

LEAN IN DESIGN FORUM  
JUNE 20-21, 2023

#LCIDesign23

# The Future of Design: Adaptability and Agility

## Lean in Design: Adapting to Realize Benefits



Lean  
Construction  
Institute  
Transforming Design and Construction

P2SL

Heather Bachman, HGA; Stan Chiu, Gensler; Dave Hagan,  
Devenney Group; Neelanjana Sen, HGA

June 21, 2023



Heather Bachman

HGA

Principal, background in  
Medial Planning and  
Interior Design



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Gensler

Director of Healthcare



Dave Hagan

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Executive Director of  
Continuous Improvement



Neelanjana Sen

HGA

Associate  
Vice President,  
Project Manager

## **What is Lean in the context of construction?**

- In construction our output is a physical structure, and this is more aligned with "production" methodologies

## **What is Lean in the context of design?**

- In design, the outputs are knowledge and decisions – and that's not as aligned with production methodologies





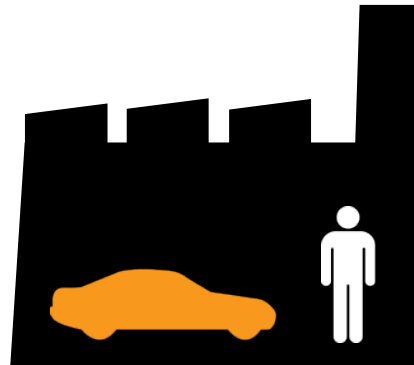
## **We're still trying to slay the same old dragons!**

Our clients say:

- It costs too much
- The process is too slow
- And we don't always get what we want or what we expected!

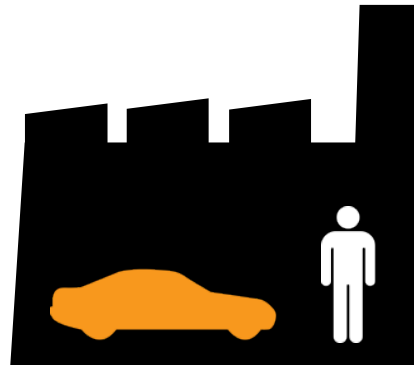
# Production systems

QQQ \$\$\$ CRAFT

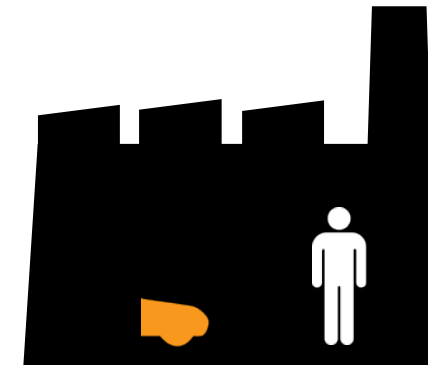
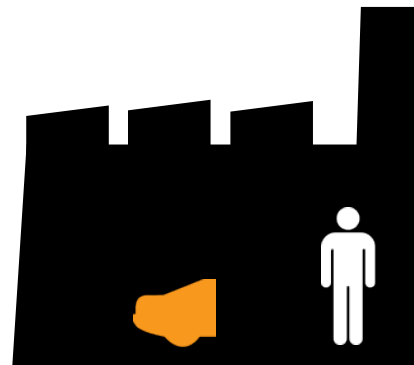


# Production systems

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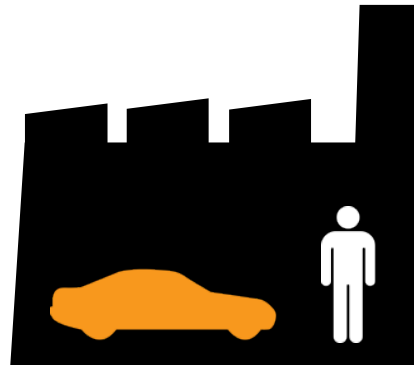


Q \$ MASS

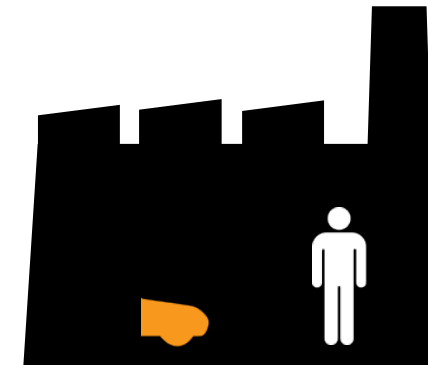
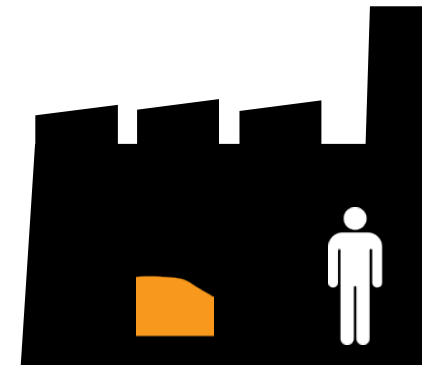
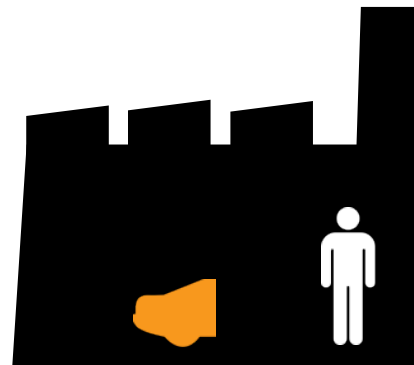


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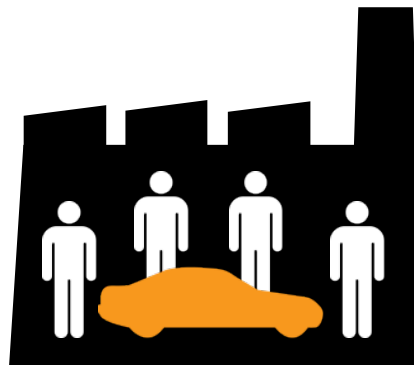
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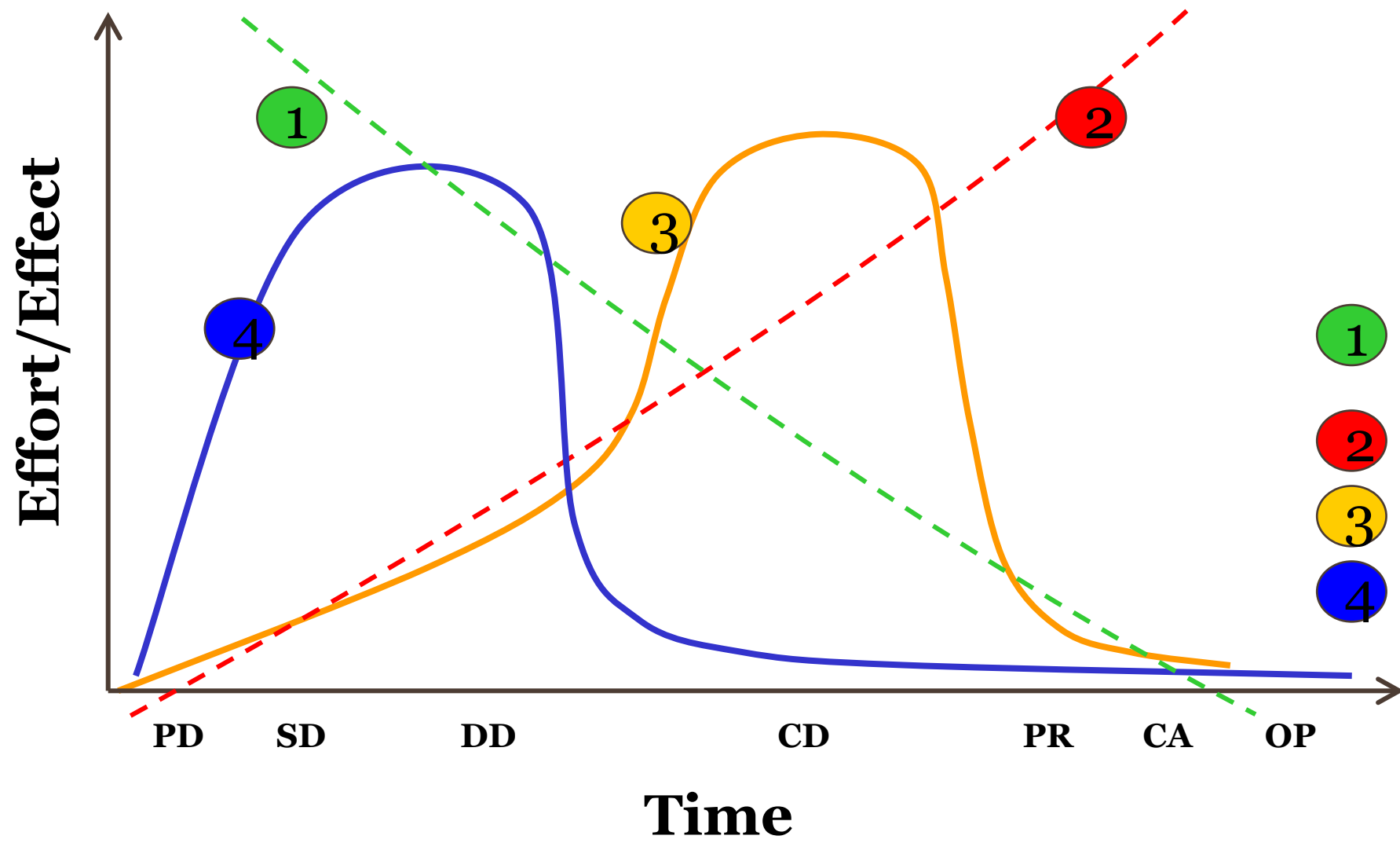
Q \$ MASS



QQ \$ LEAN



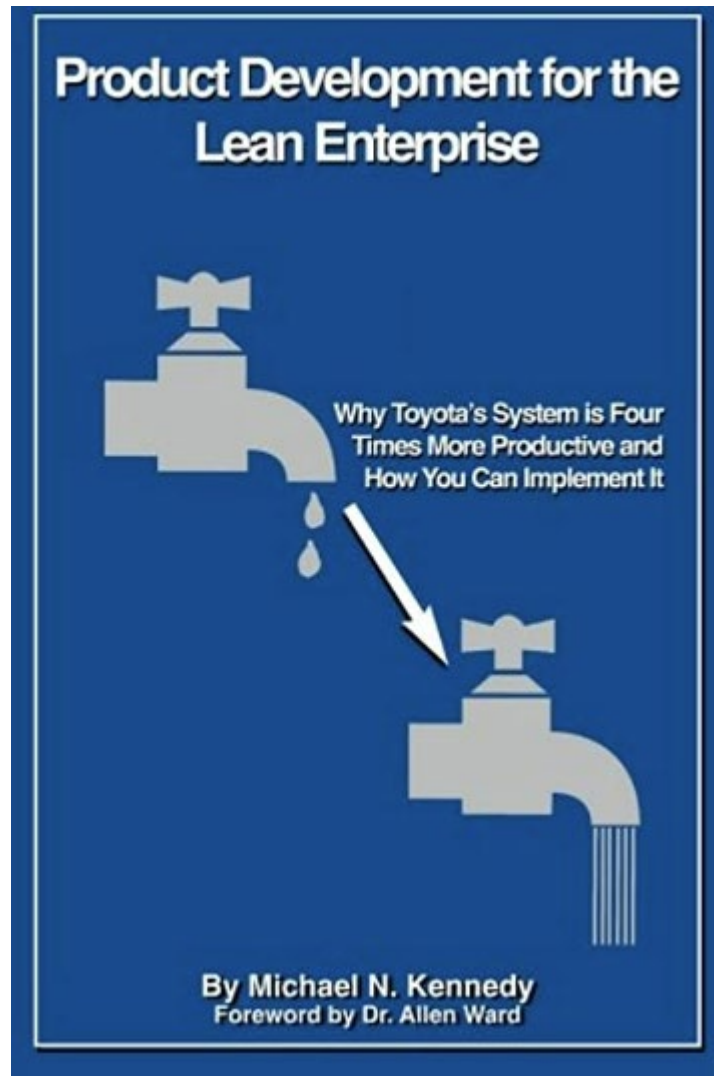
# Project Planning



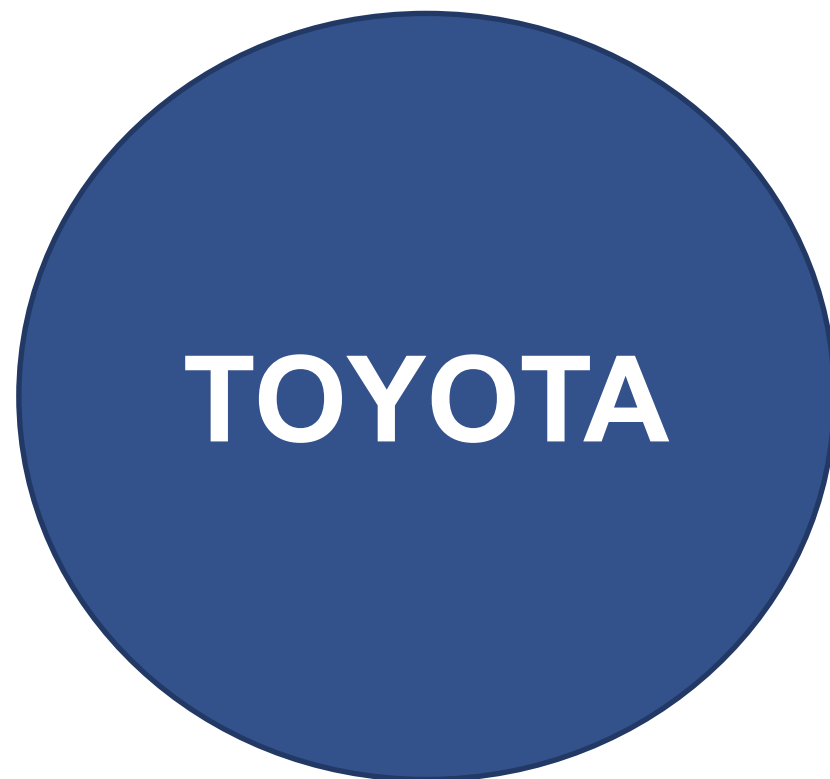
PD = Pre-Design  
SD = Schematics  
DD = Design Development  
CD = Construction Docs  
PR = Procurement  
CA = Construction Admin  
OP = Operations

- 1 Ability to Impact Cost and Functional Capabilities
- 2 Cost of Design Changes
- 3 Traditional Design Process
- 4 IPD Method

# Early Lesson



JUNE 20-21, 2023



Maximize innovation!

*A process to maximize innovation  
...not standardize design*



Minimize waste!

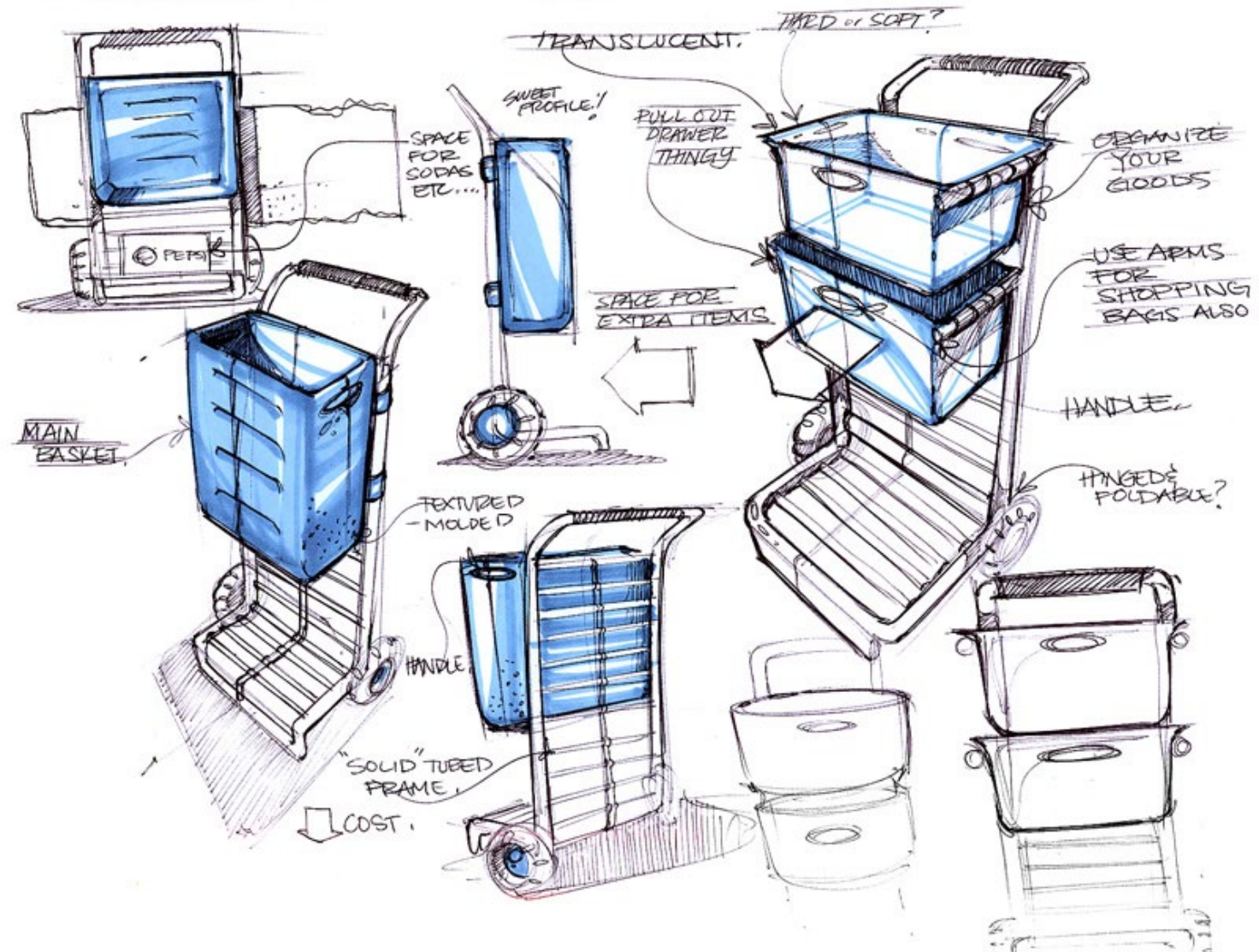
## What is innovation in the context of design?

- Pushes the boundaries of traditional and current practice
- Reframes assumptions
- Embraces the novel approach
- Holistic investigation of stakeholder needs
- **Produces better outcomes**

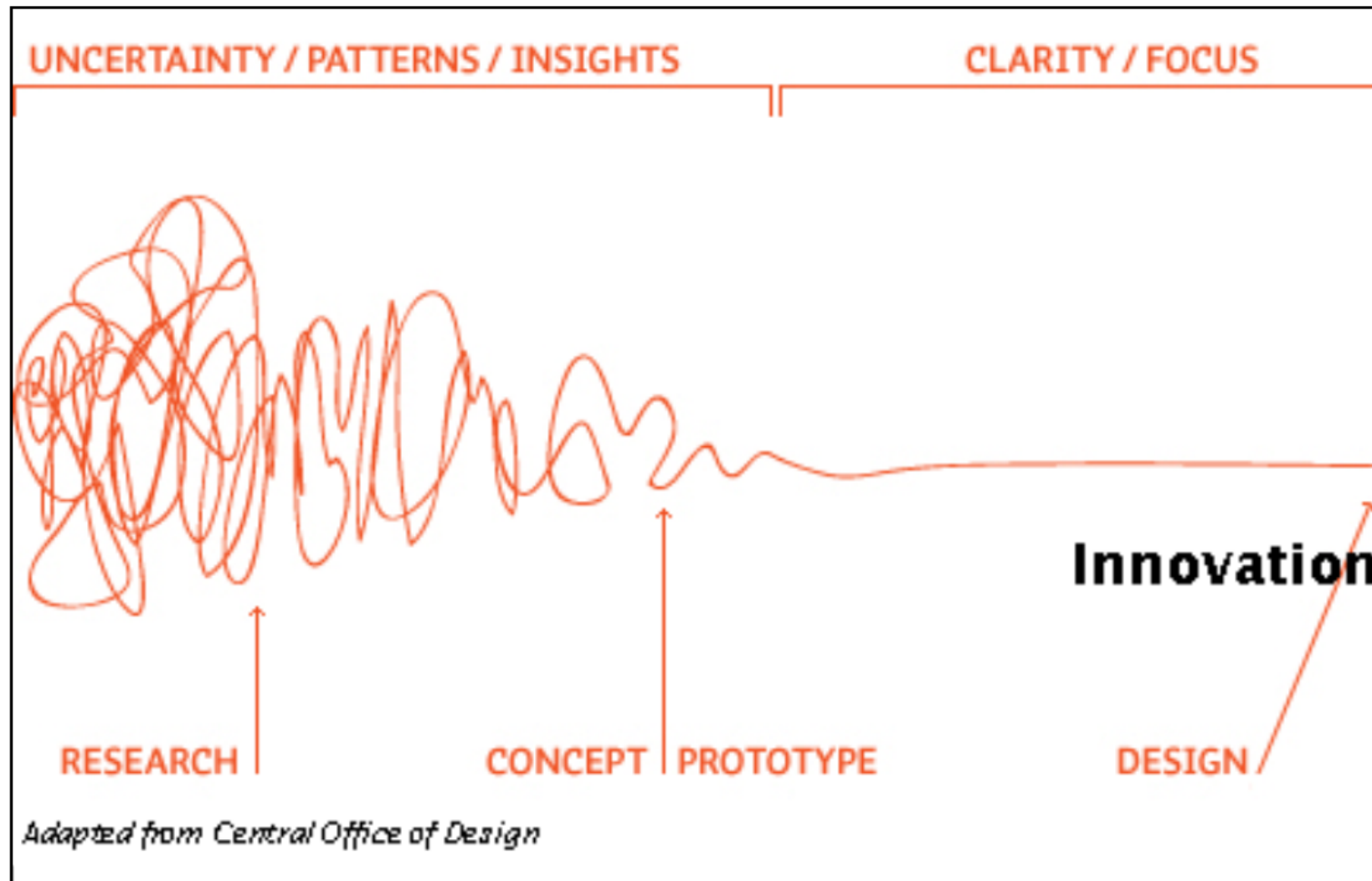
If you  
want  
clarity,  
ask  
rather  
than  
make  
assumptions.

## IDEO, Palo Alto, CA

- Mainstreamed the idea of “Design Thinking”
- Utilize Going to Gemba
- Root cause analysis
- Rapid Proto-typing
- ...and neutral Standard of Care issues



# Design Thinking as Strategy for Innovation

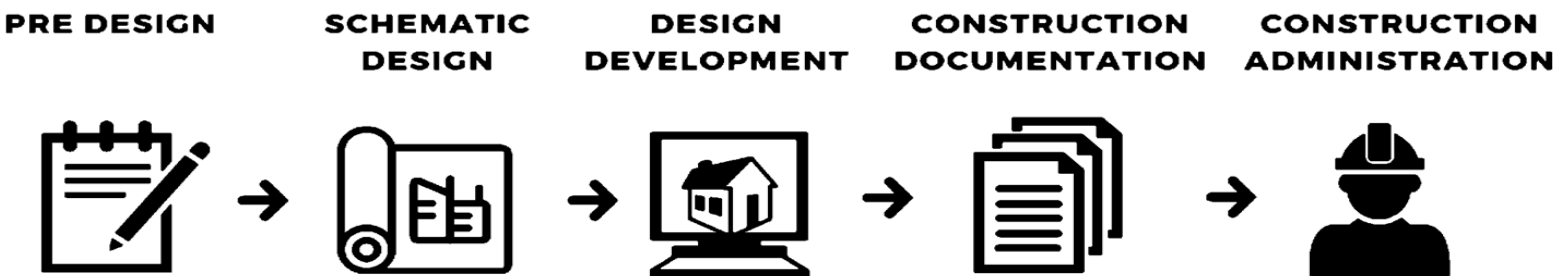


## What is Design Thinking?

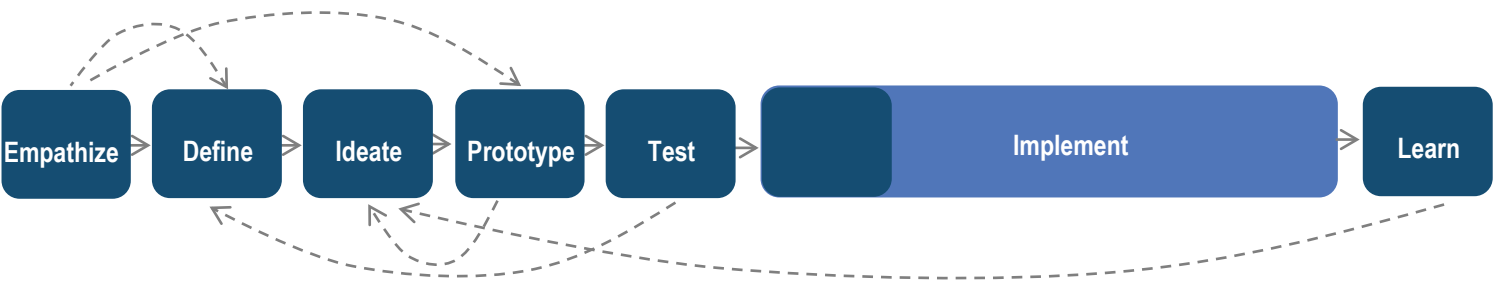
Design Thinking is a methodology used by designers to solve complex problems, and find desirable solutions for clients. A design mindset is not problem-focused, it's solution focused and action oriented towards creating a preferred future. Design Thinking draws upon logic, imagination, intuition, and systemic reasoning, to explore possibilities of what could be—and to create desired outcomes that benefit the end user (the customer).

# Clarify the Design Process

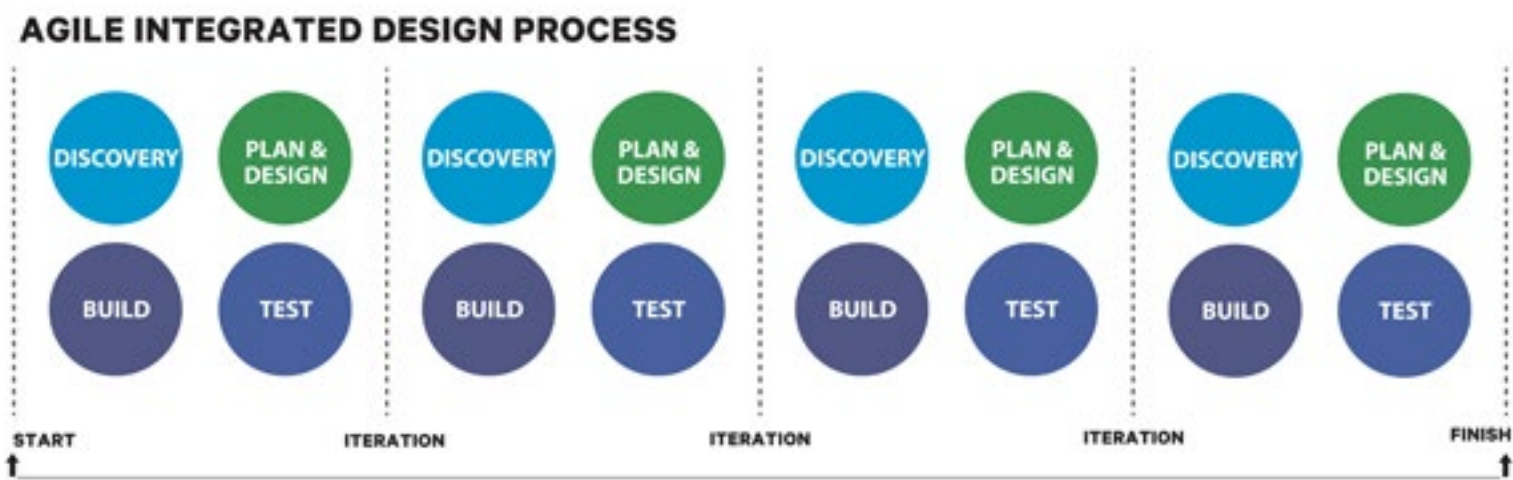
Traditional?



Design Thinking?



Agile / Kanban?



# Design Has Unique Phases

## Ideation

### *Research*

Owner/User Needs  
Value Definition

### *Ideation*

Parti  
Innovation  
Research  
Materials  
Work flow

### *Design Production*

Story Telling  
Written – Visual  
Rapid Prototyping

## Production

### *Document Production*

Design Development  
Written – Visual  
Rapid Prototyping  
Outline Specifications

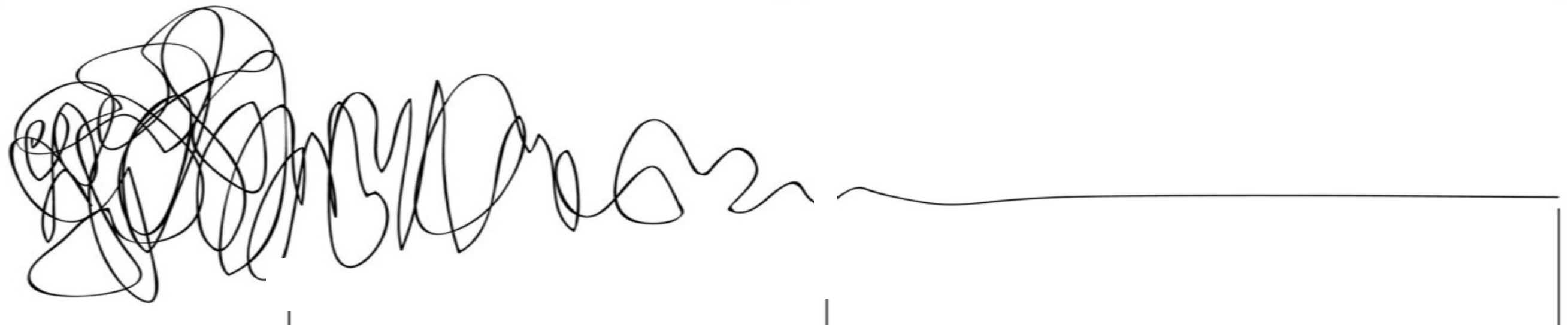
## Construction

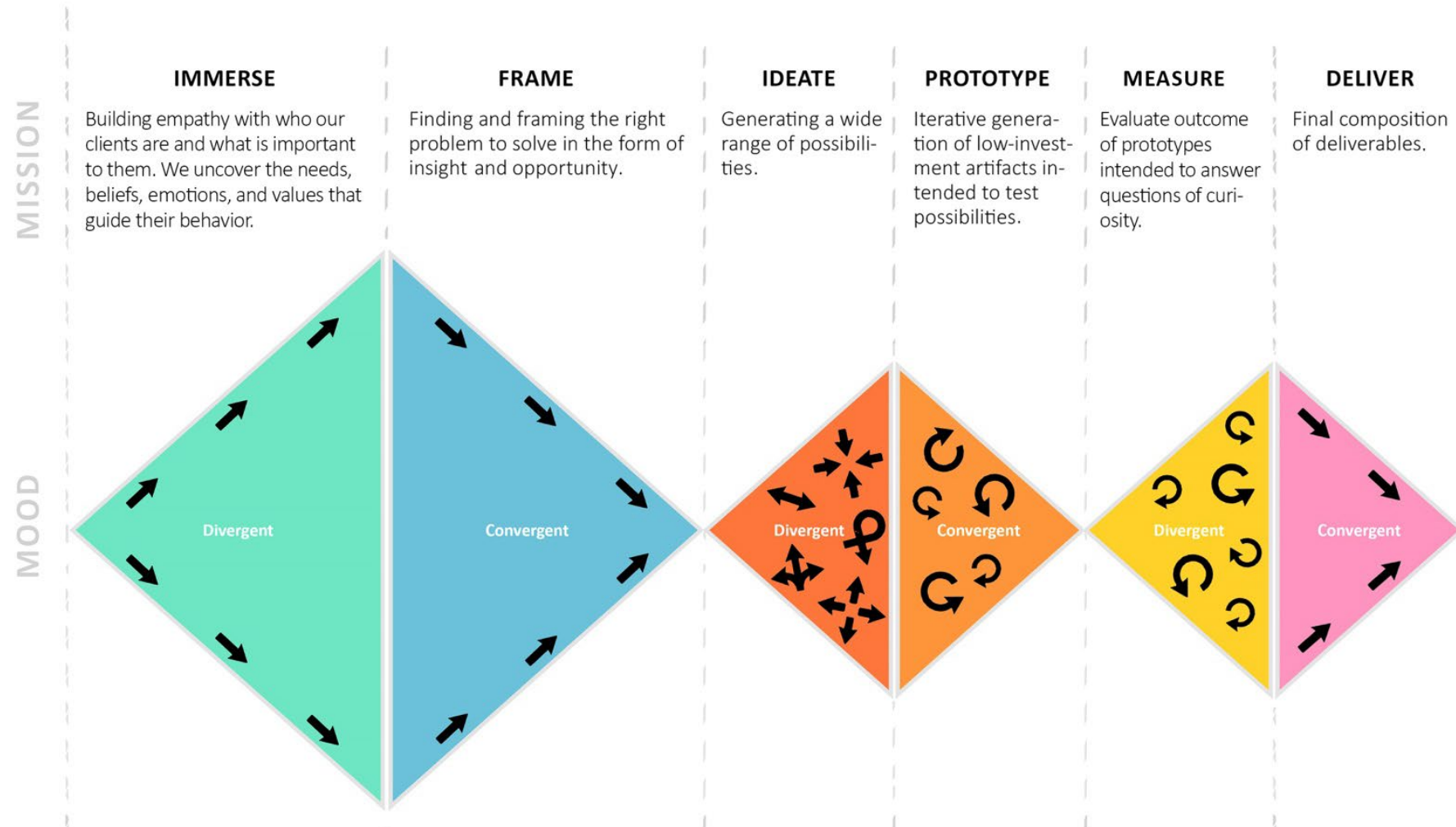
### *Document Delivery*

Contract Docs  
2D 3D 4D Specs &  
Assembly  
Instructions  
Specifications

Uncertainty / patterns / insights

Clarity / Focus





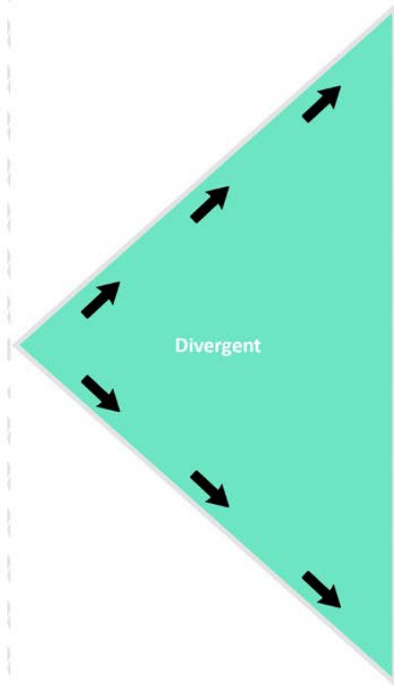
MISSION

MOOD

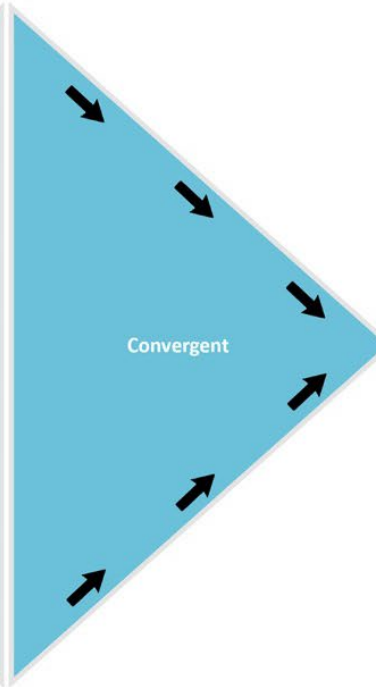
METHOD

**IMMERSE**

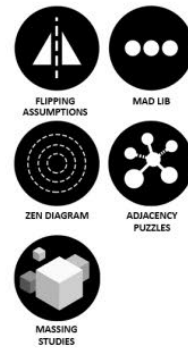
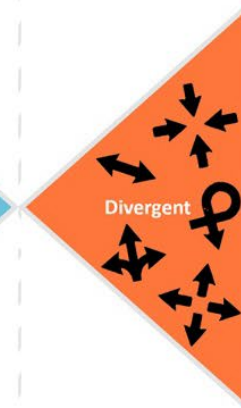
Building empathy with who our clients are and what is important to them. We uncover the needs, beliefs, emotions, and values that guide their behavior.

**FRAME**

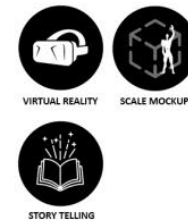
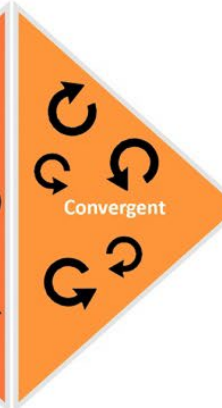
Finding and framing the right problem to solve in the form of insight and opportunity.

**IDEATE**

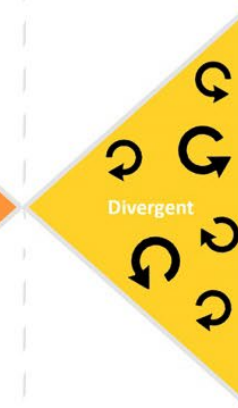
Generating a wide range of possibilities.

**PROTOTYPE**

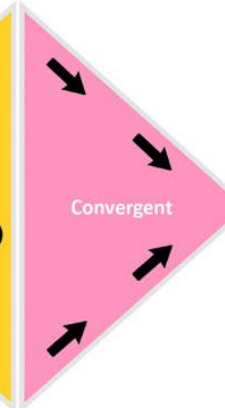
Iterative generation of low-investment artifacts intended to test possibilities.

**MEASURE**

Evaluate outcome of prototypes intended to answer questions of curiosity.

**DELIVER**

Final composition of deliverables.



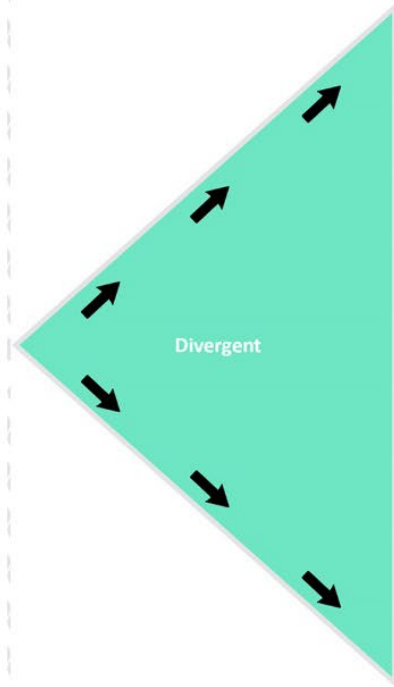
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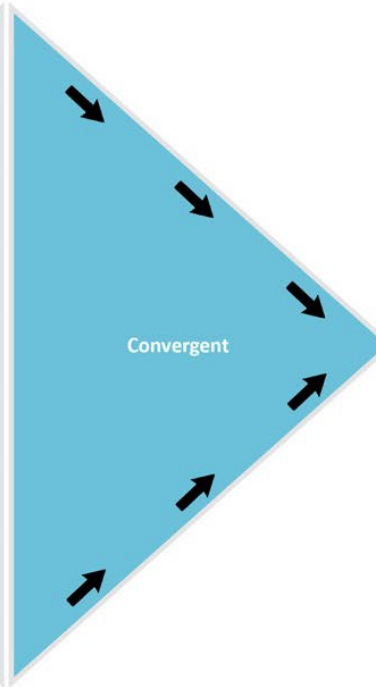
METHOD

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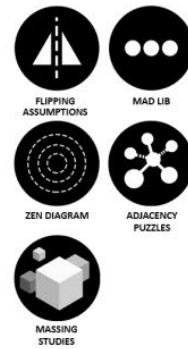
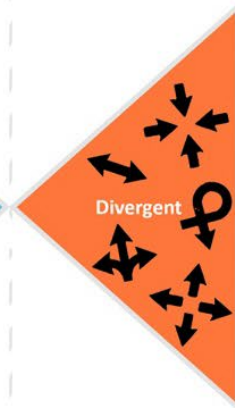
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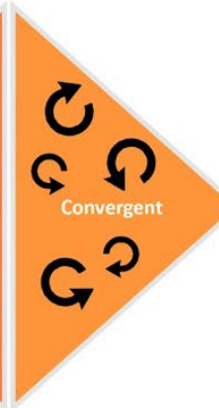
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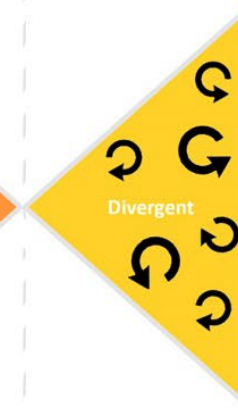
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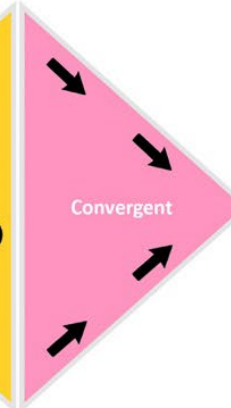
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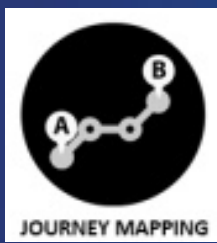
**MEASURE**

Evaluate outcome of prototypes intended to answer questions of curiosity.

**DELIVER**

Final composition of deliverables.

**JOURNEY MAPPING****FLIPPING  
ASSUMPTIONS**

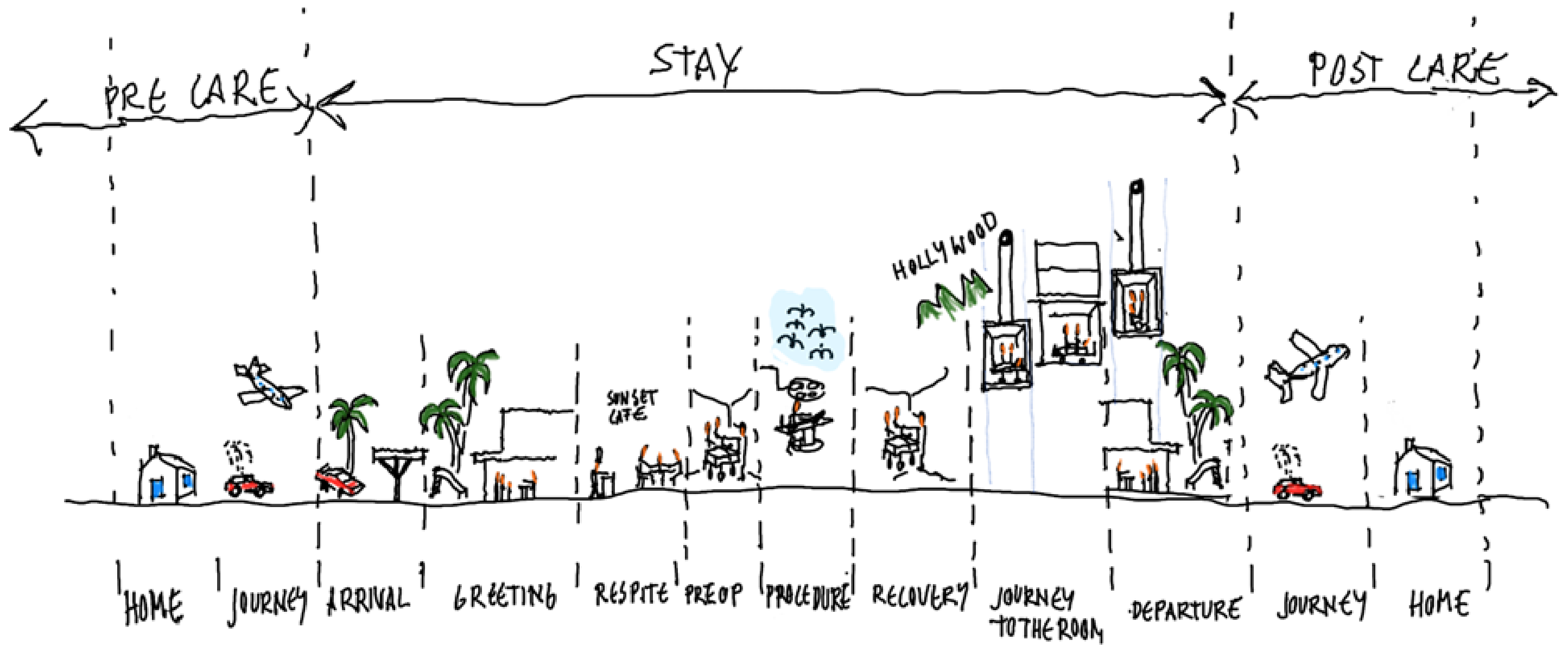


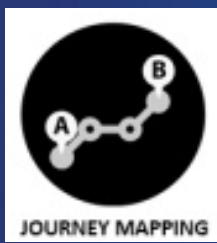
# Journey Mapping



Lean  
Construction  
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Transforming Design and Construction

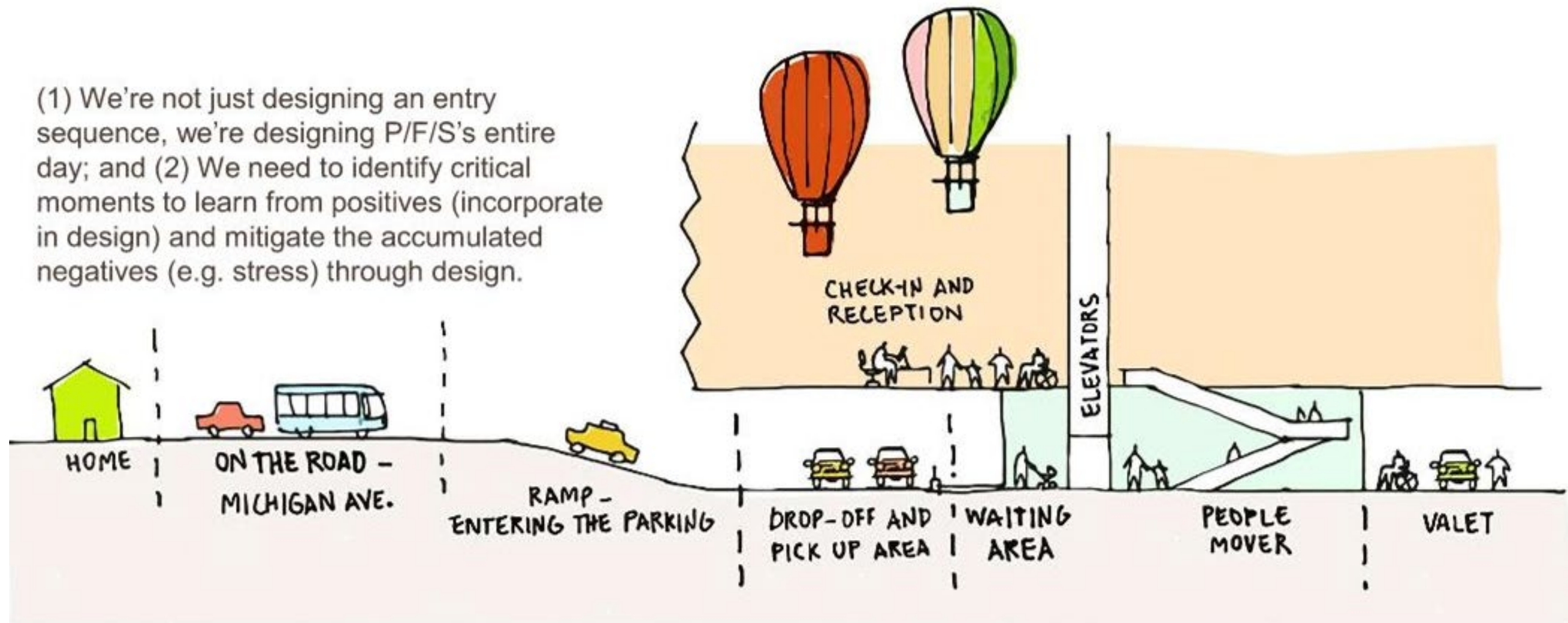
P2SL

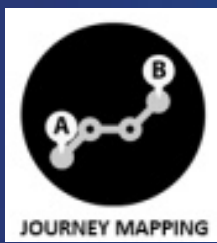




# Journey Mapping

(1) We're not just designing an entry sequence, we're designing P/F/S's entire day; and (2) We need to identify critical moments to learn from positives (incorporate in design) and mitigate the accumulated negatives (e.g. stress) through design.





# Journey Mapping

*Tell the story of your journey from home to the hospital and back.*

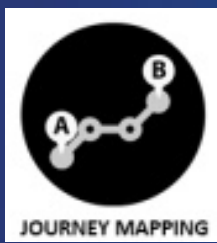
## Rules:

1. One activity / thought / feeling per post-it
2. Use "at least" 12 post-its to tell the story
3. Rank each post-it:

- Thumbs Up
- Thumbs Down
- Meh ...
- Key Moment

*(The Key Moment could be good or bad. Either way, it has a great impact on your journey to and/or from the hospital)*



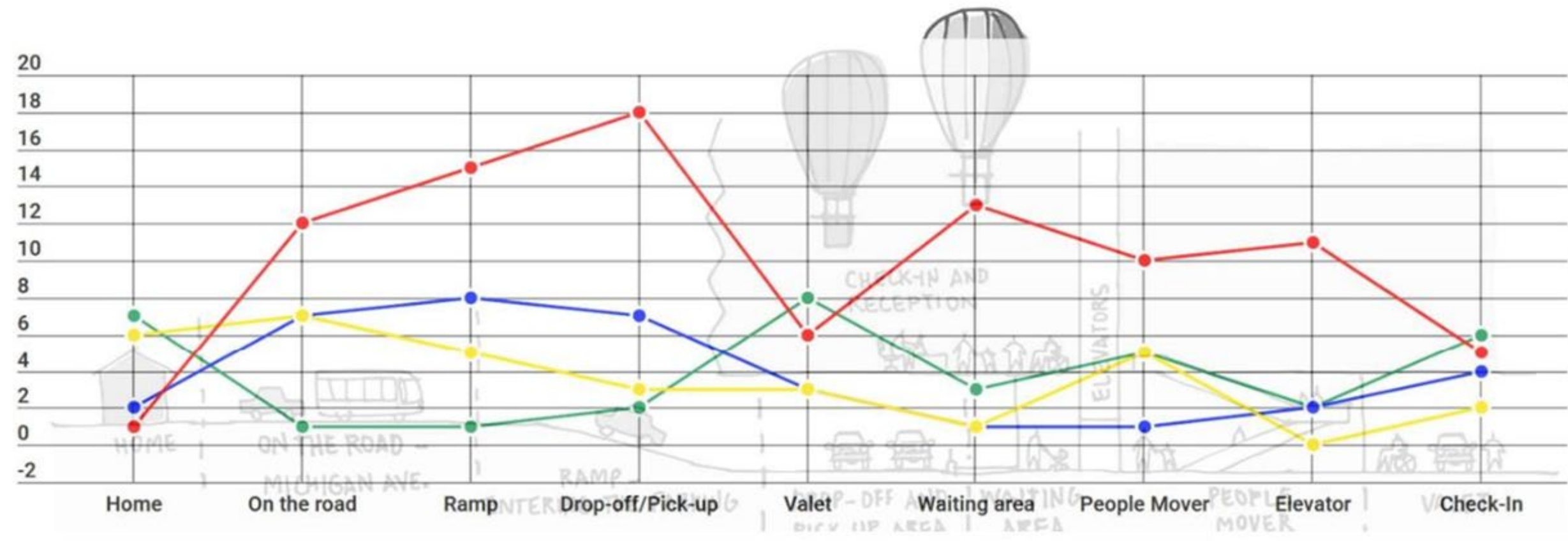


# Journey Mapping



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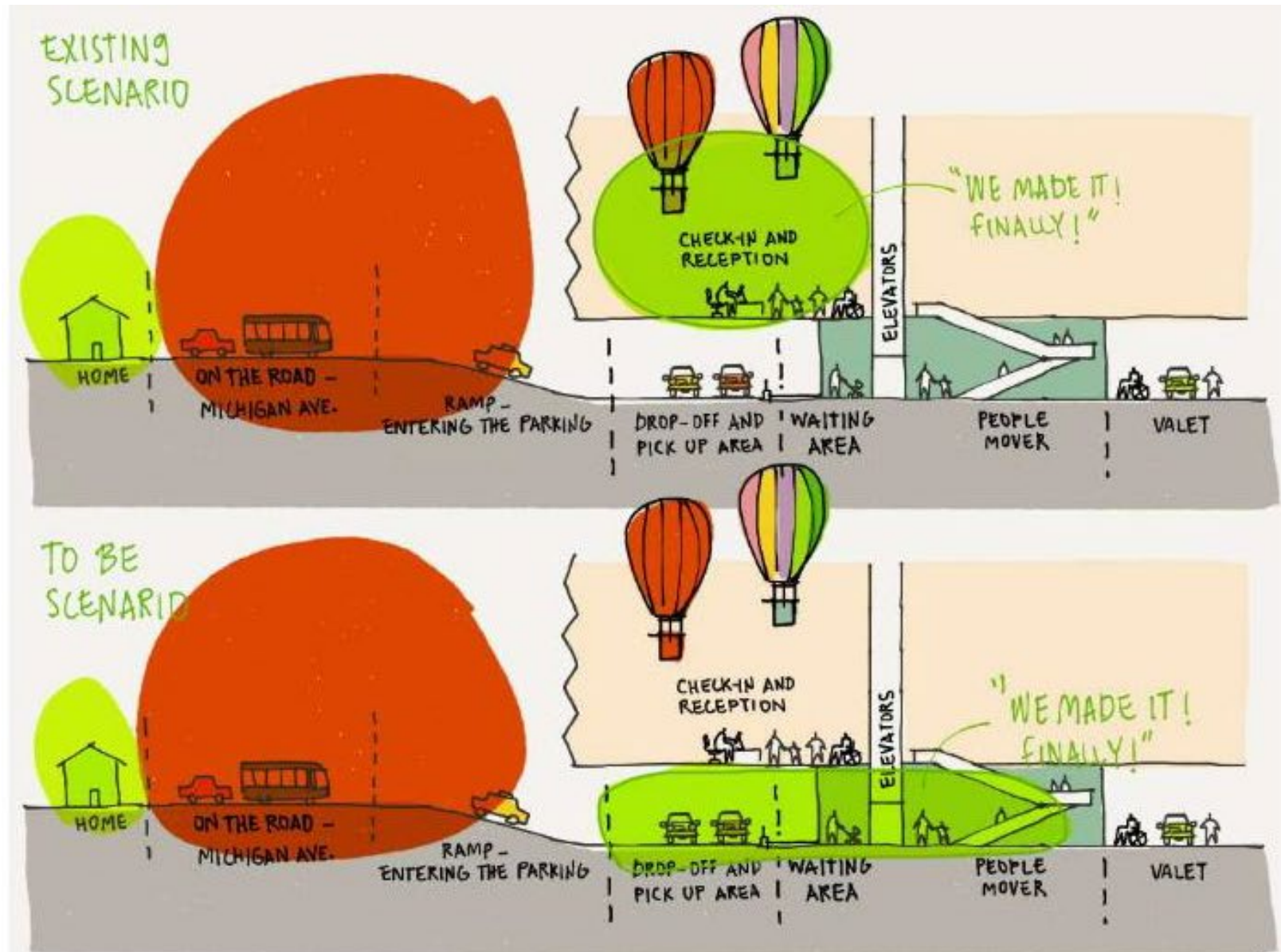
P2SL



Studying attributes of peaks and valleys



# Journey Mapping

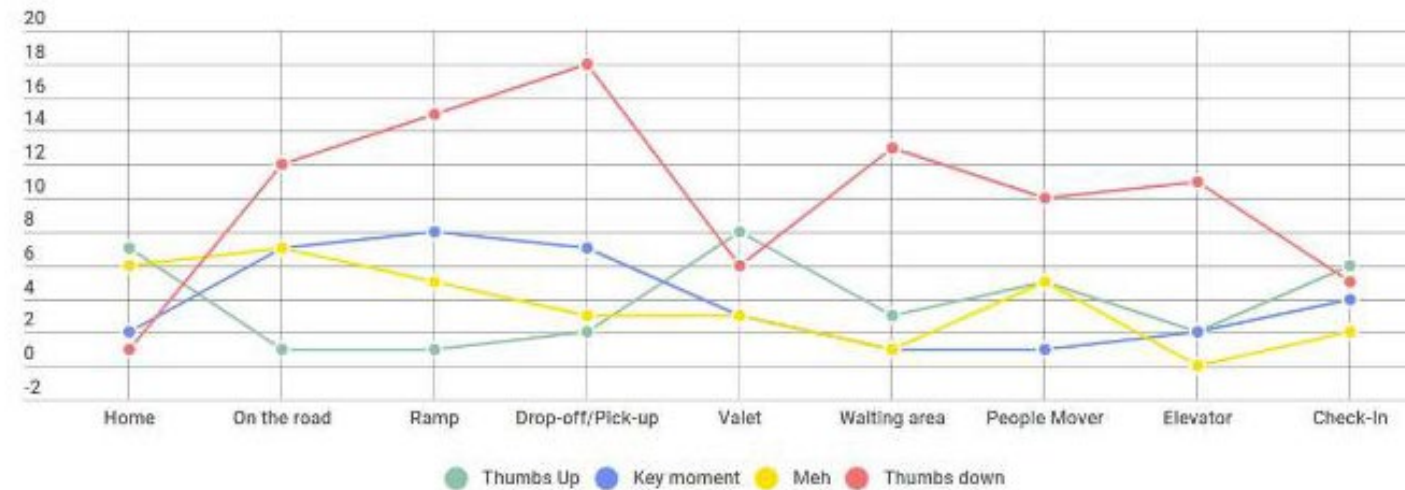


The experience of arrival needs to be replicated or extended to P1. Eventually, we might not be able to design the experience of the big red ("on the road"), but we might be able to mitigate it upon entry.

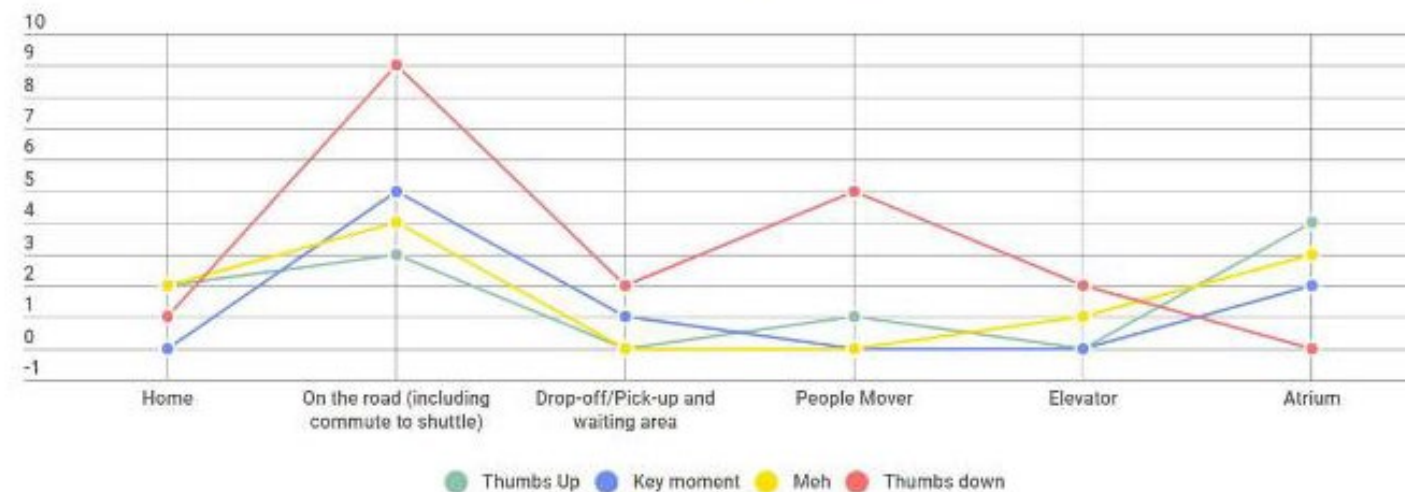


# Journey Mapping

## Patient/Family and Staff using Patient/Family perspective



## Staff



- Compared to patient/family, staff is mostly frustrated with the experience of commuting to the hospital.
- Unlike many patient/family participants, staff associate the people mover with negative attributes.
- Both groups have consensus on the Atrium being that positive node along a tiresome and stressful journey.

← EXIT  
PARKING ↑



ELEVATOR  
TO LOBBY

WAGON DOCK











*flips!*











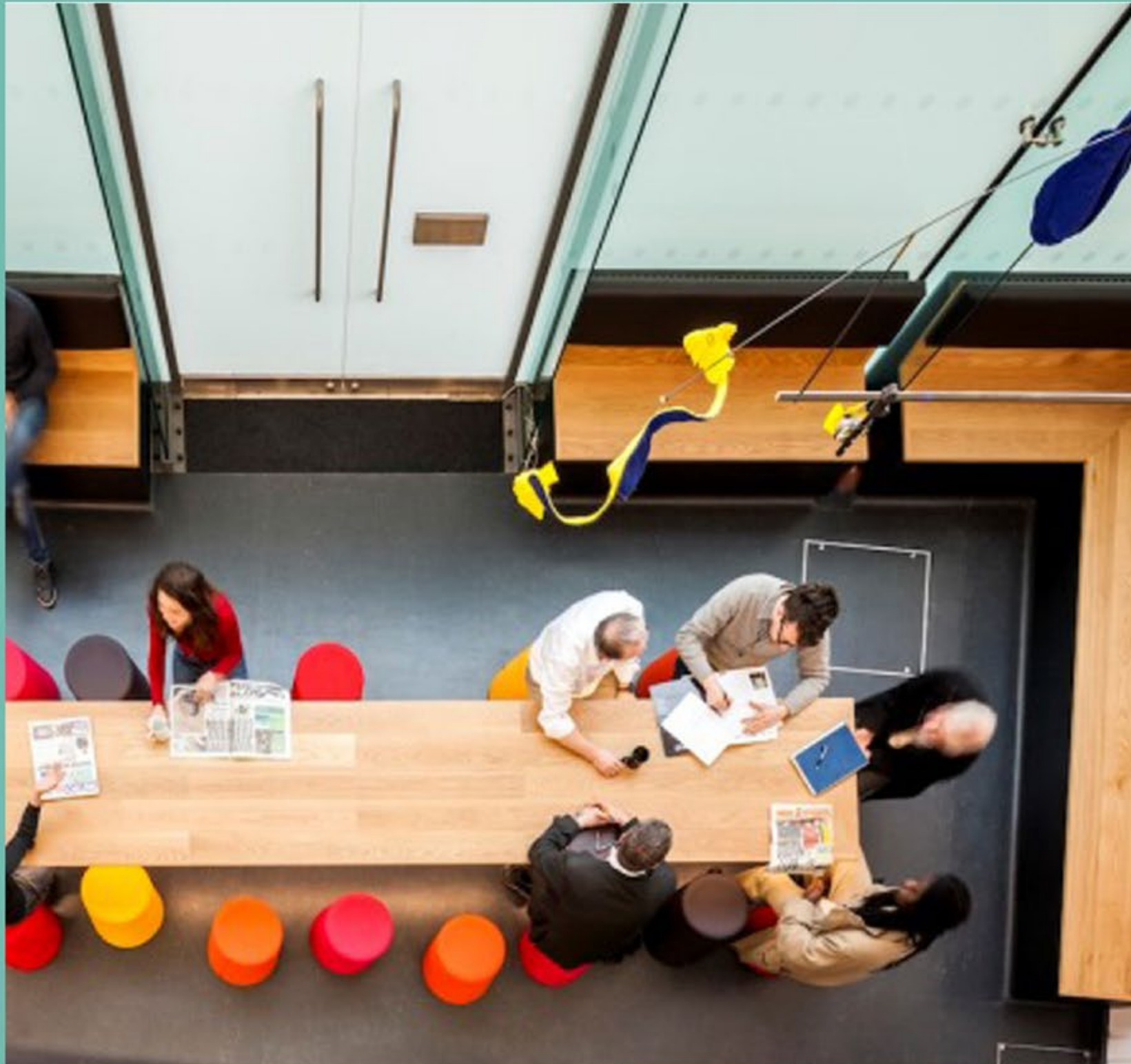






CIRQUE DU SOLEIL®





33

Wait times

### ***Existing Assumption***

*Waiting is inevitable as queuing patients makes the best use of a doctors time.*



***Assumption***

*We make the best use of the member's time. Doctors are in the room when the patients arrive.*



Population.

is the pre-  
her wait-  
doc.

only with

KOH+NOOR

reach the teachers! Members get  
perks from sharing experiences  
and giving advice to members  
under the coaching of an  
Amper and professional.

KOH+NOOR  
13  
Acoustic Separation

Existing Assumption  
Provider collaboration and  
patient encounter spaces must  
be acoustically separated for  
privacy.

Assumption

Private conversations occur in  
public all the time! We use sound  
masking for a more soothing  
environment than a noisy  
restaurant.

15

Amenities

Existing Assumption  
If the patient has a need, they  
will ask.

Assumption

Needs are different than comfort  
room (blankets, snacks, water) to  
provide a comfortable  
environment that the patient can  
help themselves to without having  
to ask.

KOH+NOOR  
Assumption  
Members who  
they use to  
maintain health  
+ connect  
with community

Existing Assumption  
Patients wait in the lobby to receive  
their health report at the end of their  
visit.

Assumption

Members are given "think time" in  
a post-appointment space. This  
provides a moment of reflection  
which might improve member's un-  
derstanding.

Existing Assumption  
For privacy and infection  
control, staff toilets need to be  
separate from public toilets.

Assumption

A toilet is a toilet! They are all  
private and clean enough for  
anyone to use. Hygiene is  
provided through antimicrobial  
surfaces, UV lights and frequent  
cleanings.

Huddle room

Encou-  
room

Huddle room

perks from  
and giving  
under the  
Assumption





neutral space

open area in  
or more vibrant

people time and  
space

let's try

private regarding  
new net ppc  
neutral space  
for staff - living  
it's not me, it's  
the room  
it's not me, it's  
the room  
it's not me, it's  
the room

guest  
environment  
and  
environment

THE BASTARD!  
TS



FOOD  
OTHER

hours de re  
join



location of the  
table is not  
the decision

include  
space

Story space  
everybody's  
that is shared



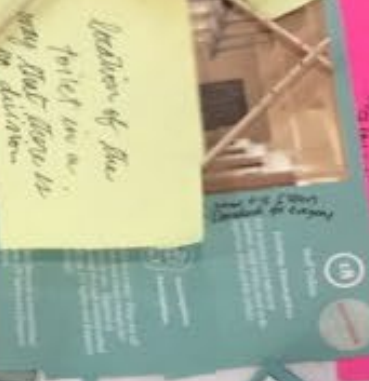
No  
apex

Spe

keep them moving



How to be  
a better meeting  
facilitator



Stories  
of care team  
and roles of  
members

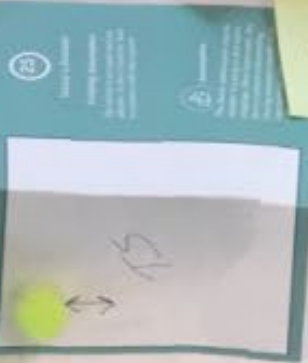
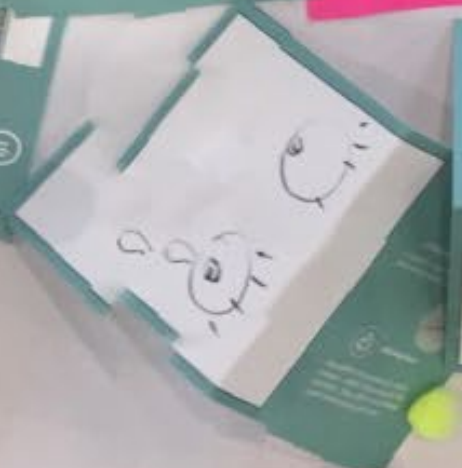
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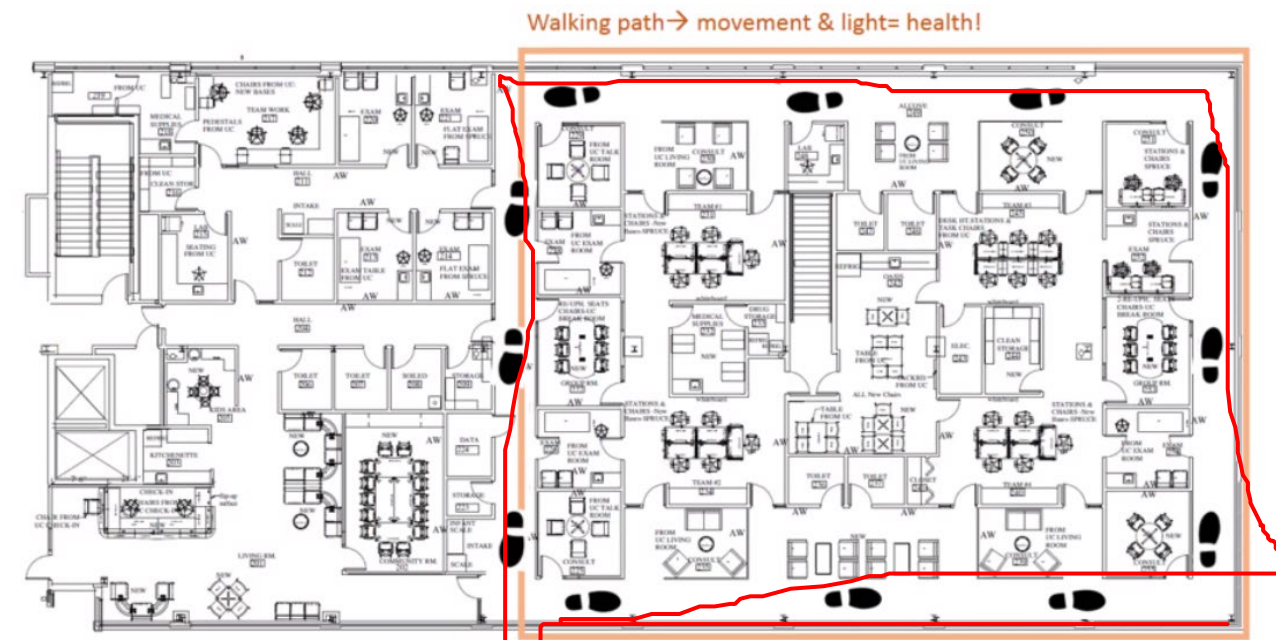
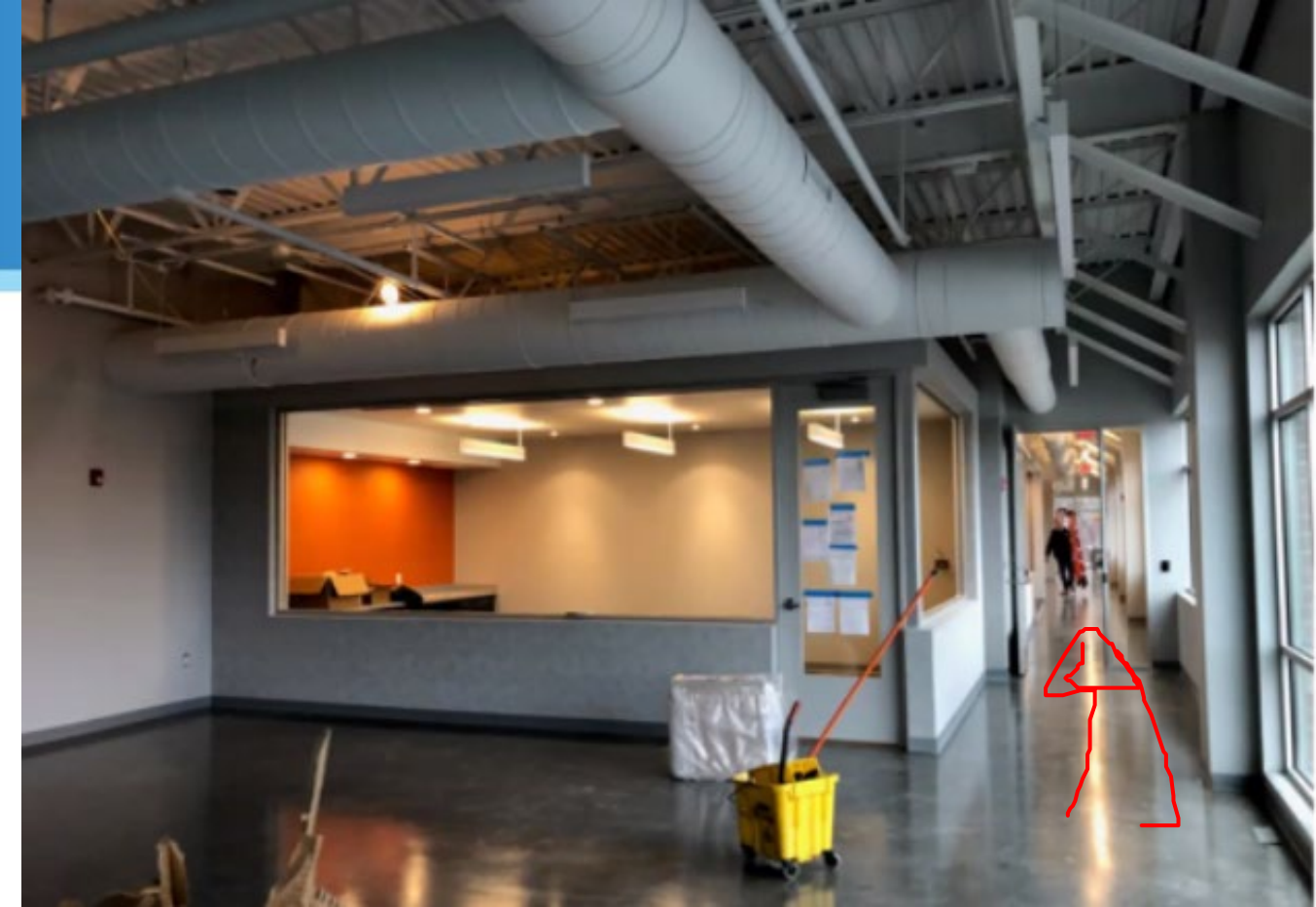
TRANSACTIONAL INTERACTIONS  
RELATIONSHIP ORIENTED  
INTERACTIONS  
- BOTH FACILITATED BY STAFF BUILDING

Why a  
change



include  
space





JUNE 20-21,  
2023



# Journey Mapping



## Journey Map your trip to Chicago

Whether you flew or drove to get to the Lean in Design Forum, create a journey map with your small group that shows steps to get here, add any notes on the experience using post-its, and add the following dots:

-  **Thumbs Up**
-  **Thumbs Down**
-  **Meh**
-  **Key Moments**



# Flipping Assumptions



## “Flip” the TSA Experience

We made an assumption that one of the key moments in a Journey map to Chicago (at least for those of you who flew) is time spent in TSA. It’s generally a “thumbs down” step that could use some improvement...here’s your chance to “flip” it!

# Small Group Activity



JOURNEY MAPPING

## A Groups

**Journey Map your trip to Chicago**

10 min to create, 5 min to report out



FLIPPING  
ASSUMPTIONS

## B Groups

**“Flip” the TSA Experience**

10 min to create, 5 min to report out



# Small Group Report Out



JOURNEY MAPPING

## A Groups

### Journey Map your trip to Chicago

5 min to report out

- What were some of the positive, negative, and key moments?
- Were there any steps in the journey that were surprising?
- Did the group agree on all the steps? If not, how did you resolve to represent everyone's journey on the map?
- Besides TSA, what other steps would you recommend "flipping"?



FLIPPING  
ASSUMPTIONS

## B Groups

### "Flip" the TSA Experience

10 min to create, 5 min to report out

- What were the typical characteristics/existing assumptions of the TSA experience that you identified?
- Share an example of an existing assumption that you flipped?
- Describe the "flipped state" that your group came up with

# Panel Discussion



Heather Bachman

HGA

Principal, background in  
Medial Planning and  
Interior Design



Stan Chiu

Gensler

Director of Healthcare



Dave Hagan

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Neelanjana Sen

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Associate  
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Project Manager

Thank you!