO, **FreshForm.**
Founding Chair, **Design Forward Alliance**

FreshForm.
Experience Design and Innovation.
www.freshform.com



ACT
AIRPORT
TRANSIT
INNOVATION

Photo Credit: mic.com

People say Design Thinking is...

STRATEGIC



Lawton Ursrey, Why Design Thinking Should Be At The Core Of Your Business Strategy Development (Forbes, June 2014)



People say Design Thinking is...

IMPORTANT



Rikke Dam and Teo Siang, What is Design Thinking and Why Is It So Popular? (Interaction Design Foundation, December 2018)



People say Design Thinking is a...

COMPETITIVE ADVANTAGE



Modicum, Design Thinking: Your Next Competitive Advantage (Forbes, June 2017)



People say Design Thinking...

WORKS!



Rikke Dam and Teo Siang, What is Design Thinking and Why Is It So Popular? (Interaction Design Foundation, December 2018)



People say Design Thinking is...

CONFUSING



Sean McGuire, "DESIGN THINKING" a misleading confusing term nobody understands! (Medium, April 2017)



People say Design Thinking is...

MISUSED



Jack Strachan: Design thinking is not doomed – it's misused (Medium May 2018)

People say Design Thinking is a...

BUZZ WORD

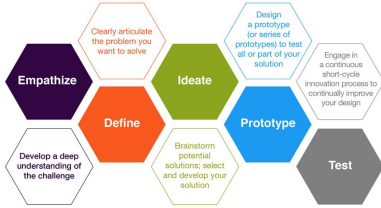
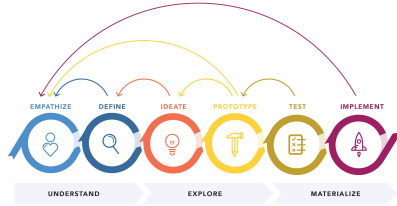


Natasha Jen: Design Thinking is Bullsh*t (99u Conference, June 2017)



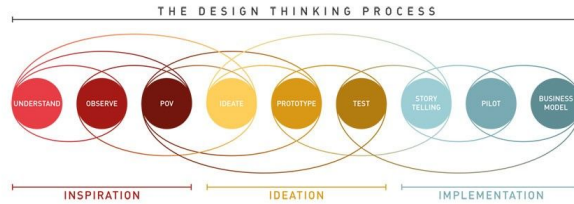
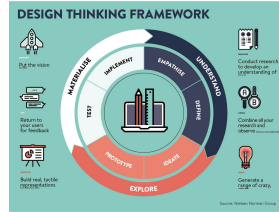
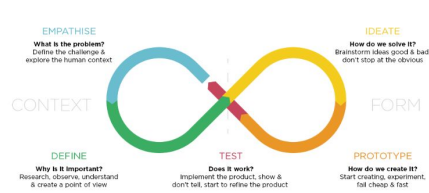
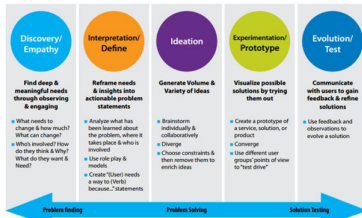
I AGREE.



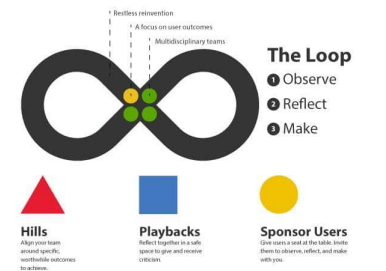
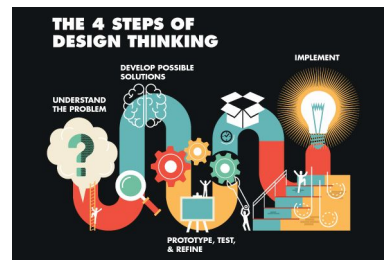
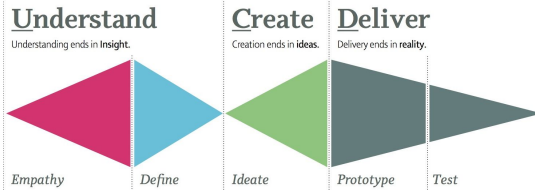
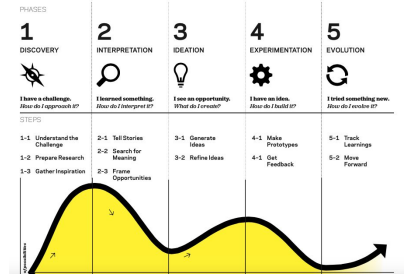
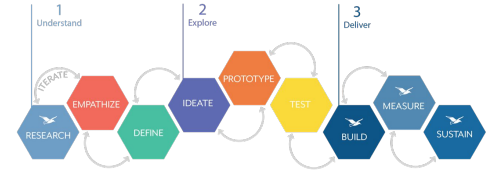
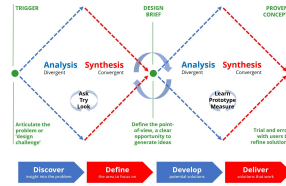


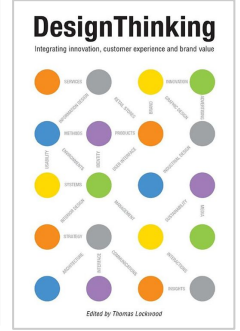
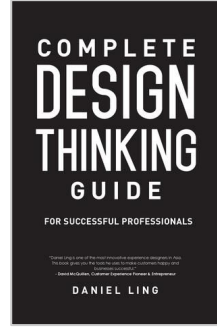
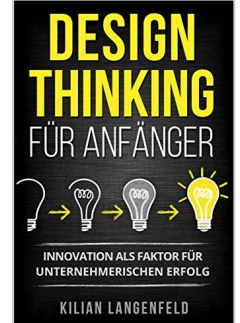
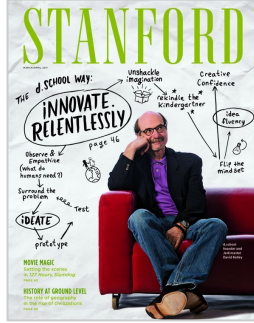
Design Thinking Process

Category Board of Education



DESIGN THINKING





In the past two years, Harvard Business Review has published

**89 ARTICLES,
BLOG POSTS,
CASE STUDIES**



So, WTF is...

DESIGN THINKING?

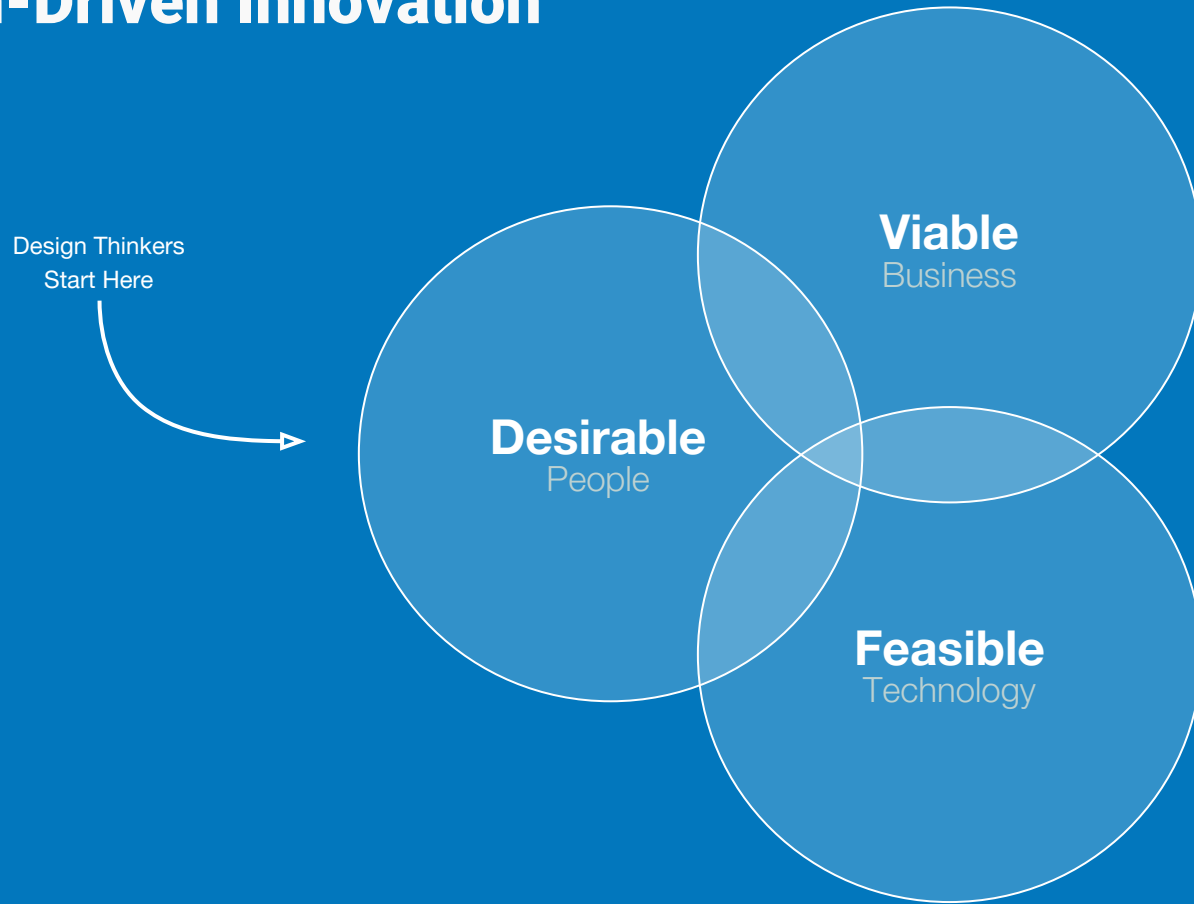


Design Thinking is...

**a human-centered innovation approach
that emphasizes observation, collaboration,
fast learning, visualization of ideas, rapid
concept prototyping and business analysis.**



Design-Driven Innovation



Design Thinking is...

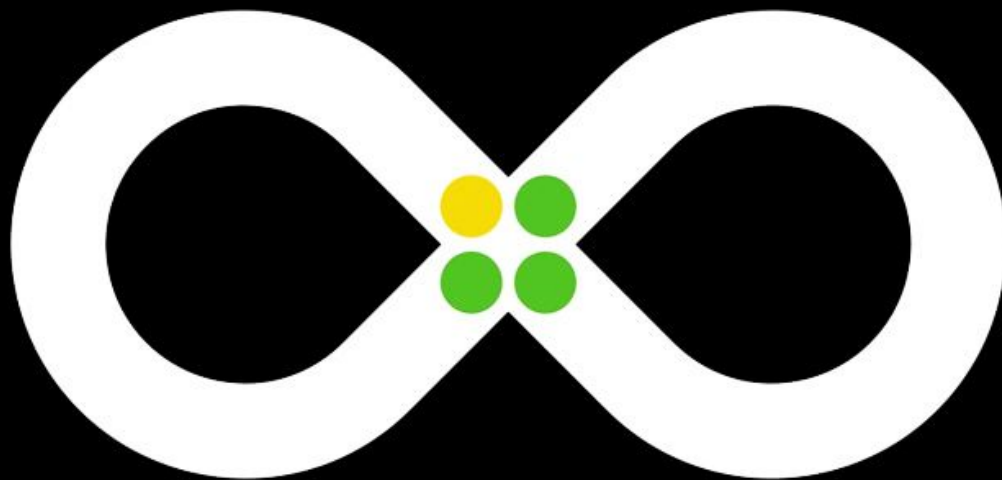
CREATIVE PROBLEM SOLVING



Design Thinking is...

- 1. a mindset** (people-centered approach)
- 2. a collection of tools & methods**
- 3. a process** (flexible, repeatable)





IBM Design Thinking

Human-centered outcomes at speed and scale



Let's think together.

Smarter teams, better ideas, and happier users.

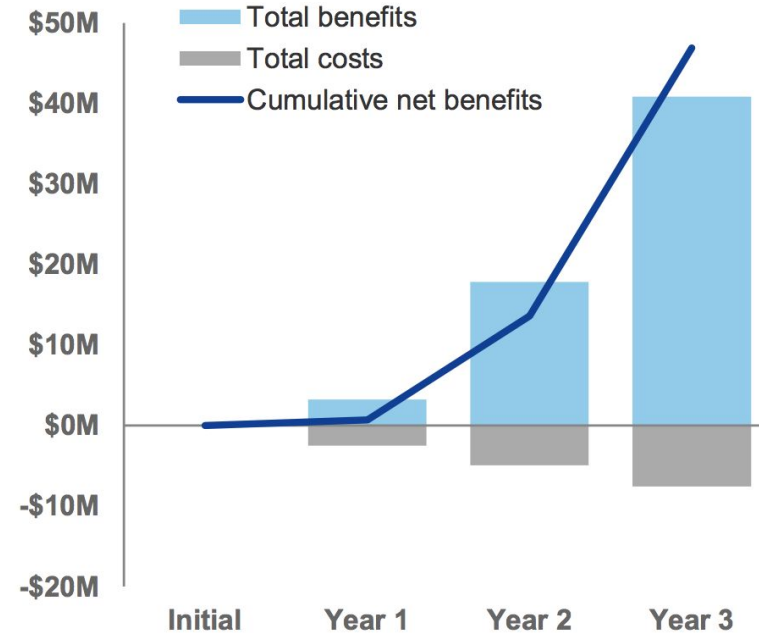


IBM Design Thinking...



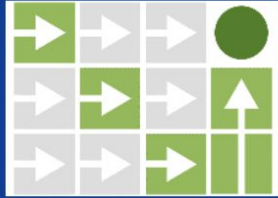
**ROI
301%**

Financial Summary (Three-Year)



Source: Feb 2018 Forrester Report: The Total Economic Impact™ Of IBM's Design Thinking Practice

IBM Design Thinking...



IBM's Design Thinking practice
cuts costs by accelerating
projects:
\$20.6 million



IBM's Design Thinking practice
reduces risk and increases
portfolio profitability:
\$18.6 million



2x
Faster time-to-market

75%
Reduced design time

33%
Reduced development time



Source: Feb 2018 Forrester Report: The Total Economic Impact™ Of IBM's Design Thinking Practice

An innovation process must deliver three things:

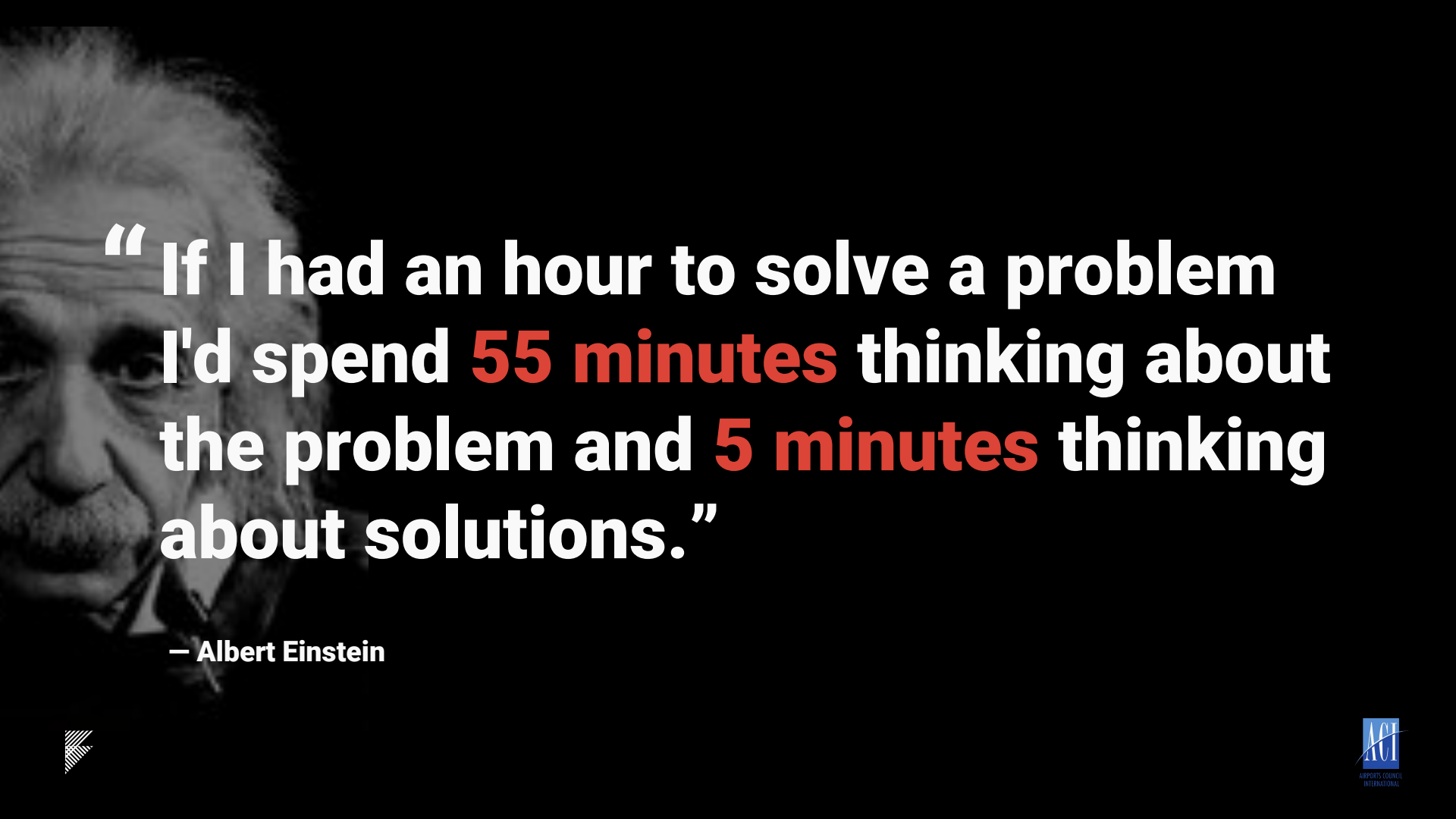
- 1) Superior solutions**
- 2) Lower risks & costs of change**
- 3) Employee buy-in**



The Design Thinking...

PROCESS

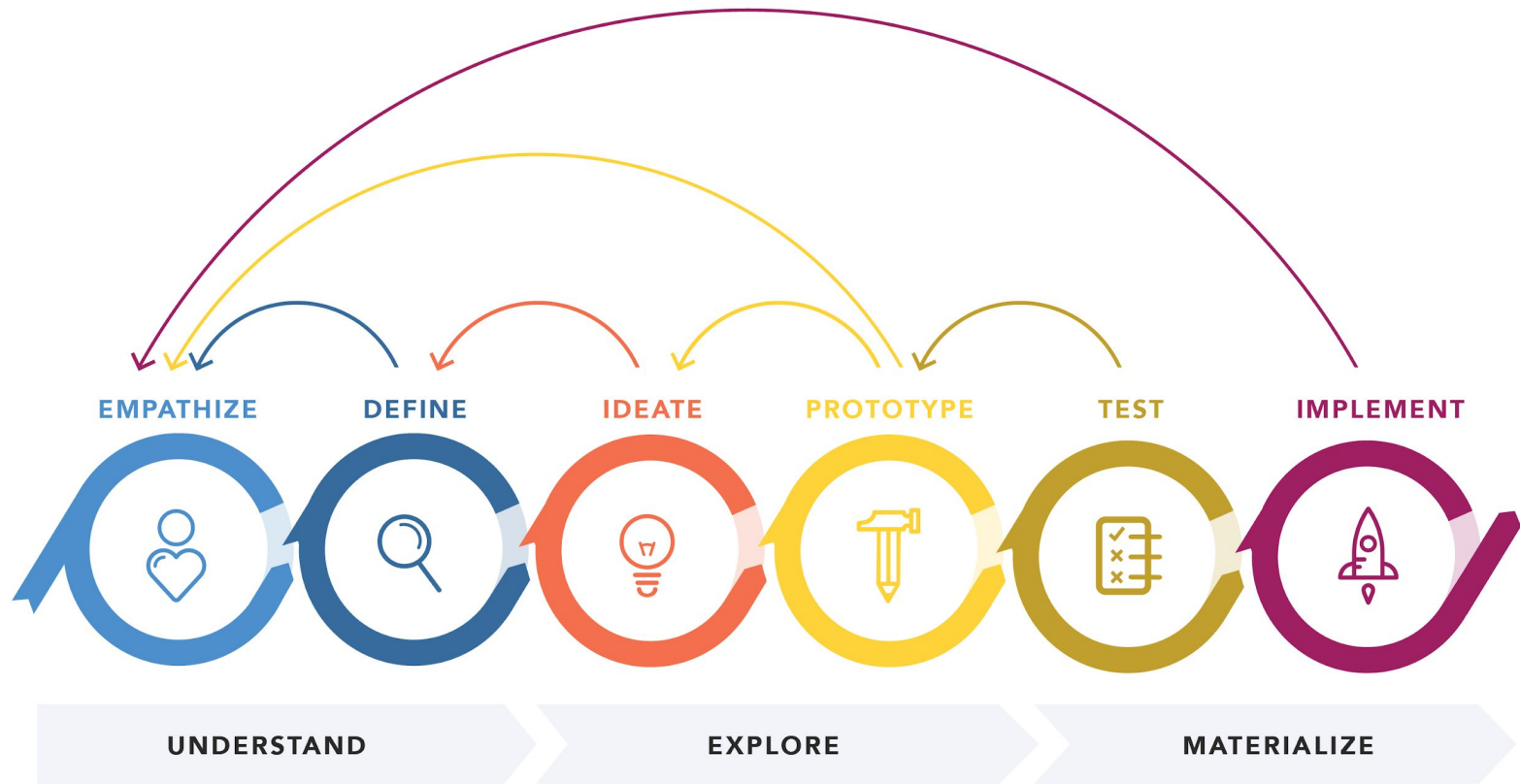




**“If I had an hour to solve a problem
I'd spend **55 minutes** thinking about
the problem and **5 minutes** thinking
about solutions.”**

— Albert Einstein





Source: Design Thinking 101, Nielsen Norman Group

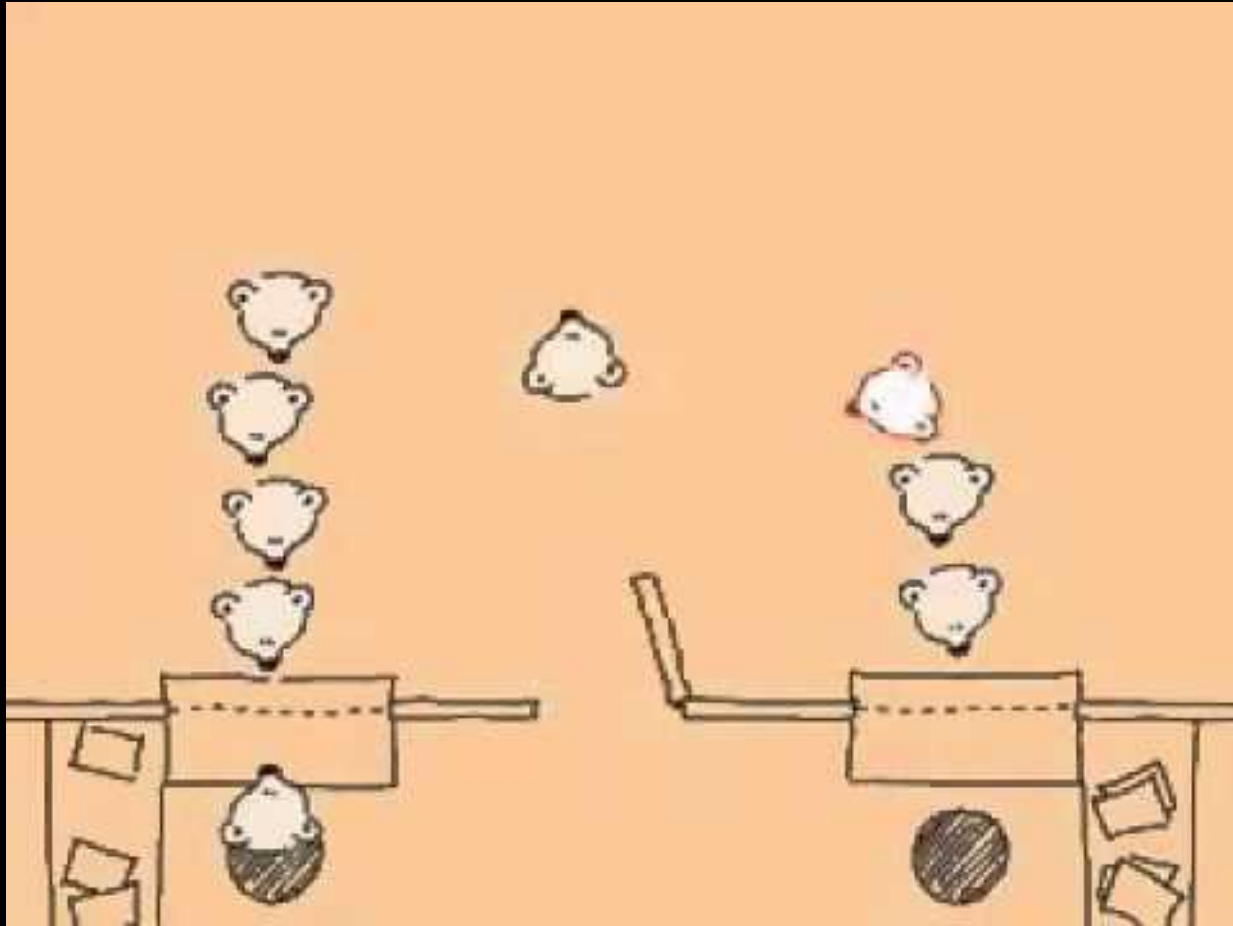


Understand + Explore + Materialize

EMPATHIZE

Conduct research to develop an understanding of your users.





**EMPATHY is
defined as feeling
with someone.**







USERS = REAL PEOPLE



Photo: Travel + Leisure



**Employees are
real people too.**



Photo: Travel + Leisure





**HIGH
RESOLUTION**

**09. SPOTIFY
ROCHELLE KING**



Spotify...

BY THE NUMBERS

Established: 2006 (Launched 2008)

Employees: 4,000+ (18 locations)

Users: 200 million (87 million paying)

Revenue: \$4.6 billion (FY 2017)





Understand + Explore + Materialize

DEFINE

Compile all your research to observe where the problems are.



“Great design is about solving the right problem.”

— Don Norman



Space. Saturate. Group.





**Reframe
the problem.**





Lost In Translation (2003)



PROBLEM FRAMING

“The elevator is too slow.”



PROBLEM FRAMING

“The elevator is too slow.”

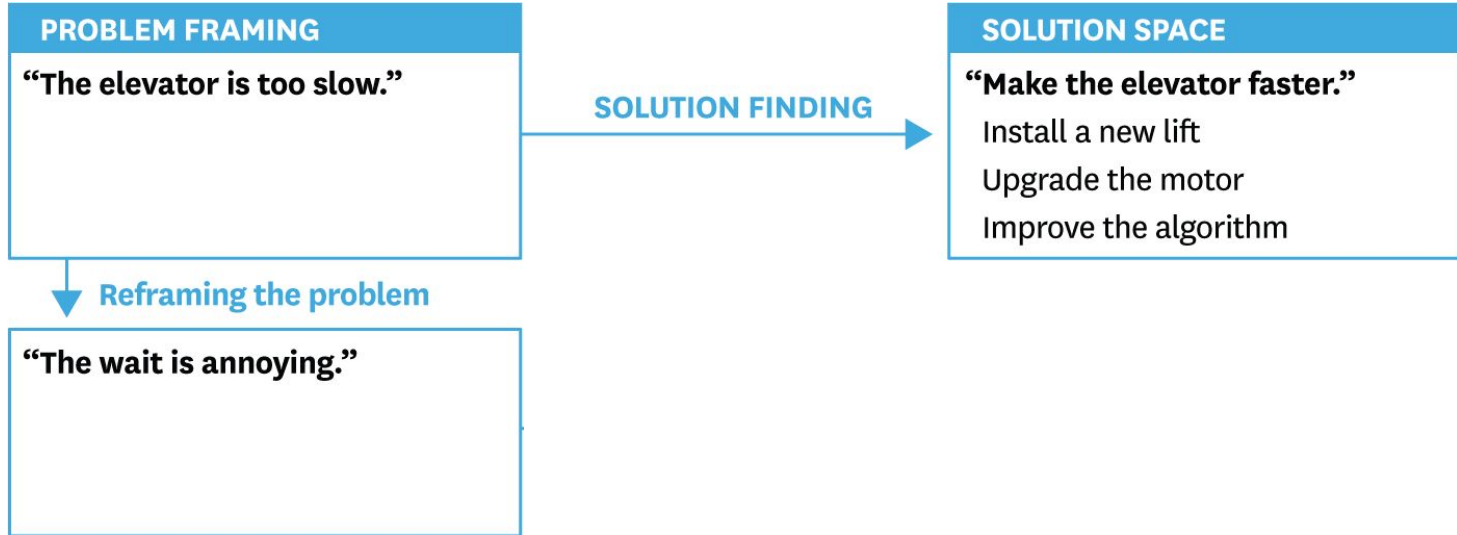
SOLUTION FINDING

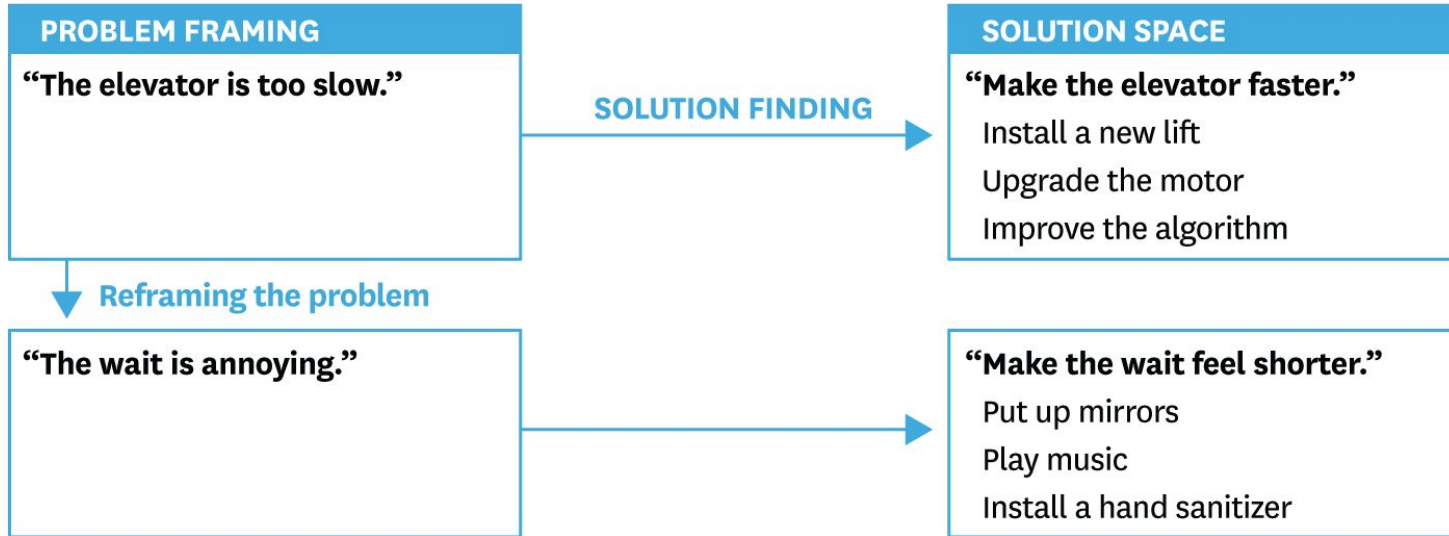
SOLUTION SPACE

“Make the elevator faster.”

Install a new lift
Upgrade the motor
Improve the algorithm









QUICK EXPERIMENT



30 Seconds...

Draw an airplane.





How might we...

**reimagine a better
way for people to
experience air travel?**





Understand + **Explore** + Materialize

IDEATE

Generate a range of crazy, creative ideas.





A photograph of three men in an office setting, viewed from the side and back. They are looking at a wall covered with various papers and colorful sticky notes. The man on the left is pointing at a note. The man in the middle is wearing glasses. The man on the right is looking intently at the wall. The entire image has a warm, orange-toned overlay.


Assemble the right experts.





Establish clear ground rules.



- 
- 1. Defer judgement**
 - 2. Encourage wild ideas**
 - 3. Build on the ideas of others**
 - 4. Stay focused on the topic**
 - 5. One conversation at a time**
 - 6. Be visual**
 - 7. Go for quantity**



Source: IDEOS' 7 Rules of Brainstorming



Port of San Diego



Have an focused facilitator.





Create a safe space for bold ideas.





Understand + **Explore** + Materialize

PROTOTYPE

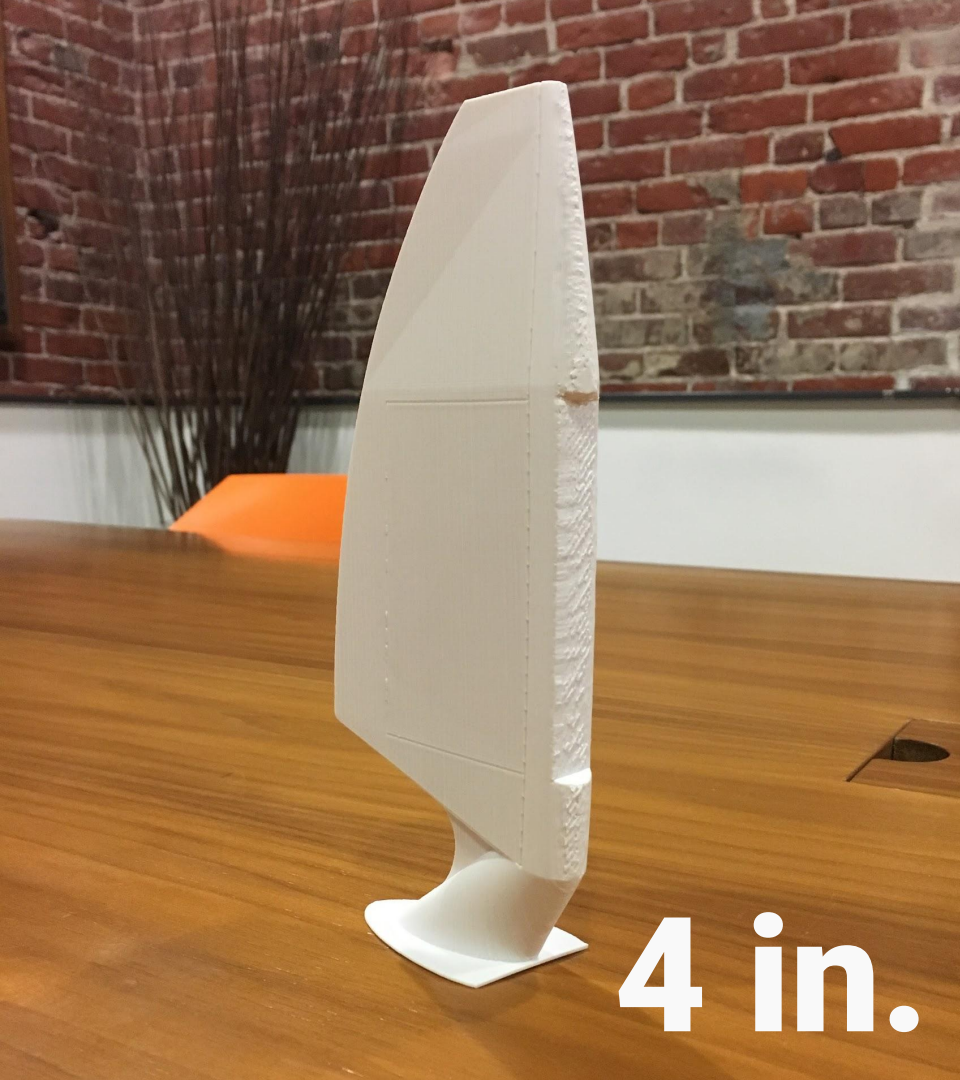
Build real, tactile representations for a range of your ideas.



Prototype for physical items.





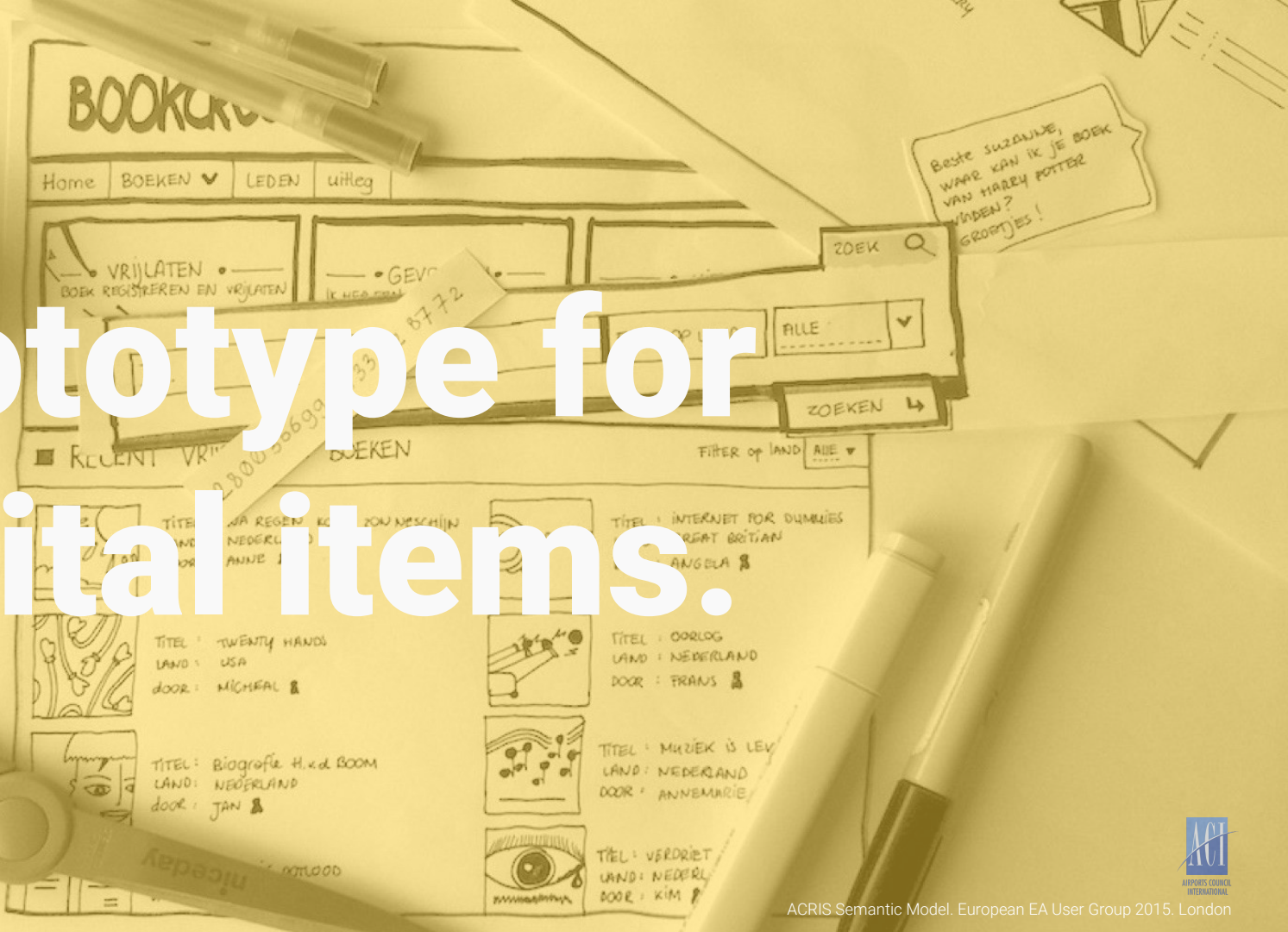


4 in.



12 ft.

Prototype for digital items.

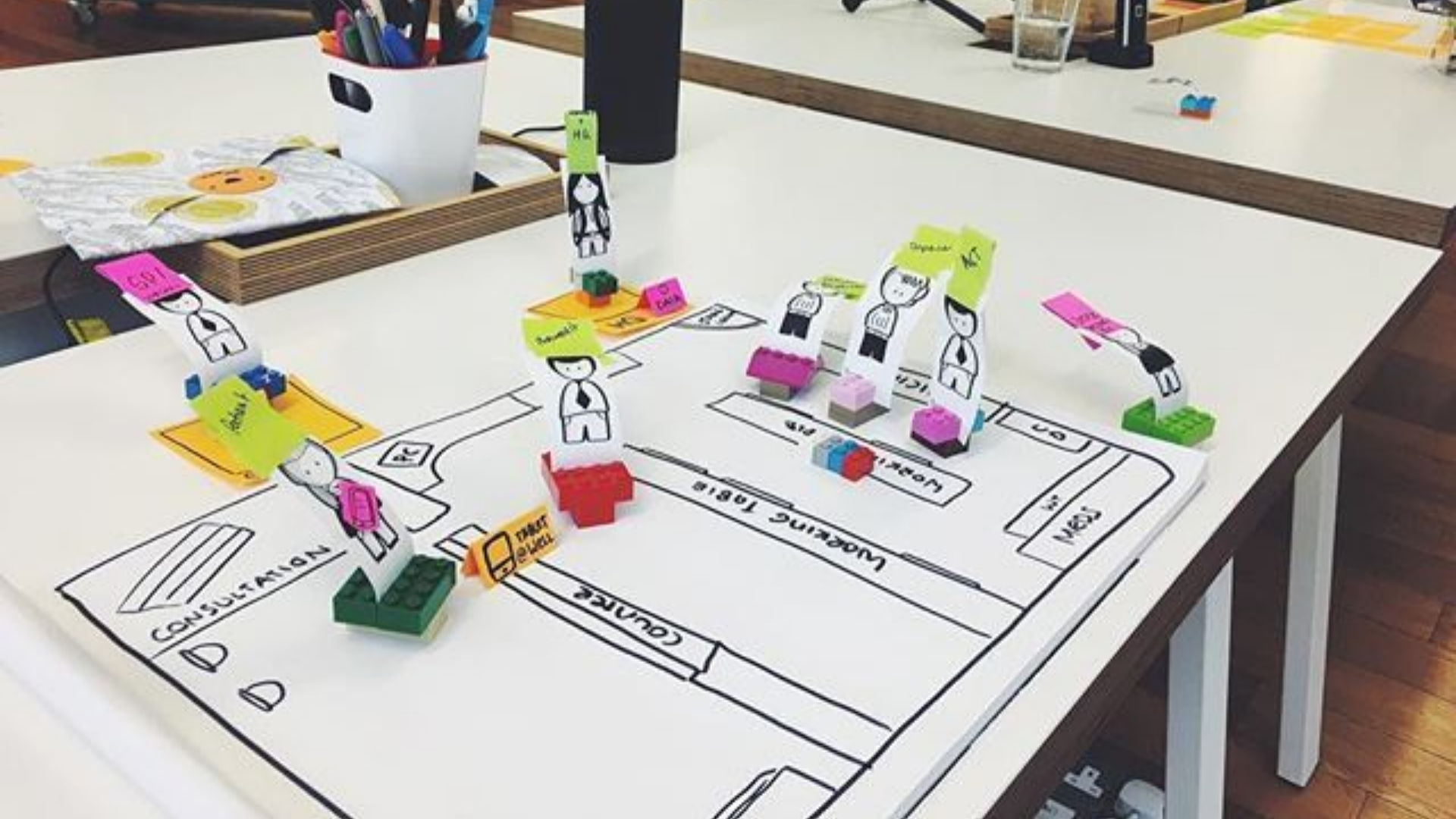






Prototype for experiences.









Understand + Explore + **Materialize**

TEST

Return to your users for feedback.





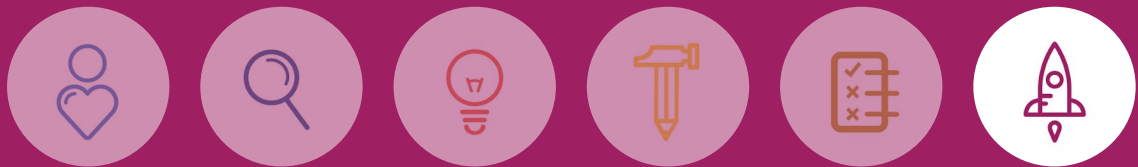
Real people.



Jeff Chlupach/Facebook, NYP HOLDINGS, INC.

**No idea is
a bad idea.**





Understand + Explore + **Materialize**

IMPLEMENT

Put the vision into effect.



A woman in a grey blazer and skirt is walking down an airport escalator. She is smiling and looking down at a dark jacket she is holding. She has a rolling suitcase in her right hand. In the background, other people are visible on the escalator and in the airport terminal. The entire image has a purple tint.

~~Design Thinking.~~ Design Doing.



(Re)designing Baggage Claim

Amber Murray & Karen Chan // Feb. 18, 2016 // IxD MDes Prototyping

Inviting

Engaging

Informing

1



Lisa checks her bags in for her flight to San Francisco and receives a baggage claim card as usual. She is invited to try out a bag tracking service that allows her to receive real-time text updates about where her bags are. She is eager to be reunited with her bags.

As she bids her bags farewell, Lisa's travel bag is printed with a colorful green icon that she can use to identify it. She is confident that she will be able to spot her bag easily when she is at Baggage Claim.

2



Lisa arrives at her destination. As she waits for the plane to taxi, she gets a text message letting her know where and when her bags will arrive at Baggage Claim.

She knows that her bags will arrive at the Baggage Claim carousel. She is confident that she will be able to spot her bag easily when she is at Baggage Claim.

3



Lisa approaches the Baggage Claim carousel with a bit of time to spare. Right away, she understands that she is at the right carousel.

She passes by the baggage claim carousel. She is confident that she will be able to spot her bag easily when she is at Baggage Claim.



The timer counts down to 00:00 and Lisa is excited when she sees the screen change to show the order of the bags that are coming out.

Travelers around her calmly step up to the carousel only when they see their icon appear in the carousel queue.

Lisa waits patiently for her icon to appear on the screen.



Lisa feels her phone buzz and checks her text message. She gets a text saying that her bag is about to come out, that she signed up to get updates about her bag's whereabouts.

She double checks the image of her icon that she received in the text and steps up to the carousel to prepare to retrieve her bag.

Generate a process map.

FEATURES & OPPORTUNITIES

Trackable RFID bag tags are printed with colorful icons of traveler initials

- Increase traveler confidence in baggage tracking
- Incorporate visual identifiers that are easy for travelers to remember

Opt-in to real-time text message service to receive updates about bag location

- Increase traveler confidence in being reunited with bags
- Better communicate baggage location and wait time to help travelers stay informed

Text message update of baggage location and time until bags arrive at Baggage Claim

- Enable travelers to stay informed about baggage location and wait time
- Reduce traveler stress and anxiety upon arrival
- Enable travelers to make better use of idle time

Baggage Claim carousel monitor displays information that is easy for travelers to see and understand

- Increase visibility of Baggage Claim carousel monitor
- Communicate in ways that are inclusive of travelers who may not understand English
- Communicate baggage status in terms that can be more easily understood
- Inform travelers about wait time

"Bag Cam" gives a peek of baggage journey

- Diminish sense of unease about baggage handling process
- Make better use of idle time at the carousel

Traveler icons are depicted on the monitor to visualize baggage location on the carousel

- Personalize the baggage claim experience
- Reduce travelers' need to crowd around the carousel
- Communicate in ways that are inclusive of travelers who may not understand English

Text message update of baggage arrival

- Communicate when bags will arrive on the carousel
- Reduce need to crowd around the baggage entry
- Increase traveler confidence in retrieving bags successfully

© 2016 Karen Chan





**Manufacture a
new product.**



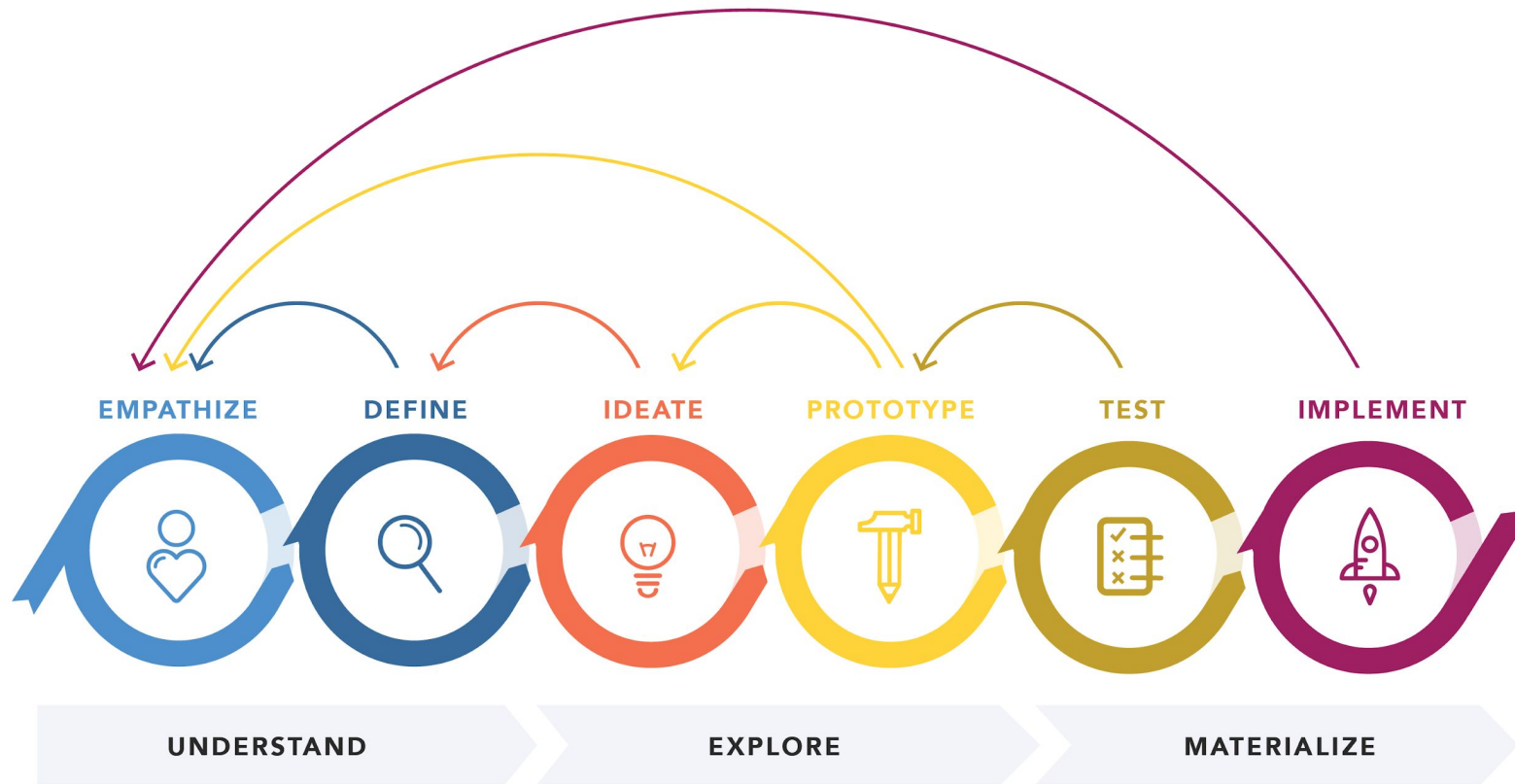
OXO's Good Grips Handles





Deliver an end to end experience.







Balance







LAX 2.0: The Vertical Airport, Jonathan Ortega, 2018 Skyscraper Competition, Honorable Mention



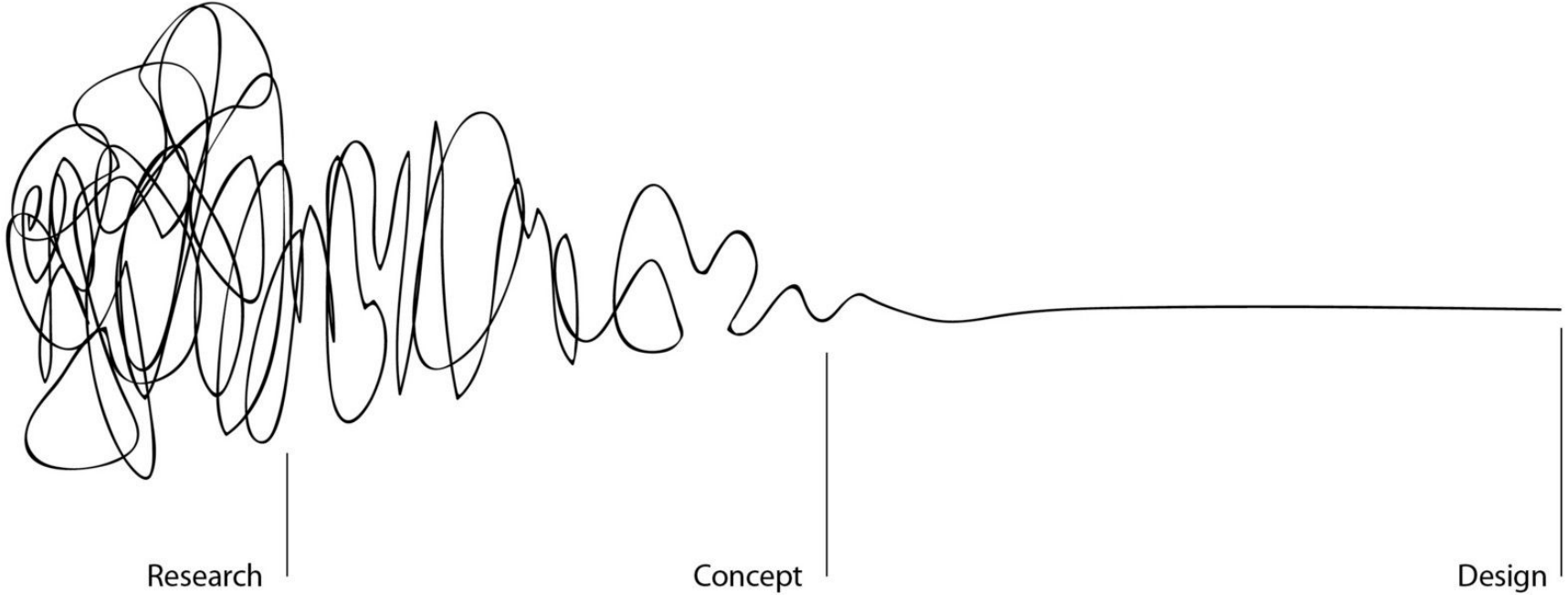
Design Thinking is...

- 1. a mindset** (people-centered approach)
- 2. a collection of tools & methods**
- 3. a process** (flexible, repeatable)



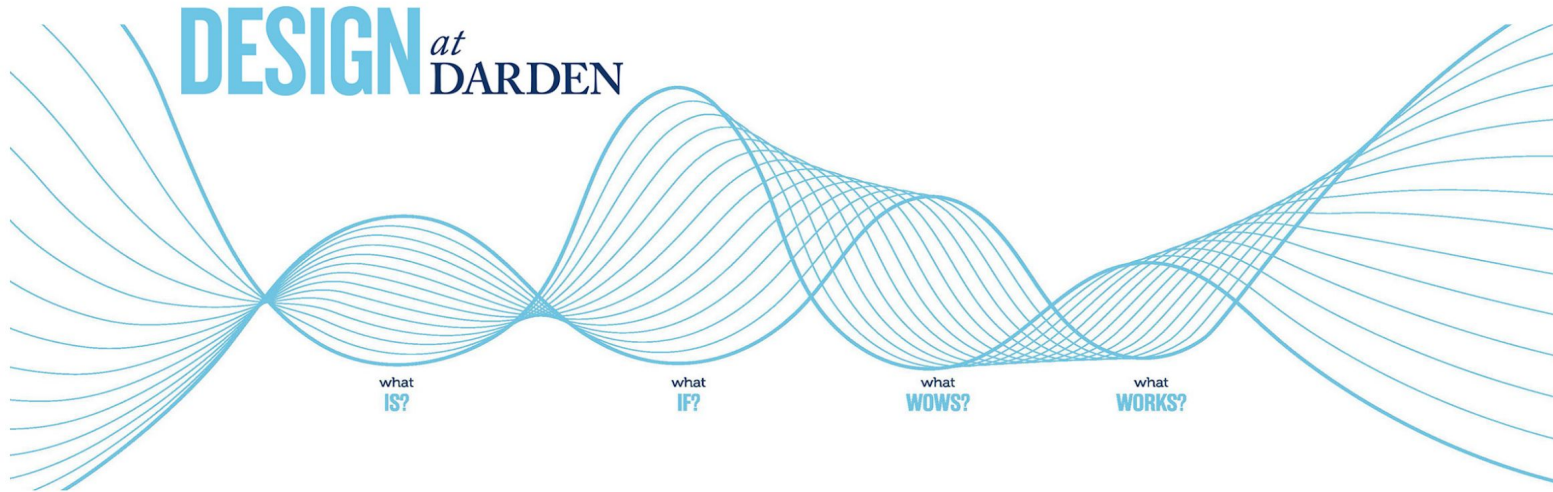
Uncertainty / patterns / insights

Clarity / Focus



The Design Squiggle by Damien Newman, 2006

EXPLORING THE IMPACT OF DESIGN THINKING IN ACTION



Design Thinking provides an Impact on Innovation Outcomes by...

- 1. Produces higher quality solutions.**
- 2. Reduces the risk/visibility of failure.**
- 3. Improves likelihood of implementation.**
- 4. Improves adaptability.**
- 5. Creates local capability sets.**







THANK YOU.

Scott Robinson

scott@freshform.com

Twitter, Instagram: [@_mr_robinson_](#)

LinkedIn: [@scott-robinson-san-diego](#)

FreshForm.

Experience Design and Innovation.

www.freshform.com

[@freshform](#)



Photo Credit: mic.com