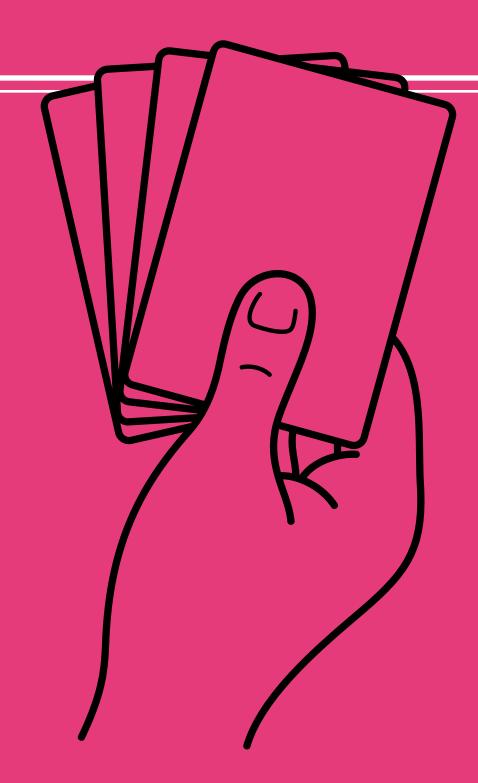
# Things to Think With



TORCHI / DEC 2020

Stephen P. Amlerson

@stephenanderson



## ON A MISSION...

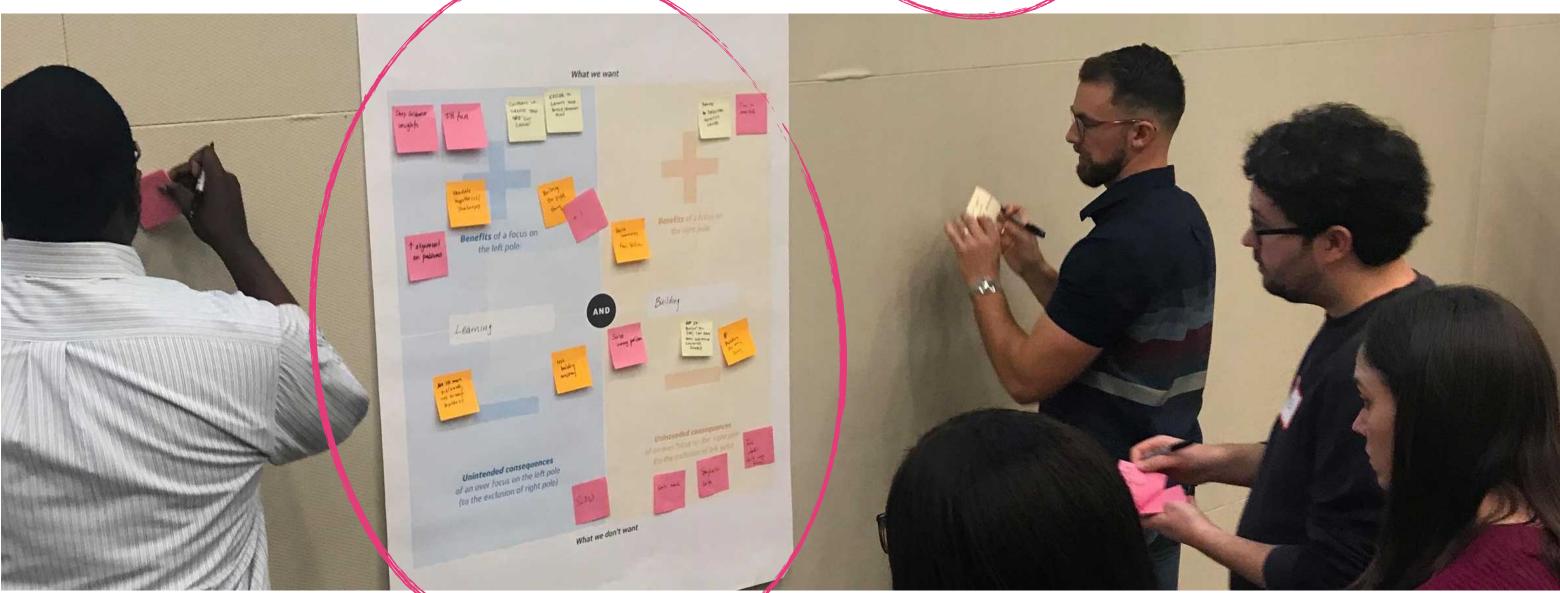
To make learning the hard stuff fun, by creating 'things to think with' and 'spaces' for generative play.





CARD DECKS
TILES
CANVASES
MAPS
MODELS
REFLECTION QUESTIONS
GAMES

'things to think with'



ANALOGIES

EXPLORABLE EXPLANATIONS

GAMEBOOKS

SIMULATIONS

DATA VISUALIZATIONS

ETC.

CARD DECKS
TILES
CANVASES
MAPS
MODELS
REFLECTION QUESTIONS
GAMES

#### WHY 'things to think with'?

ANALOGIES

EXPLORABLE EXPLANATIONS

GAMEBOOKS

SIMULATIONS

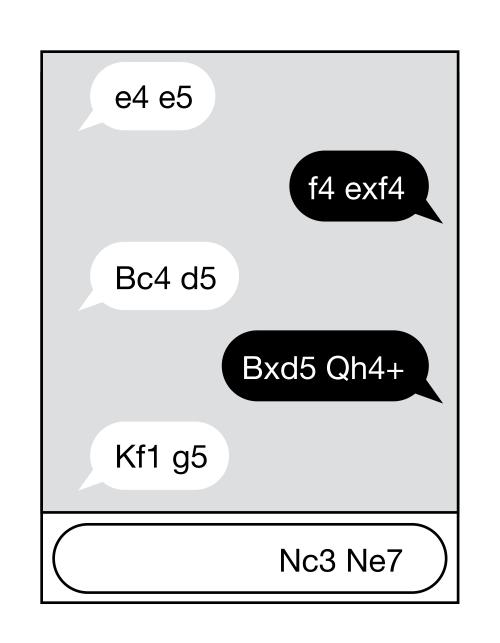
DATA VISUALIZATIONS

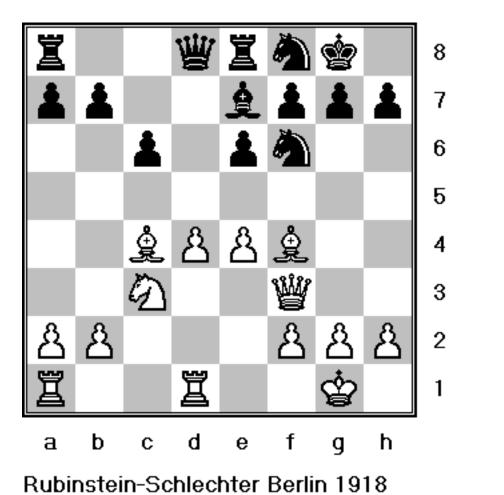
ETC.



When we bring ideas into the world (in a thoughtful, structured way) we extend our ability to think about and discuss complex topics.









REQUIRES SERIOUS
CONCENTRATION AND
RECALL OF ALL THAT
HAS BEEN SAID

OFFERS A RECORD OF INFORMATION WE CAN REFER BACK TO

HOLDS INFORMATION IN A WAY THAT:

- SUPPORTS REFLECTION
- REVEALS PATTERNS

+ INTERACTIONS
ALLOW US TO EXTEND
OUR THINKING AND SEE
MORE POSSIBILITIES

SUPPORTS MORE COMPLEX THINKING!

#### NOW, THINK ABOUT THE LAST SERIOUS DISAGREEMENT YOU GOT INTO ...

...OR A BIG DECISION THAT YOU RECENTLY MADE

REQUIRES SERIOUS
CONCENTRATION AND
RECALL OF ALL THAT
HAS BEEN SAID

OFFERS A RECORD OF INFORMATION WE CAN REFER BACK TO

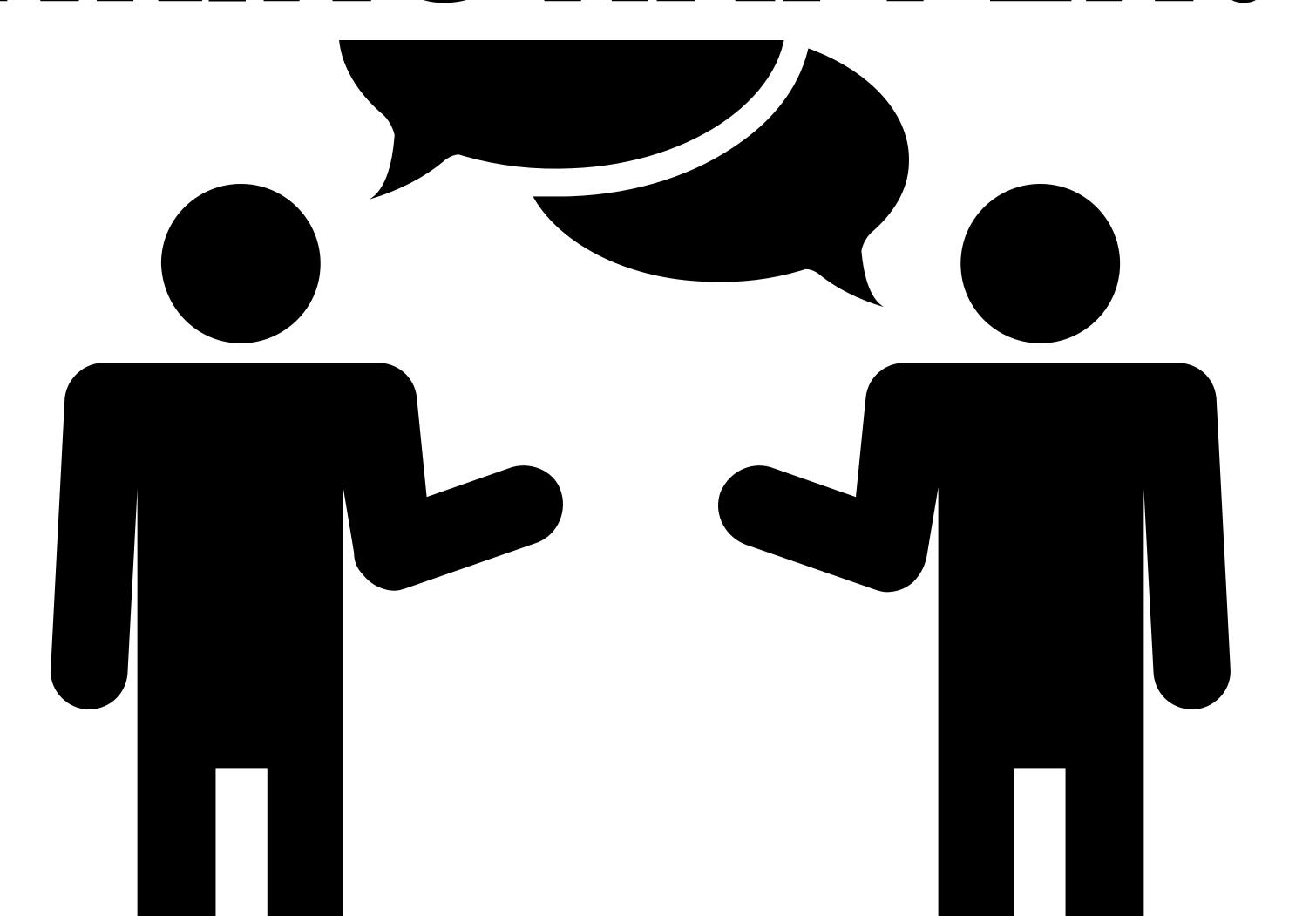
HOLDS INFORMATION IN A WAY THAT:

- SUPPORTS REFLECTION
- REVEALS PATTERNS

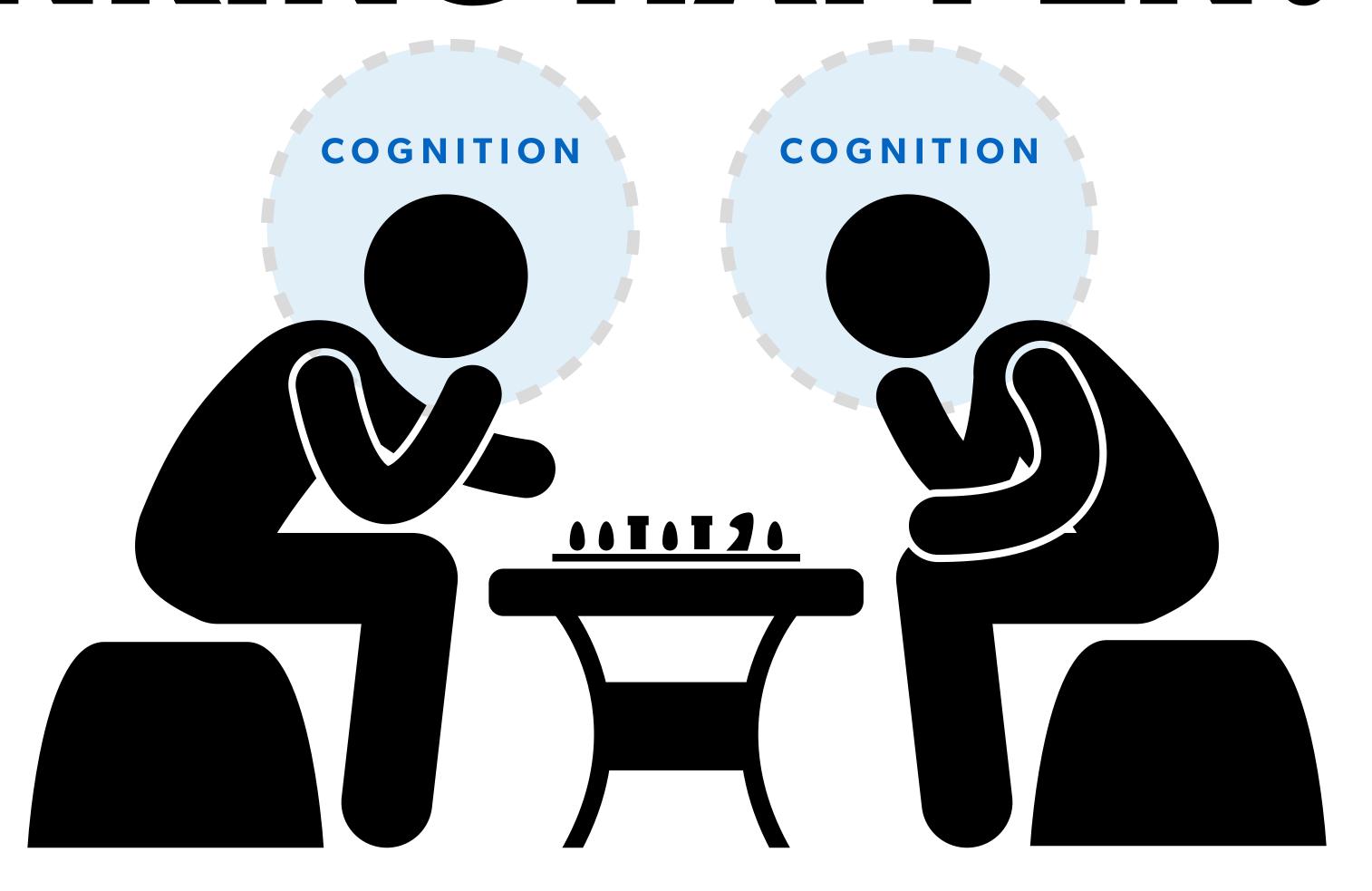
+ INTERACTIONS
ALLOW US TO EXTEND
OUR THINKING AND SEE
MORE POSSIBILITIES

SUPPORTS MORE COMPLEX THINKING!

# WHERE DOES THINKING HAPPEN?

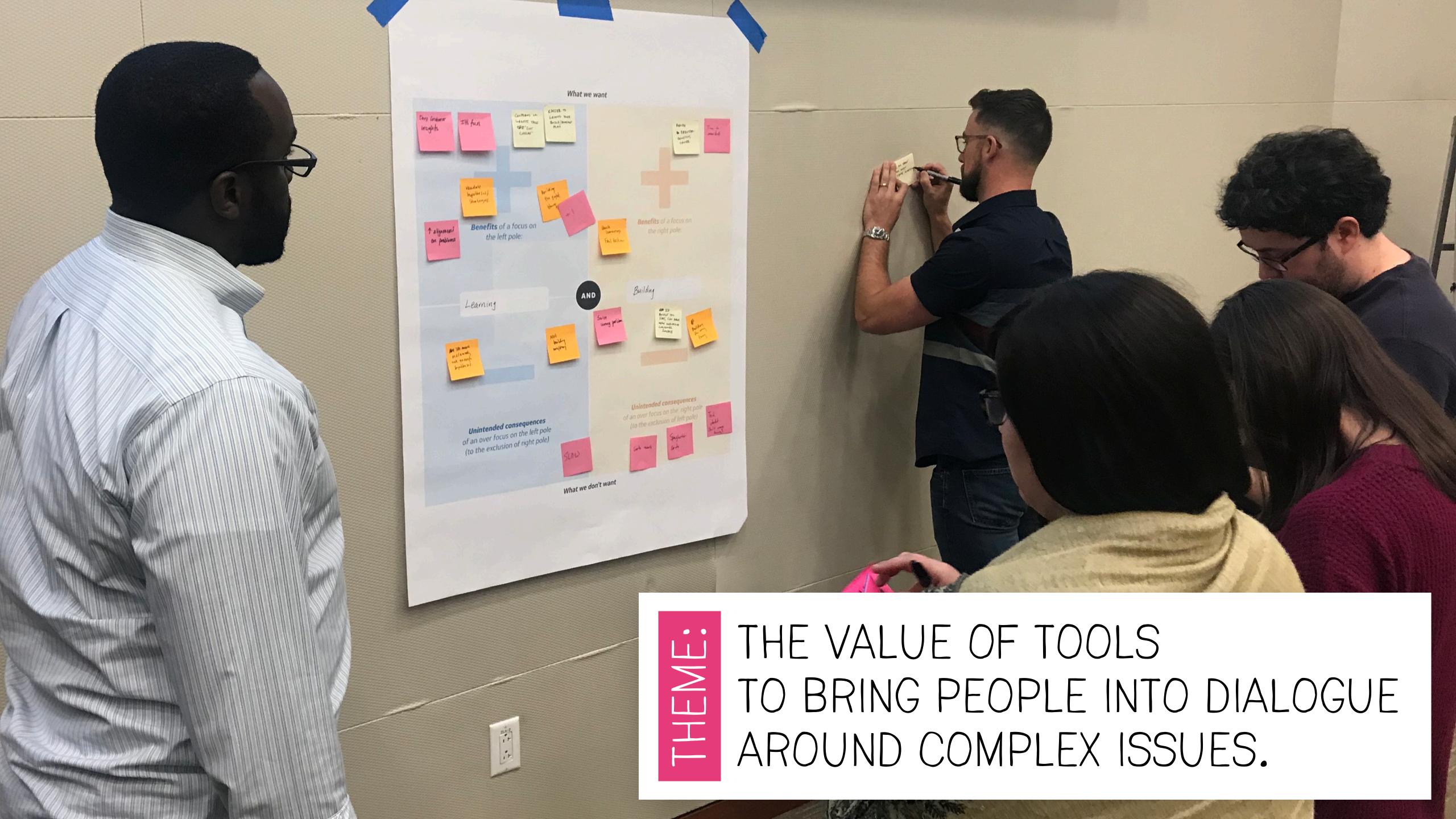


# WHERE DOES THINKING HAPPEN?



# WHERE DOES THINKING HAPPEN?





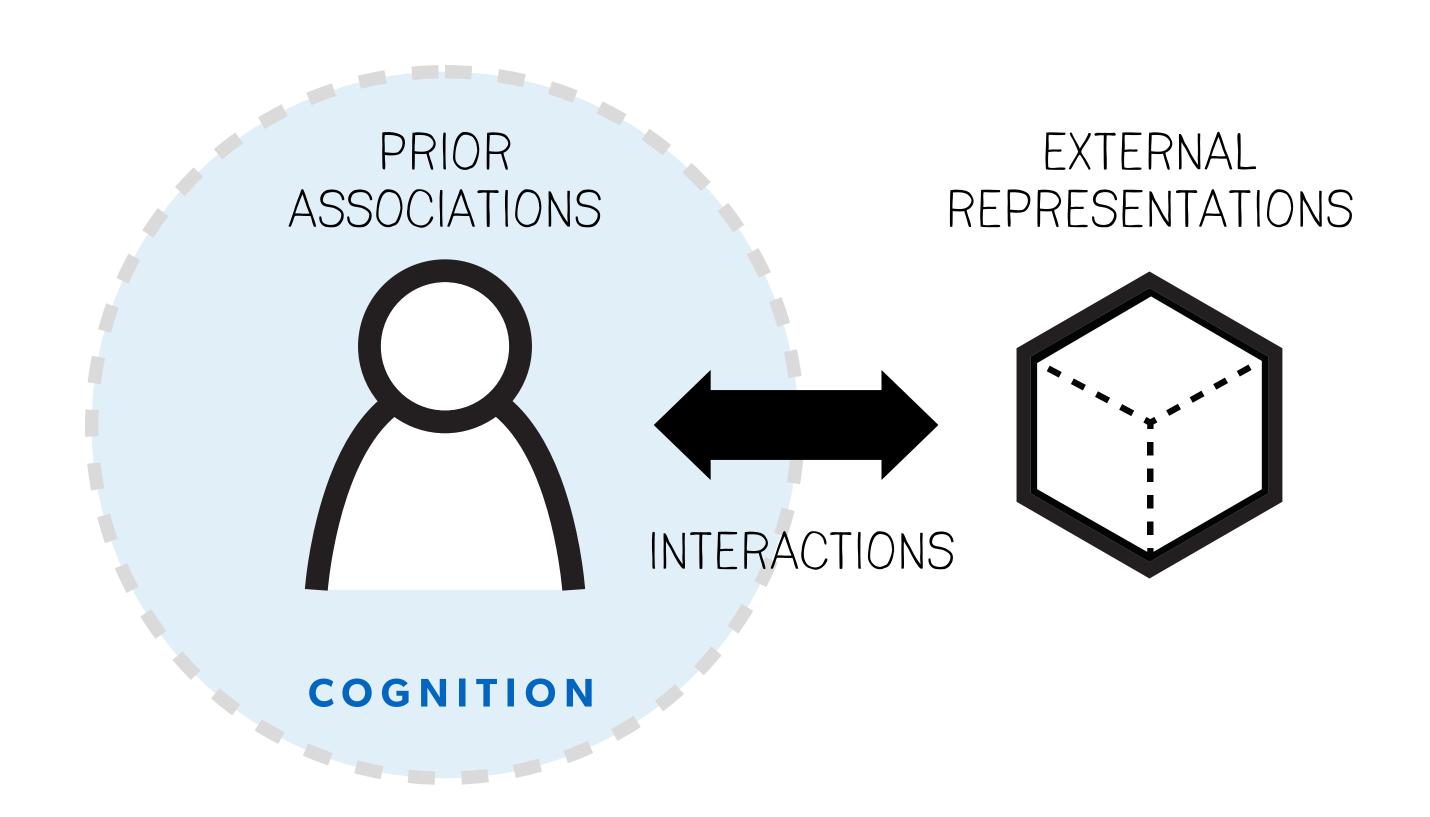
## Multiply 2x3.

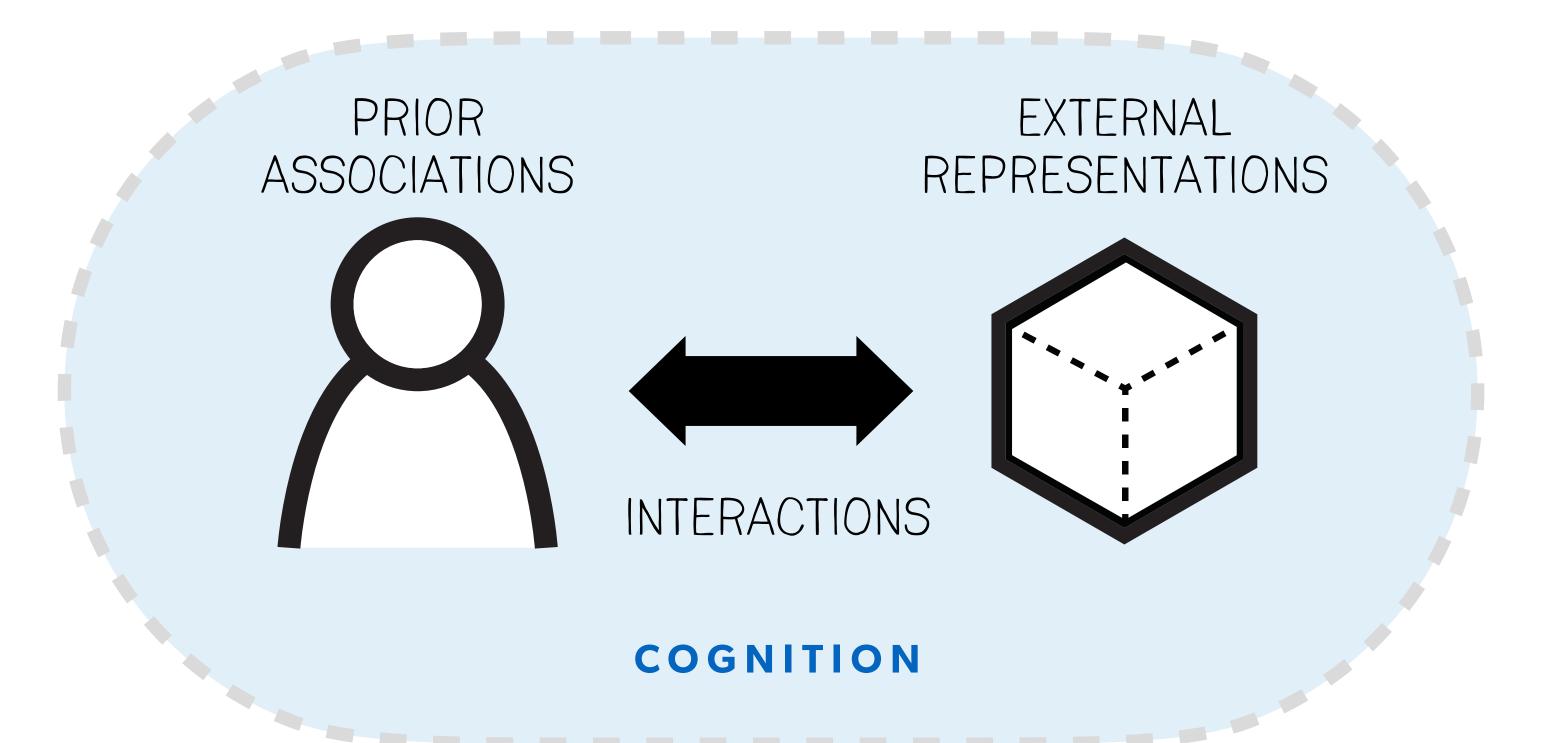
## Multiply 32 x 11.

### Multiply 32 x 11.

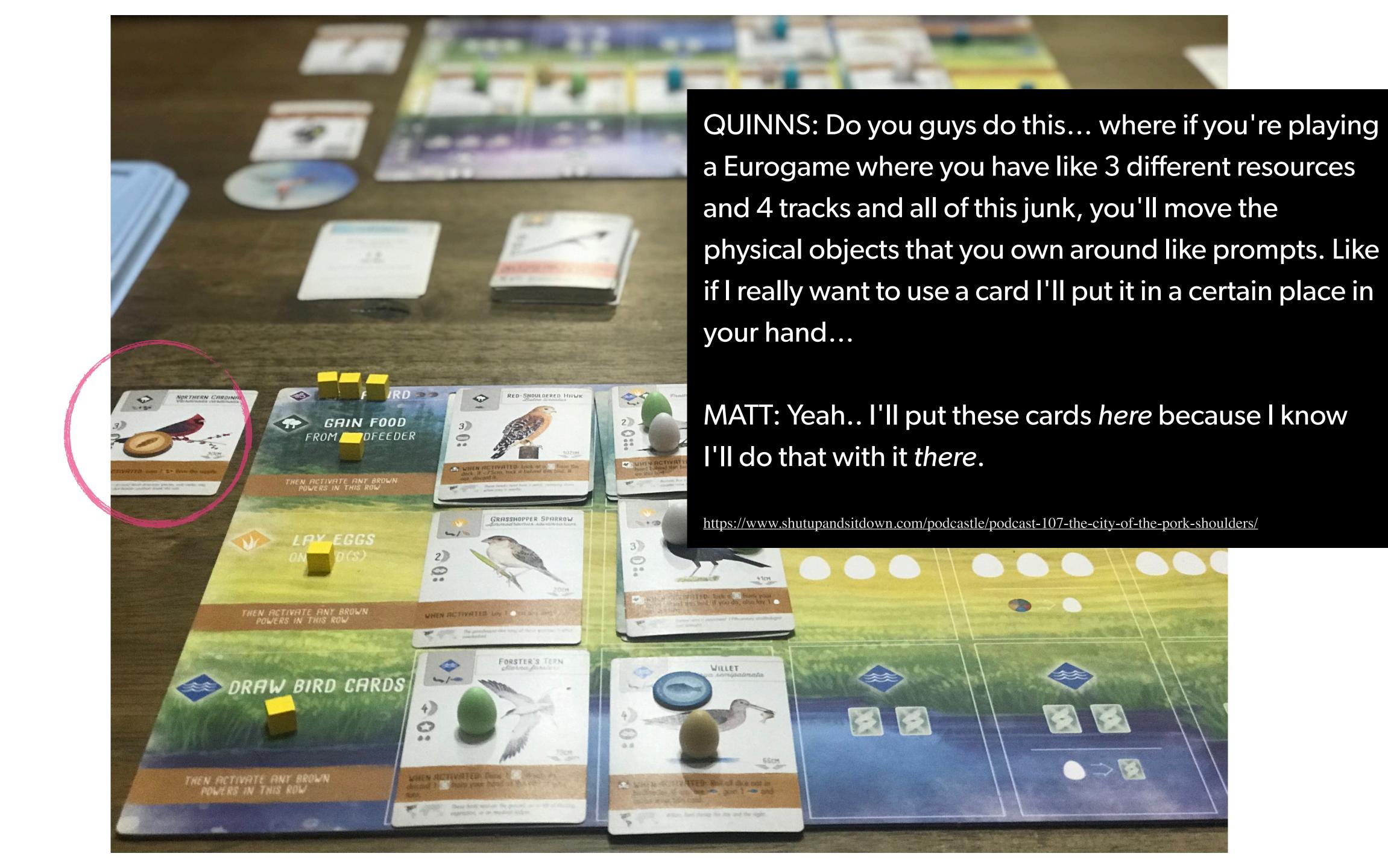


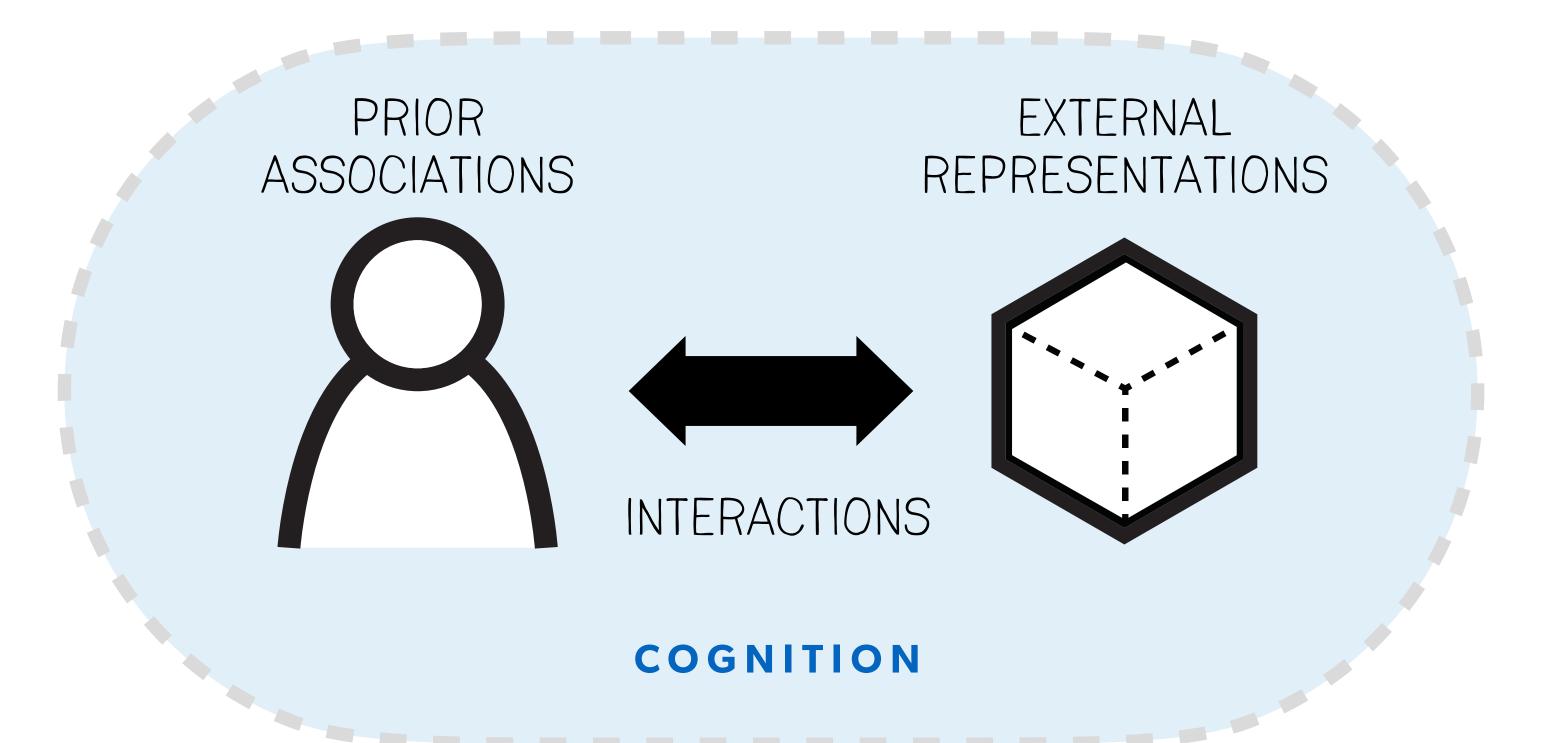




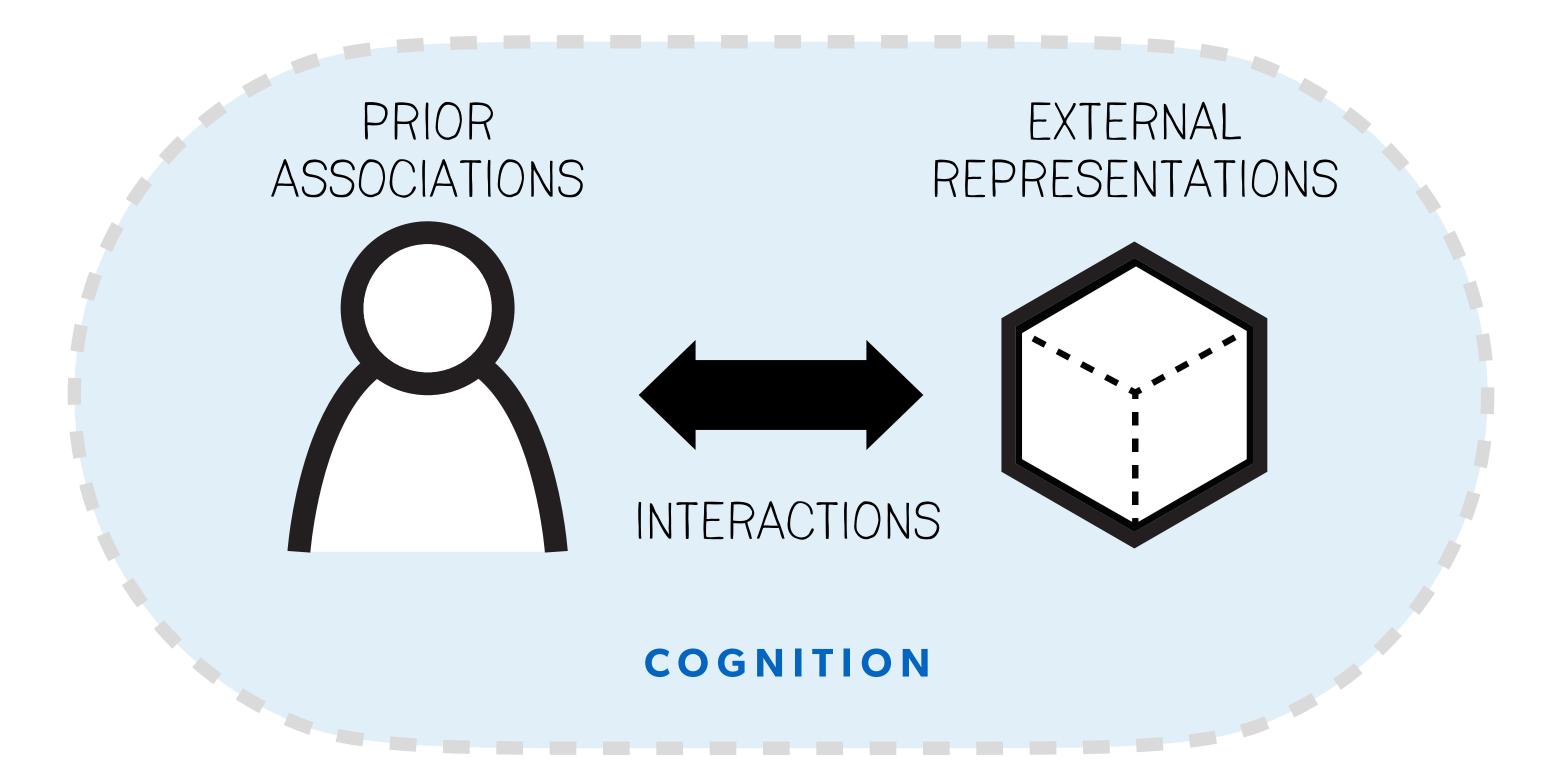




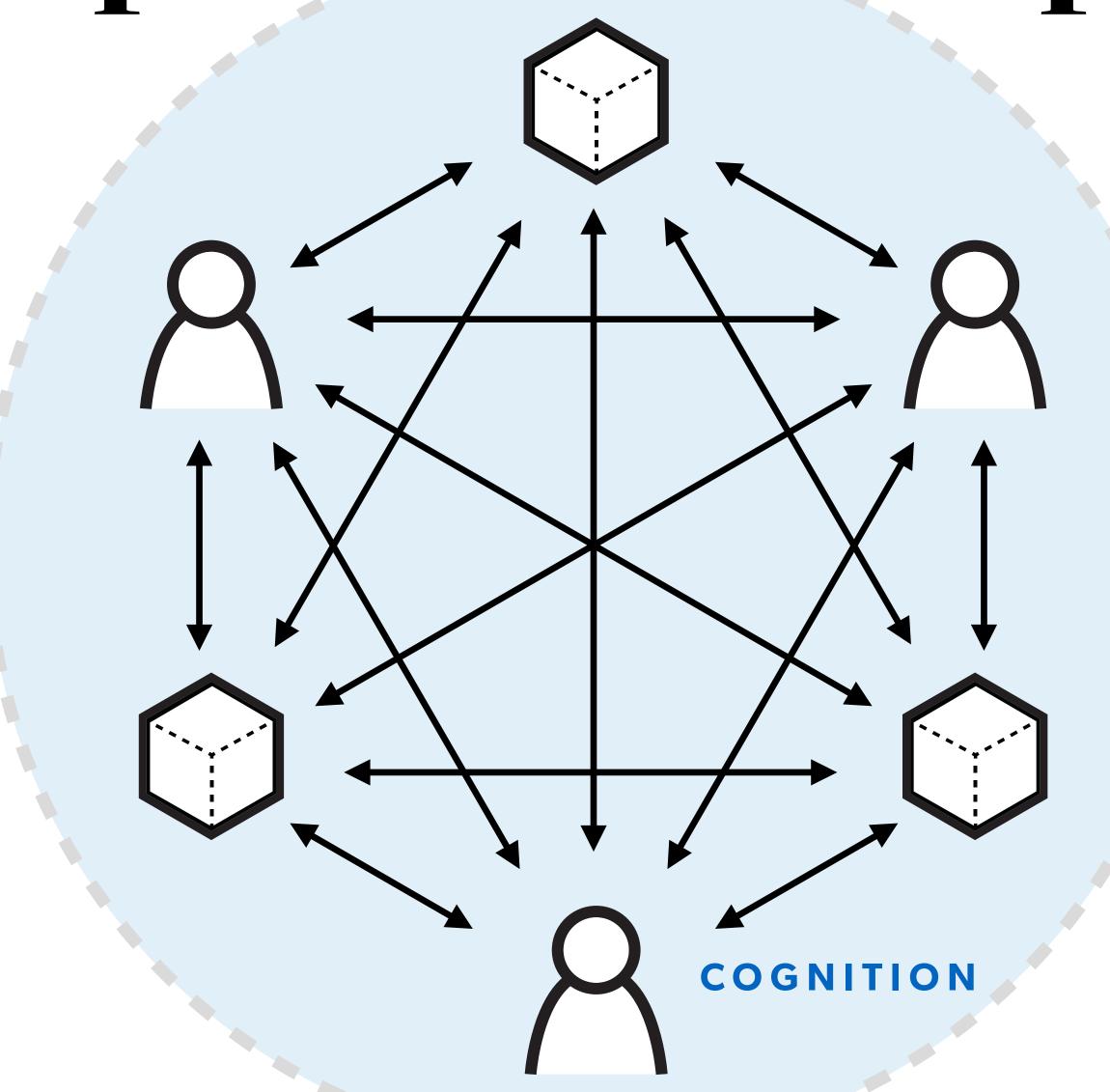




#### "Let's plan the next sprint."



#### "Let's plan the next sprint."



THE COORDINATION OF ...

PRIOR ASSOCIATIONS

EXTERNAL REPRESENTATIONS

INTERACTIONS





#### **EXTERNAL VISUAL TOOLS...**

#### ...create persistent, shareable structures:

- Are persistent structures.
- Can be shared with others
- Can represent literal as well as conceptual ideas.

#### ...provide perceptual, computational benefits:

- Relieve our short term memory
- Help us to spot patterns
- Are powerful as mental construction tools.

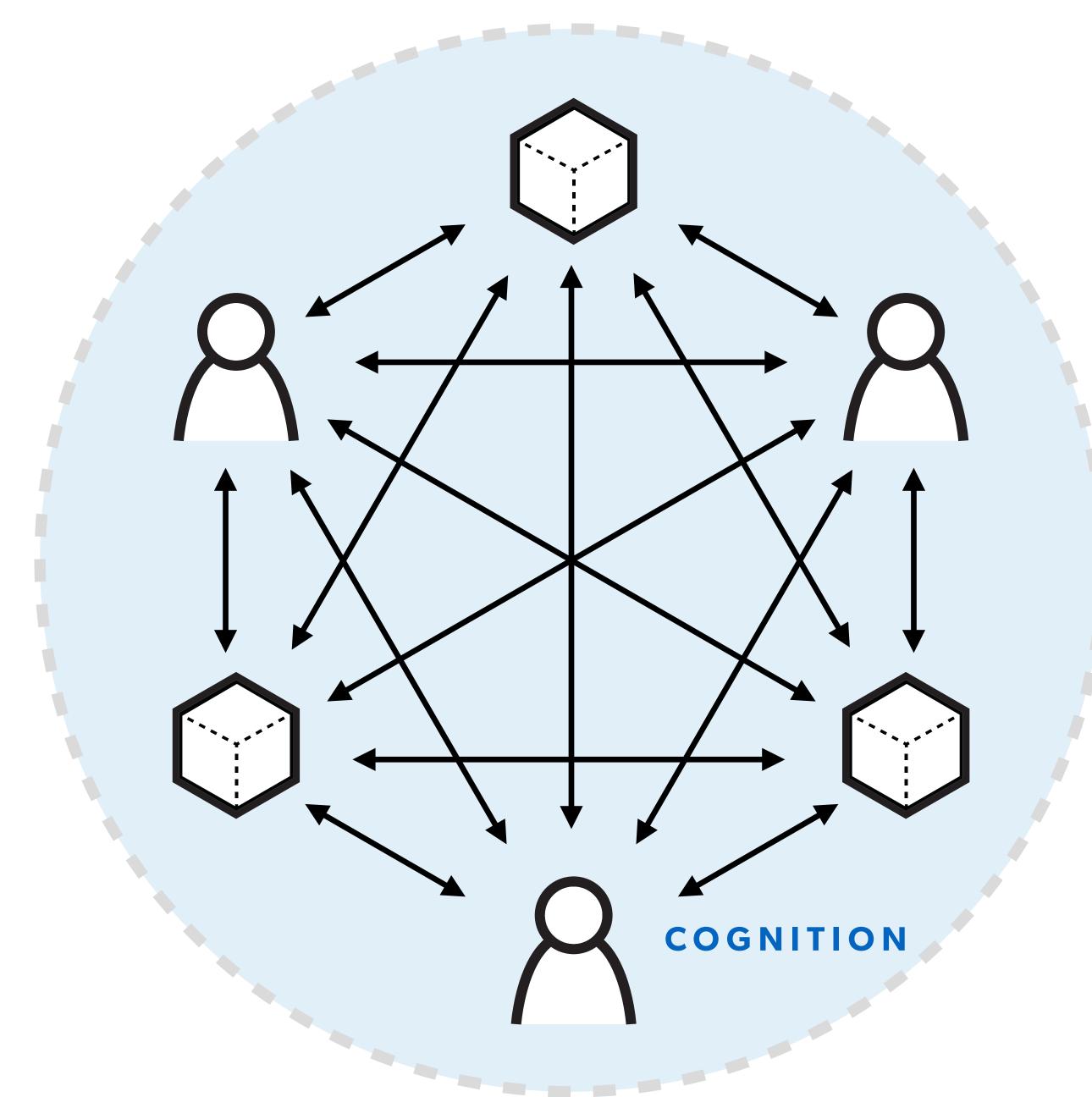
#### ...allow us to more easily interact with information:

- Can be modified.
- Can be rearranged (making it easier to explore many options)
- Can be "reformulated"

#### ...frame the conversation

- Align us to specific outcomes
- Define boundaries within which we explore
- Direct us to think in one or several different ways

...accelerate collective learning!

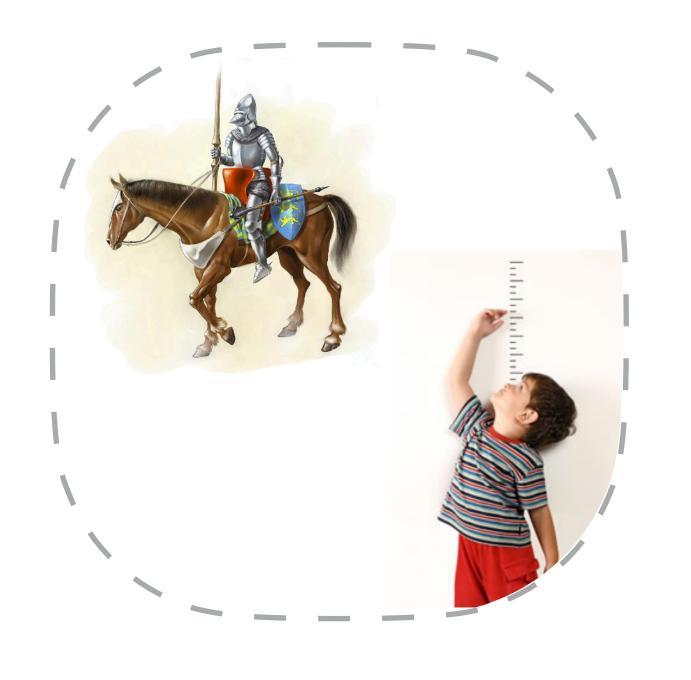


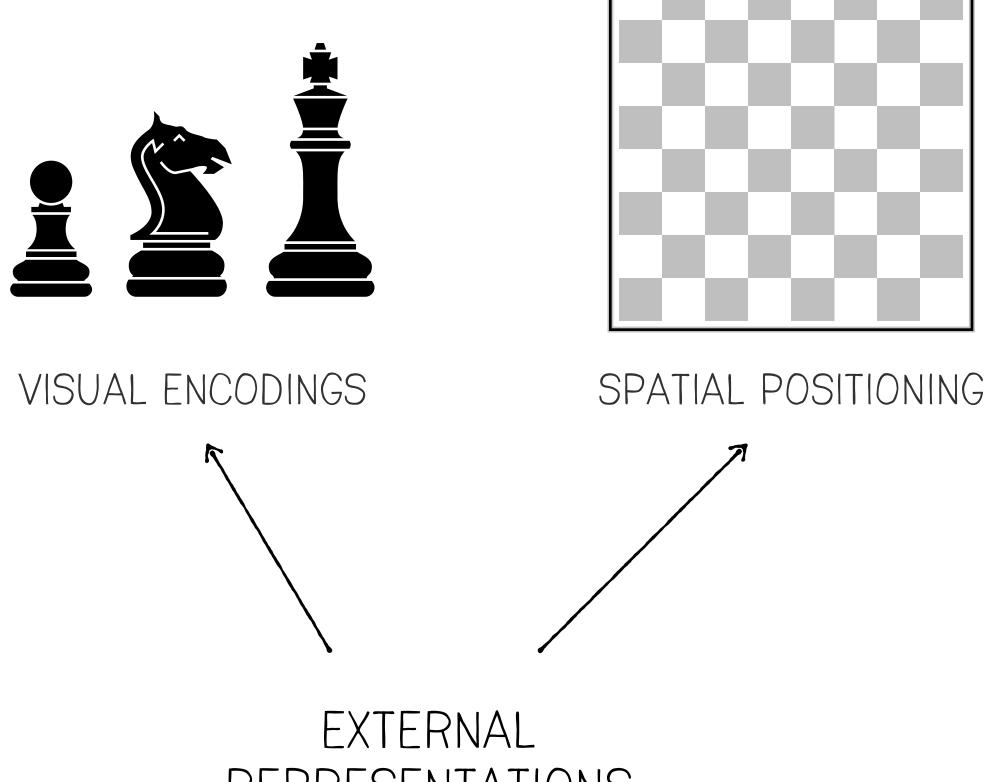
THE COORDINATION OF ...

PRIOR ASSOCIATIONS

EXTERNAL REPRESENTATIONS

INTERACTIONS



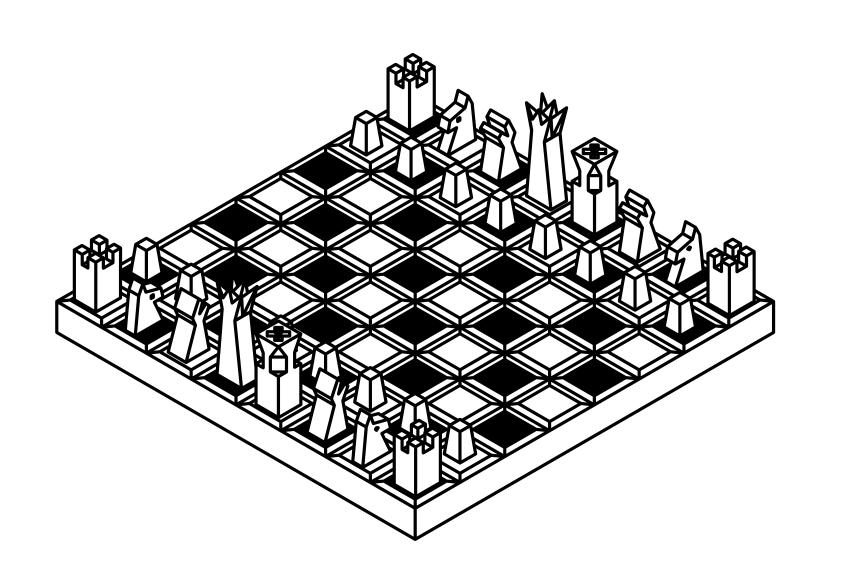




PRIOR ASSOCIATIONS

REPRESENTATIONS

INTERACTIONS



Pieces activate prior associations

Pieces hold meaning

Pieces hold place

Placement holds meaning

Interactions facilitate meaning making



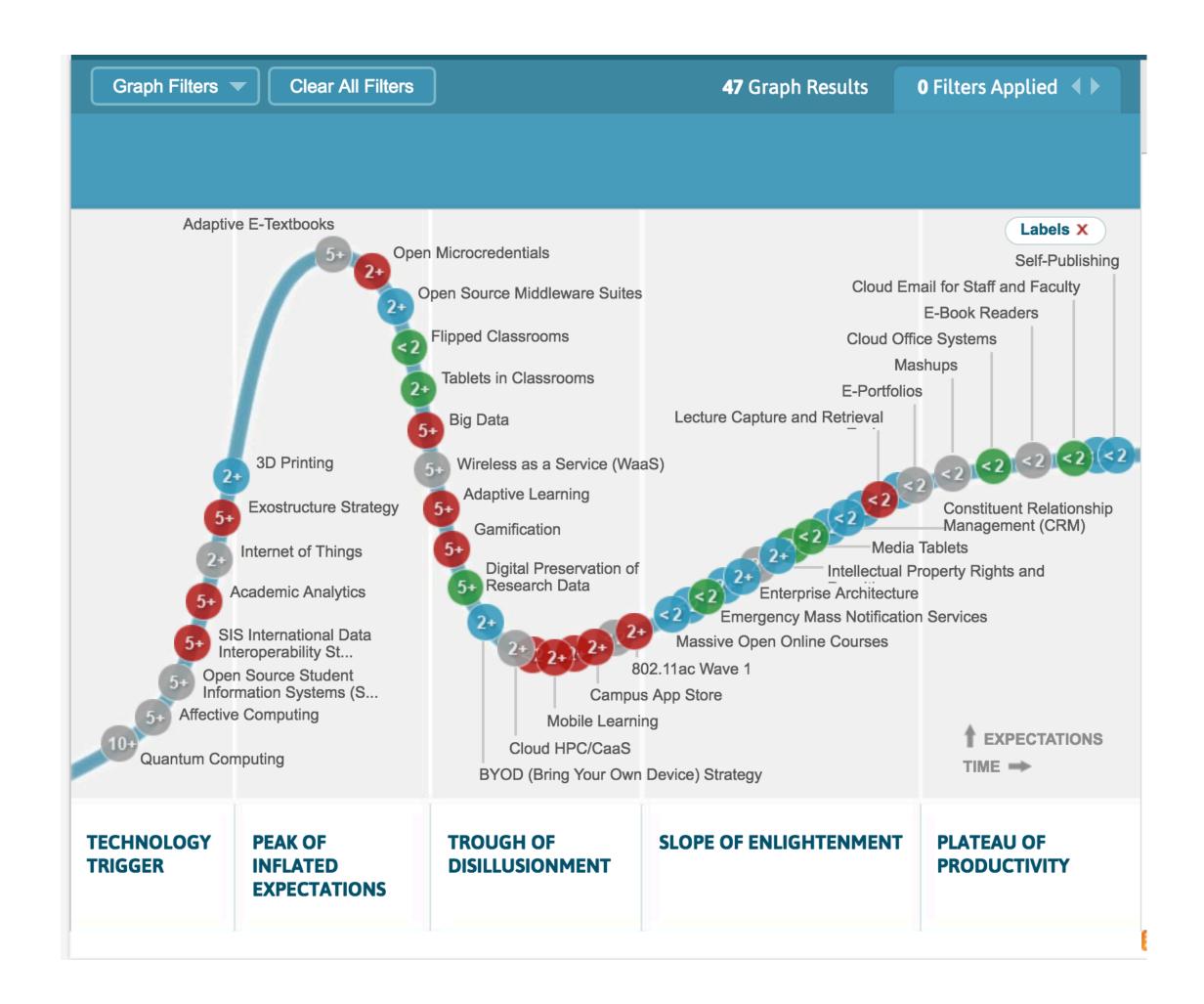
Pieces activate prior associations

Pieces hold meaning

Pieces hold place

Placement holds meaning

Interactions facilitate meaning making



Pieces activate prior associations

Pieces hold meaning

Pieces hold place

Placement holds meaning

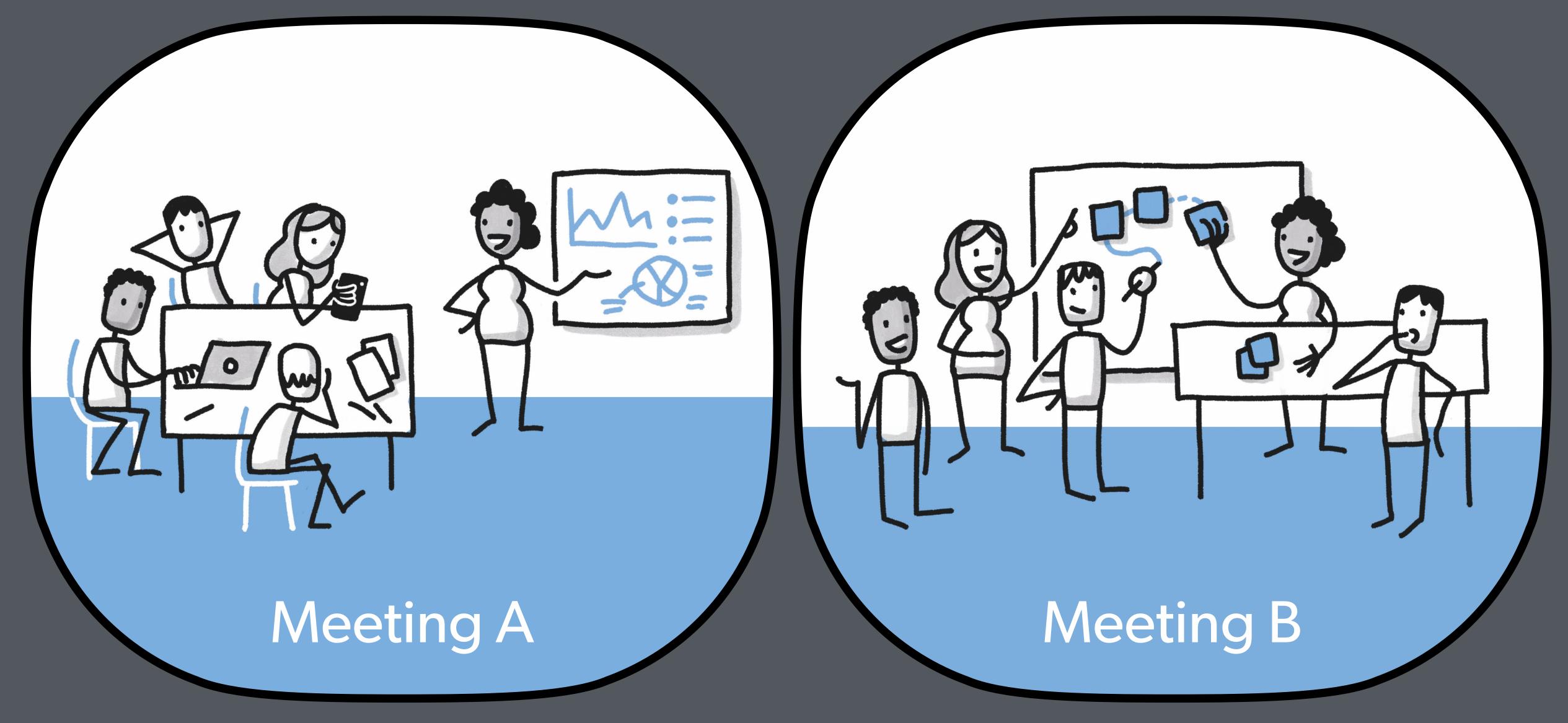
Interactions facilitate meaning making



When we bring ideas into the world (in a thoughtful, structured way) we extend our ability to think about and discuss complex topics.

#### What do you see?

(THINKING ABOUT COGNITION)



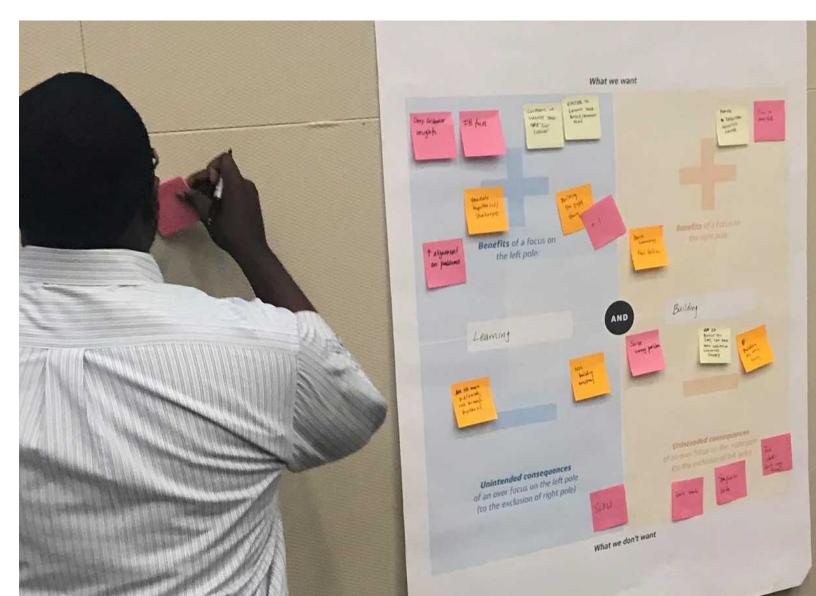
# THEORY CEXAMPLES?

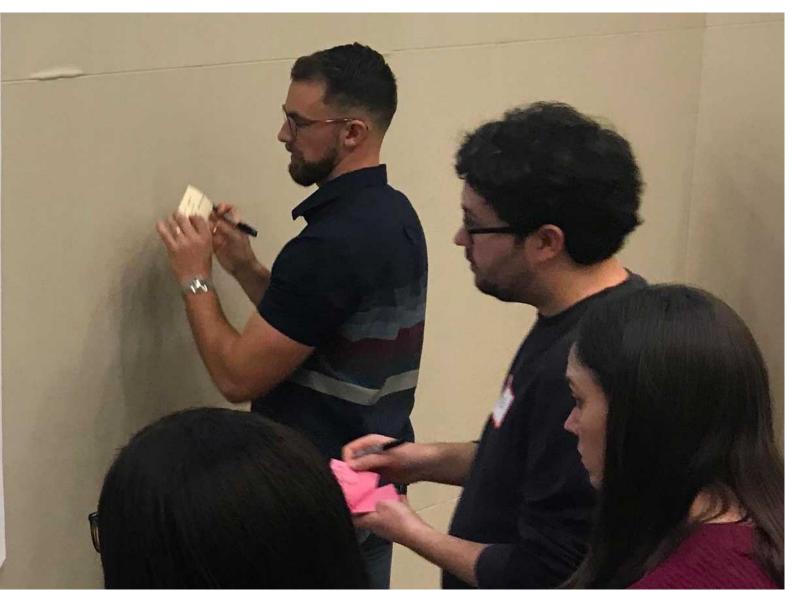




CARD DECKS
TILES
CANVASES
MAPS
MODELS
REFLECTION QUESTIONS
GAMES

'things to think with'





ANALOGIES

EXPLORABLE EXPLANATIONS

GAMEBOOKS

SIMULATIONS

DATA VISUALIZATIONS

ETC.



# How do we discuss competing priorities?

(Polarity Mapping)

" It feels like no cares about user research, or leaves room for good, thoughtful design. We talk about how important users are, but our processes are all about shipping features—as quickly as possible—with the promise that we'll make it better in the future. To be frank, I'm not proud of the work I've done. We're building the wrong things; most of it is stuff only the business cares about."

"The design team wants to slow everything down. Right now, we need to move fast and get a pilot in market—ASAP. We can learn along the way. As it is, teams spend too much time in research. We need more execution."



#### [ LEARNING ]

" It feels like no cares about user research, or leaves room for good, thoughtful design. We talk about how important users are, but our processes are all about shipping features—as quickly as possible—with the promise that we'll make it better in the future. To be frank, I'm not proud of the work I've done. We're building the wrong things; most of it is stuff only the business cares about."

#### [BUILDING]

"The design team wants to slow everything down. Right now, we need to move fast and get a pilot in market—ASAP. We can learn along the way. As it is, teams spend too much time in research. We need more execution."



TWO IDEAS ARE DIRECTLY OPPOSED AND IN CONFLICT

SOMETHING THAT CAN HAVE A RIGHT — OR BEST — ANSWER; A SOLUTION EXISTS

BOTH/AND

## A PROBLEM... OR A POLARITY?

EITHER/OR

A DILEMMA THAT IS ONGOING, UNSOLVABLE AND CONTAINS SEEMINGLY OPPOSING IDEAS

TWO IDEAS ARE COMPLEMENTARY AND INTERDEPENDENT

Should we focus on Innovation or Efficiency?

Should we prioritize Delivery or Quality?

Growth vs. Consolidation?

Short-term Gains vs. Long-term Organic Growth?

Centralization vs. Decentralization

Change vs. Stability?

Empathy or Toughness?

Keeping Control or Empowering Others?

Generalist or Specialist?



"Think of it like breathing. Breathing isn't a choice between inhaling or exhaling. If you inhale to the exclusion of exhaling, the negative results show up quickly. And the reverse is also true. The polarity approach says, we must both inhale and exhale."

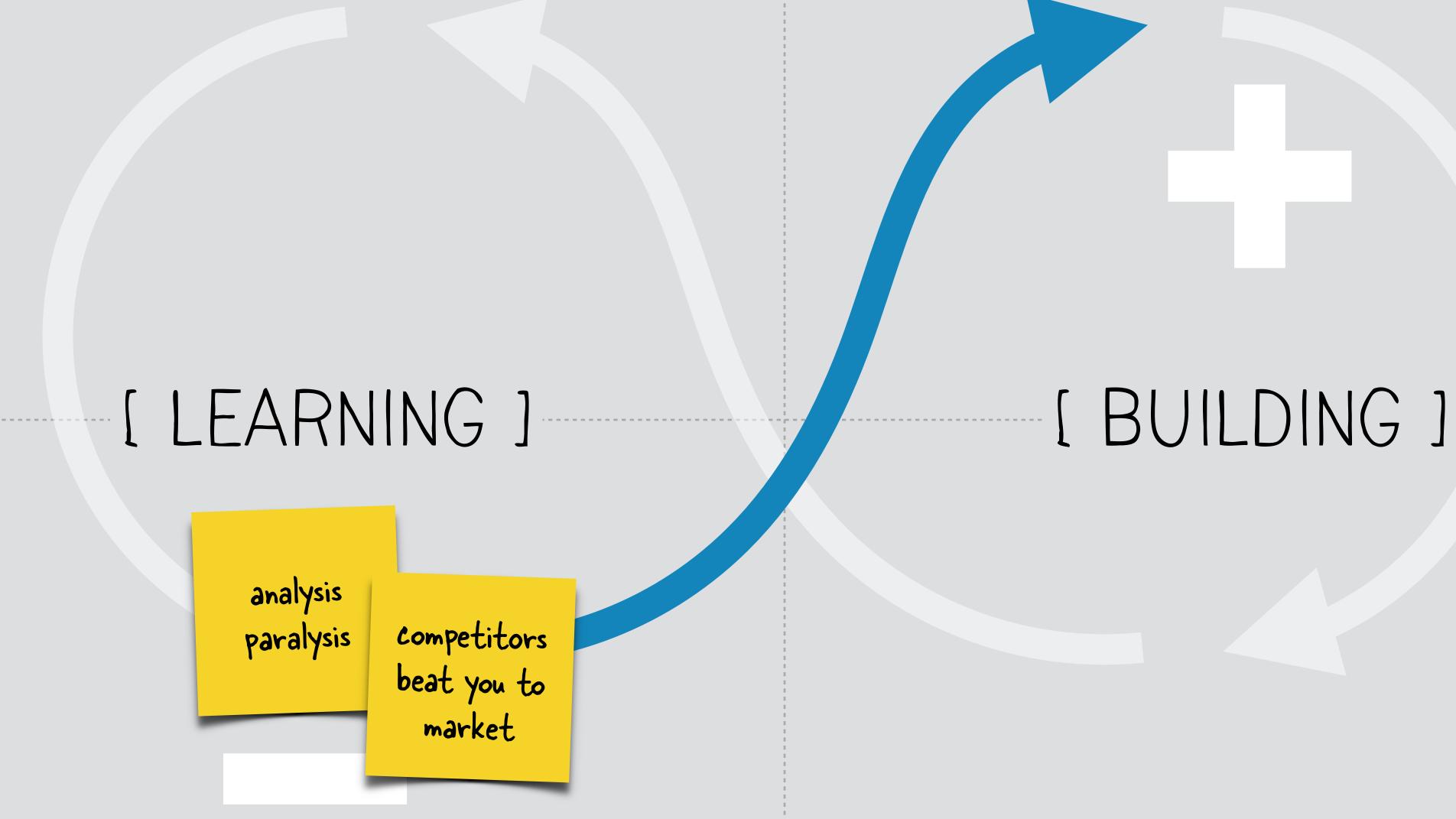
[LEARNING]

[BUILDING]



[BUILDING]





Generates
something
that can be
added to

Deliver real
customer value

[LEARNING]

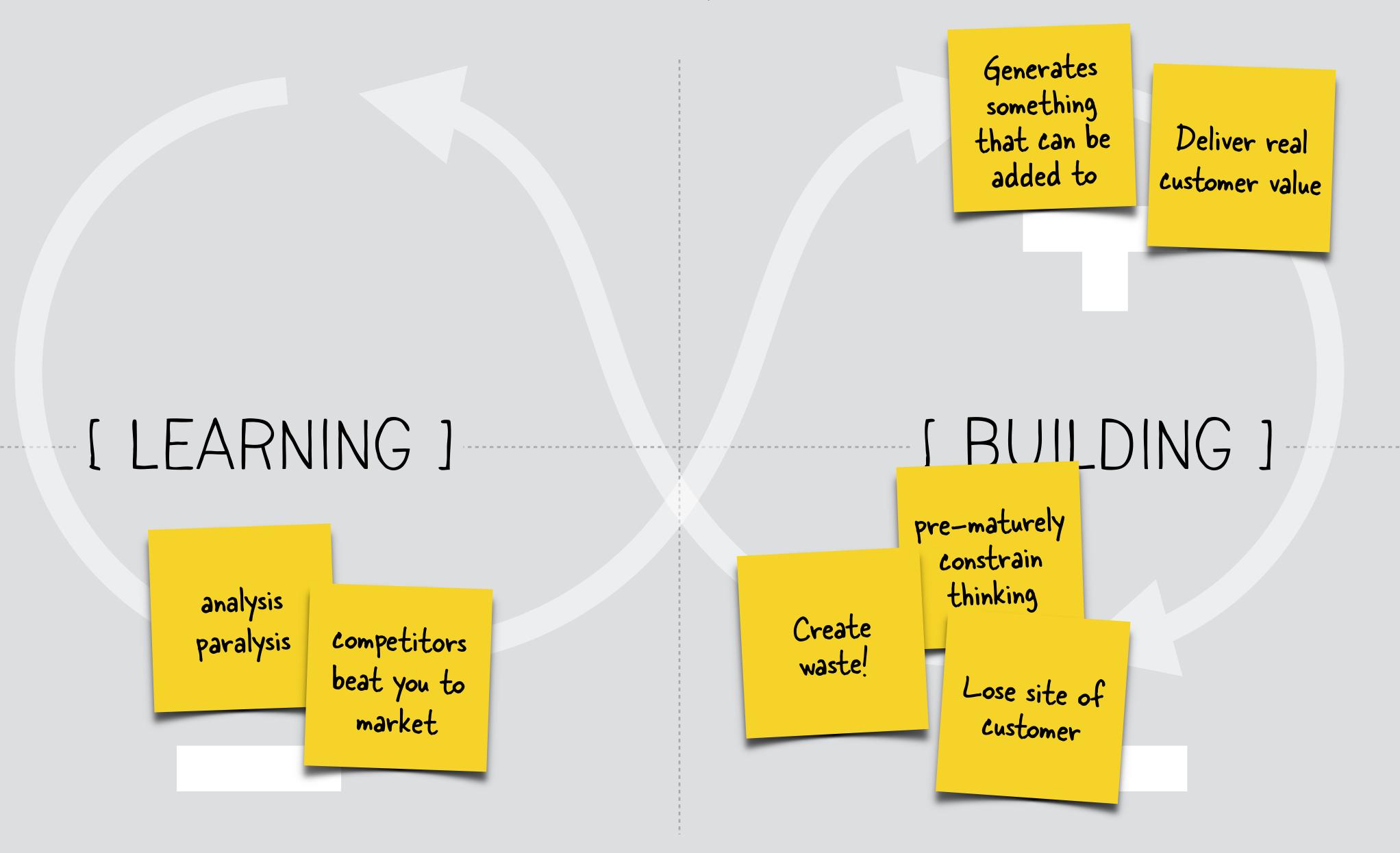
[BUILDING]

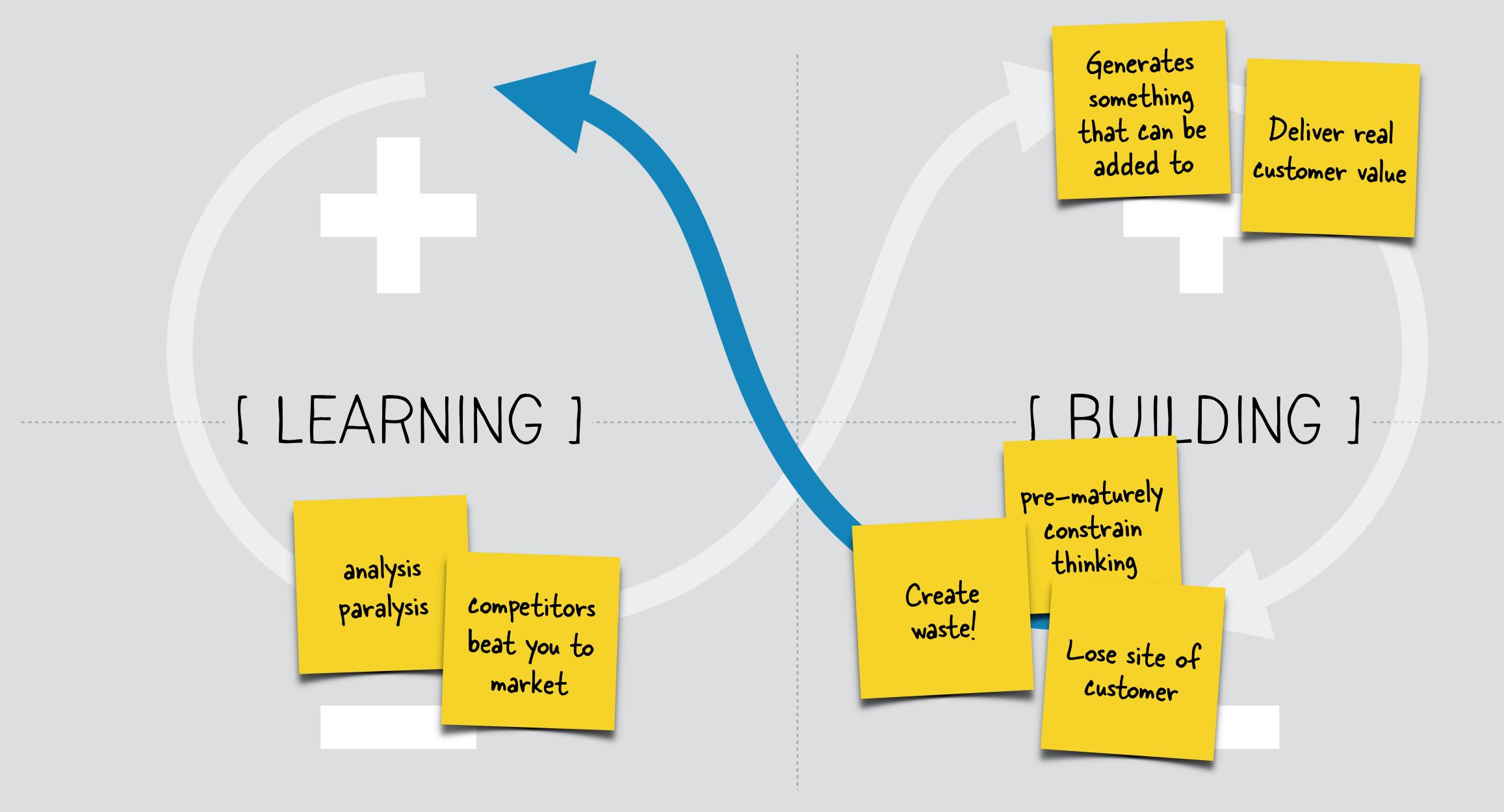
analysis
paralysis
competitors
beat you to
market

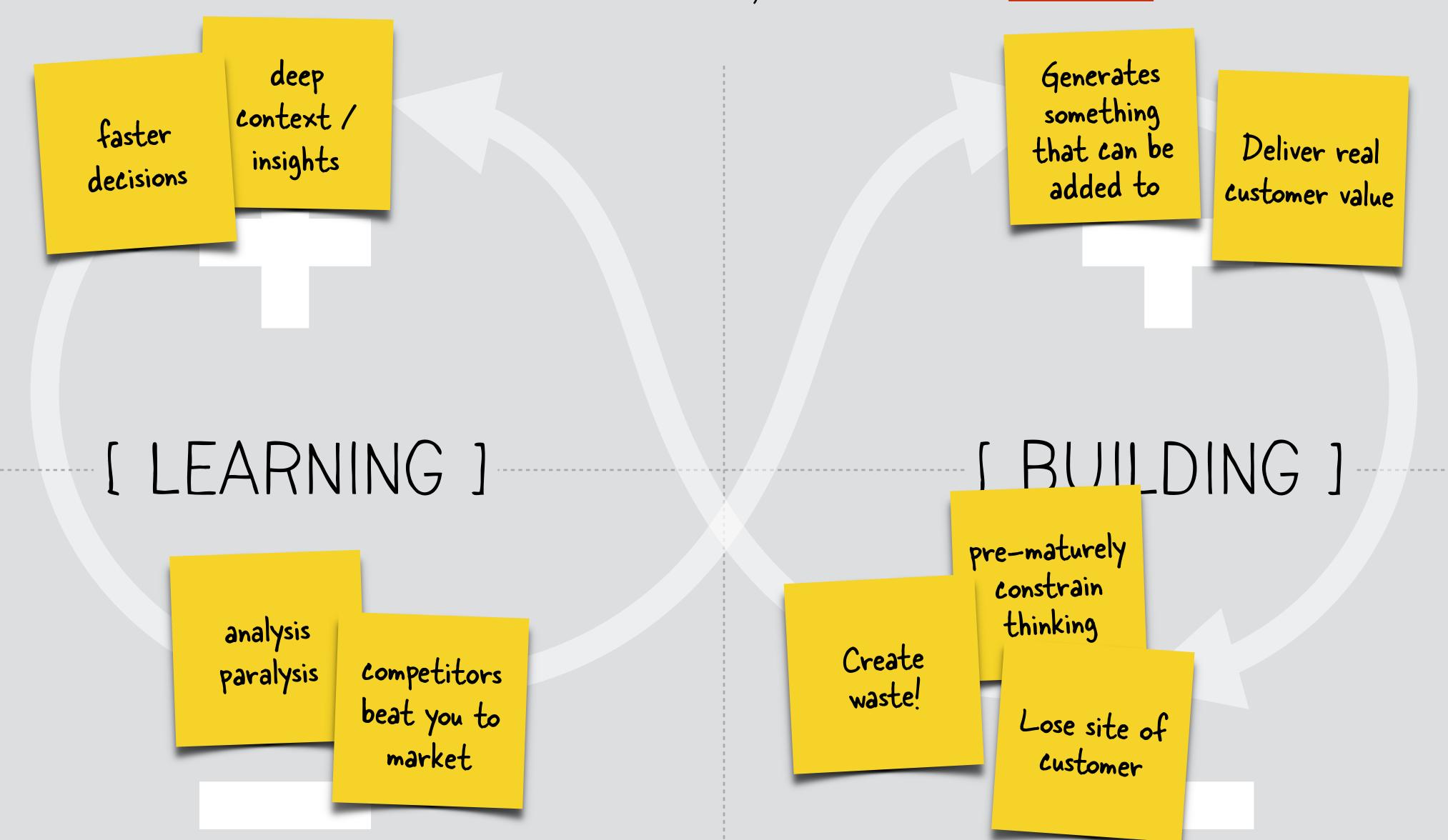
Generates something that can be added to Deliver real customer value [BUILDING]

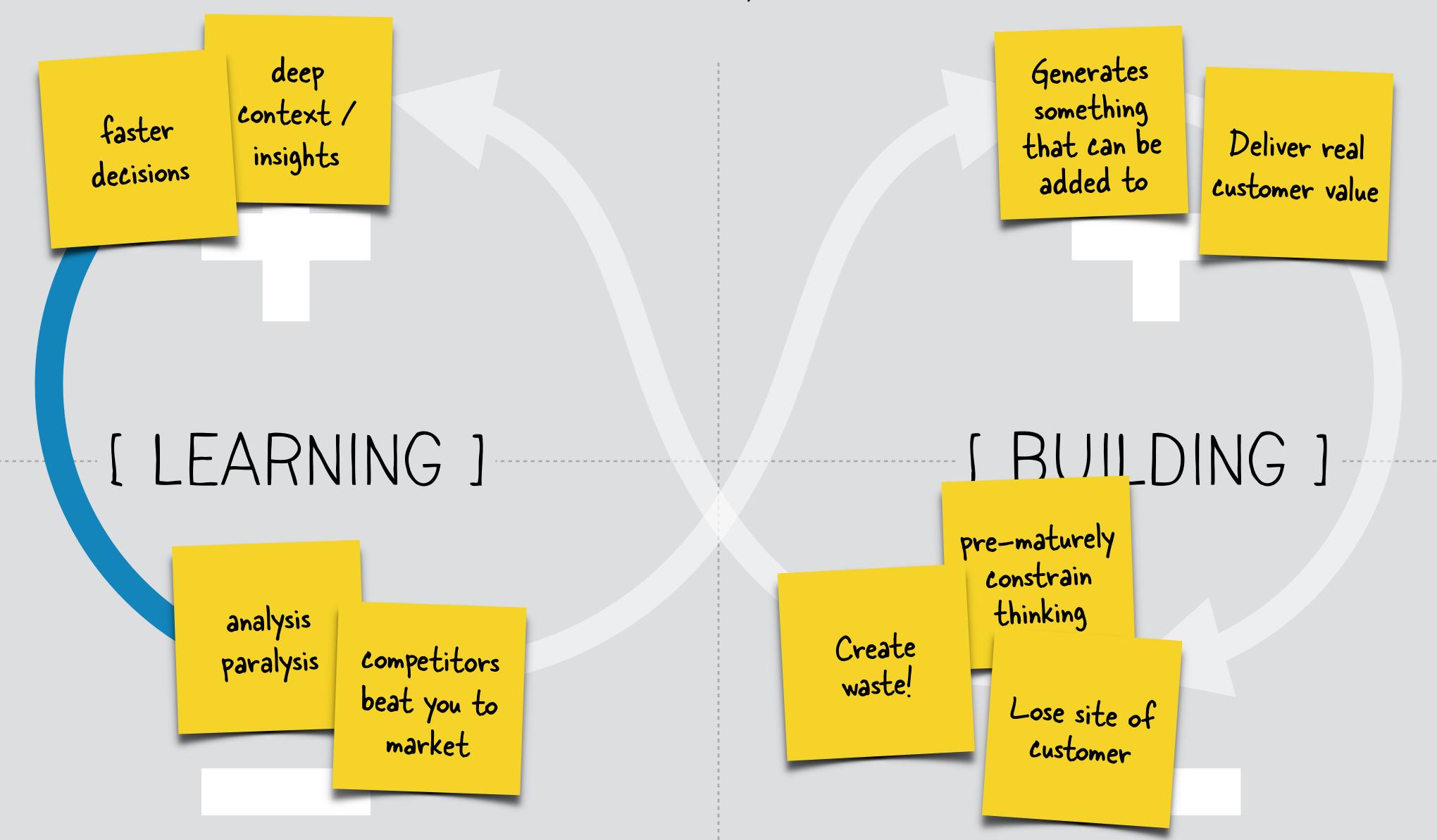
[LEARNING]

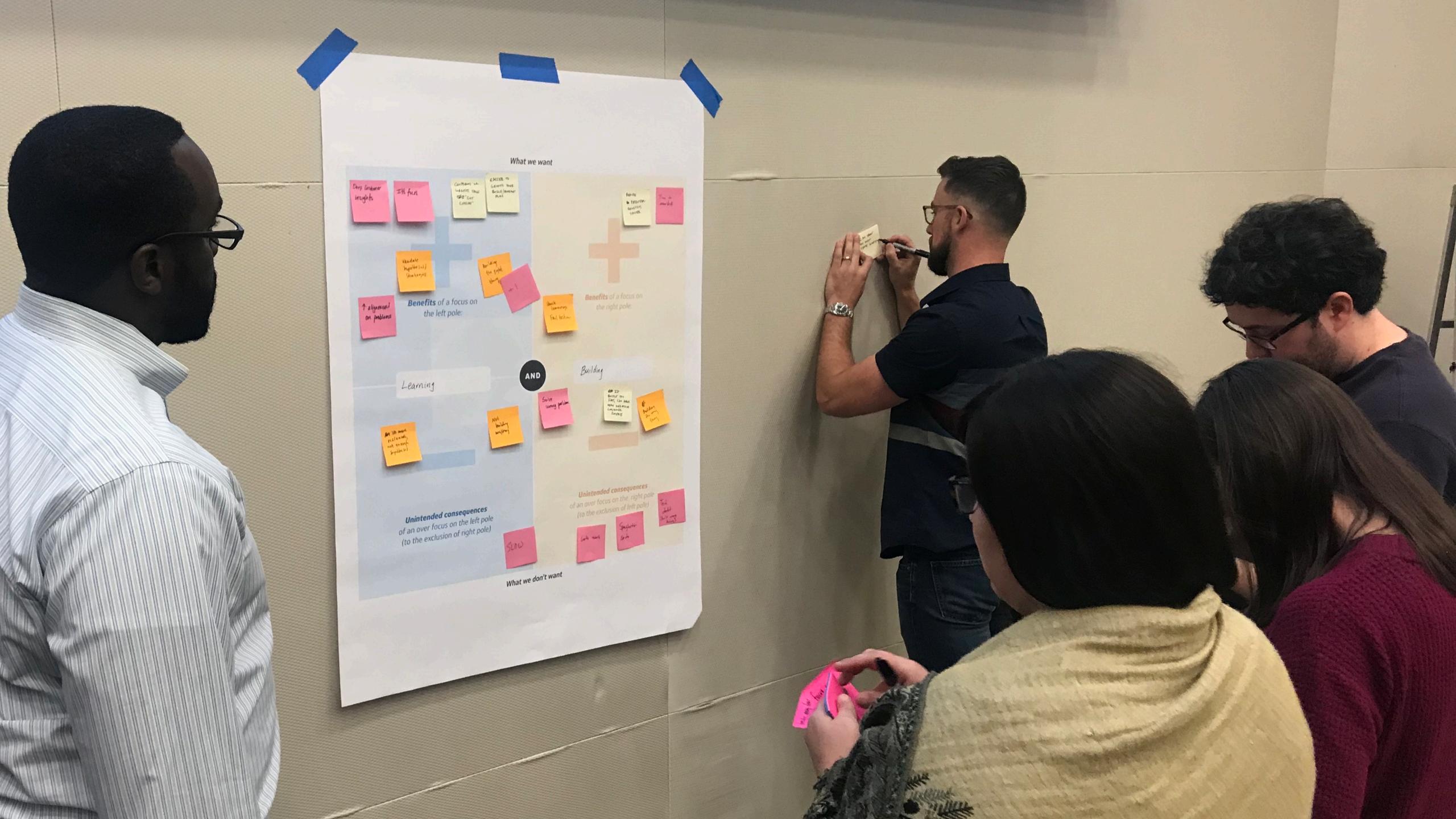
analysis
paralysis
competitors
beat you to
market













When we bring ideas into the world (in a thoughtful, structured way) we extend our ability to think about and discuss complex topics.

# Mind if I geek out about cards?





## Value of (Physical) Cards?

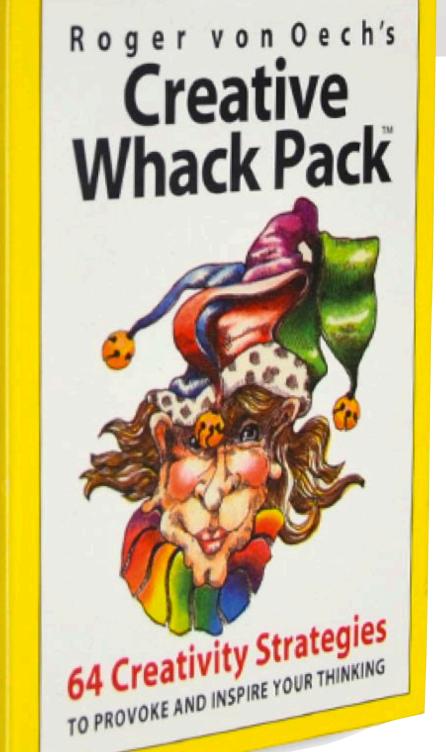
DISCRETE (NON-LINEAR) UNITS OF INFORMATION

CAN BE ORGANIZED IN DIFFERENT WAYS

CAN BE MANIPULATED IN DIFFERENT WAYS







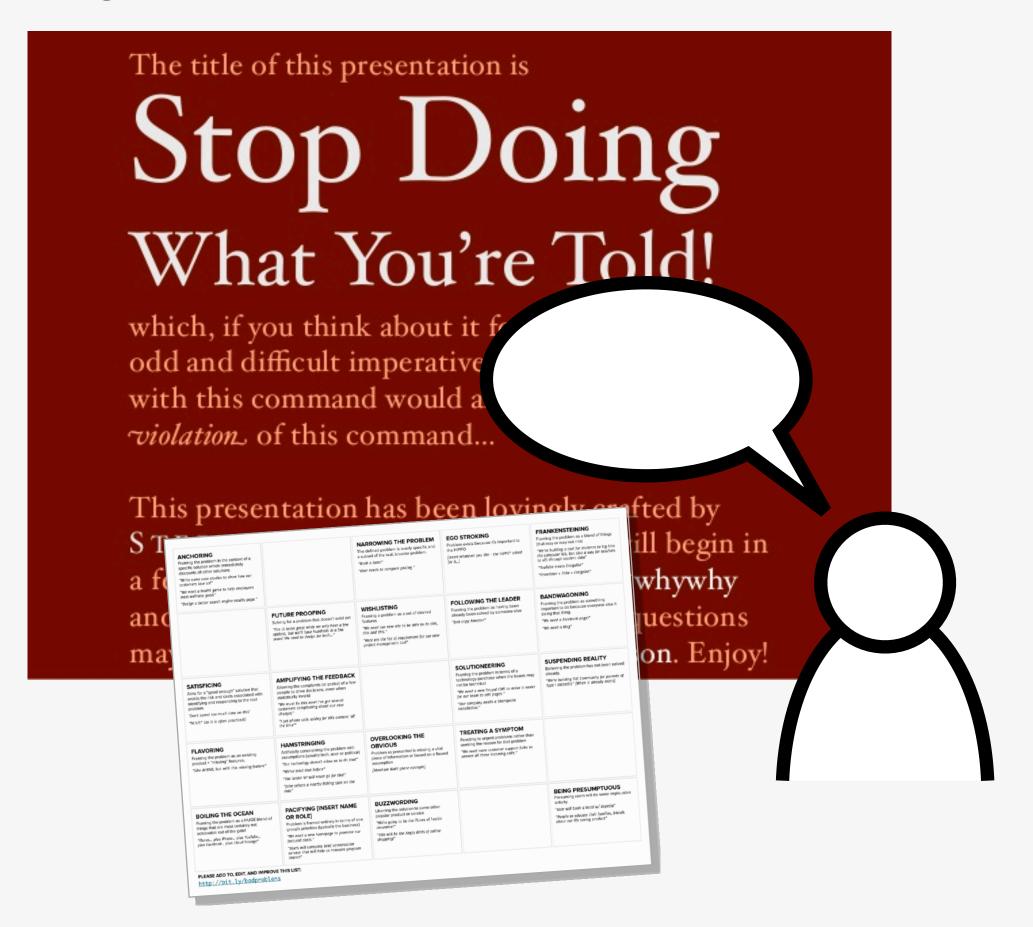


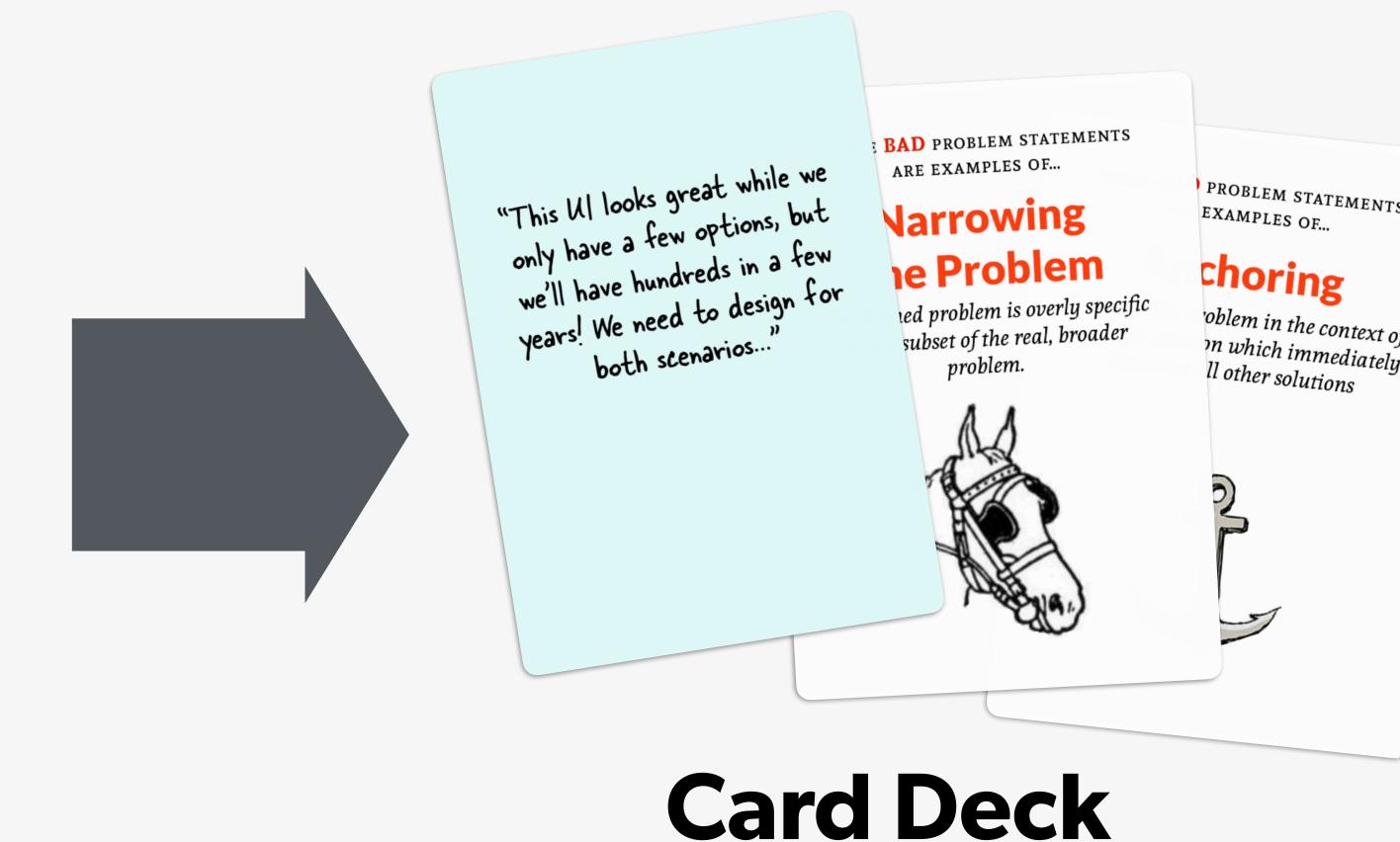
## Let's level up...

# **Spotting Bad Problem Statements**

(CARD FLIP SUPPORTS 'CHECK YOURSELF')

#### Talk





...plus a Bingo Sheet!

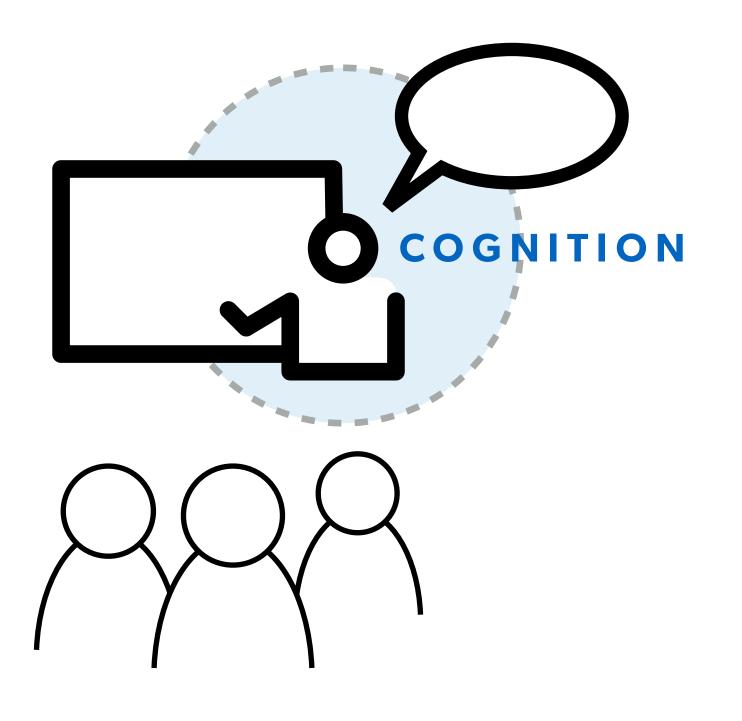
#### EVERY CARD HAS TWO SIDES:

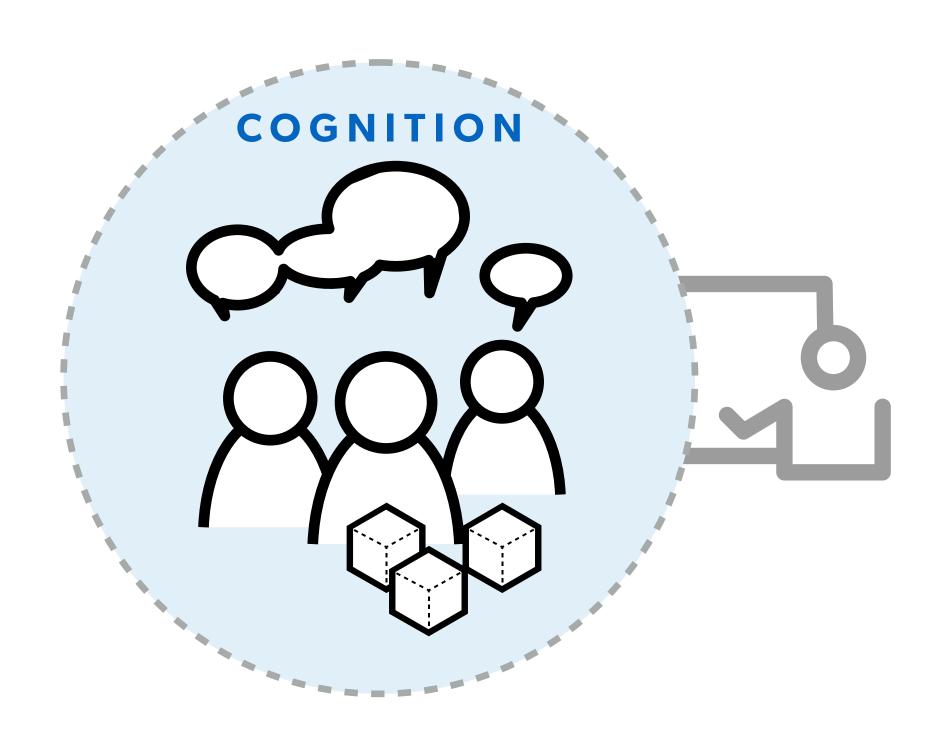
BAD PROBLEM STATEMENTS "This Ul looks great while we only have a few options, but we'll have hundreds in a few we'll have hundreds in a few years! We need to design for both scenarios..." ARE EXAMPLES OF... PROBLEM STATEMENTS **Narrowing** EXAMPLES OF... ne Problem choring red problem is overly specific subset of the real, broader oblem in the context of on which immediately SIDE A: AN problem. ll other solutions EXAMPLE BAD PROBLEM STATEMENT SIDE B: BAD PROBLEM STATEMENT DEFINITION



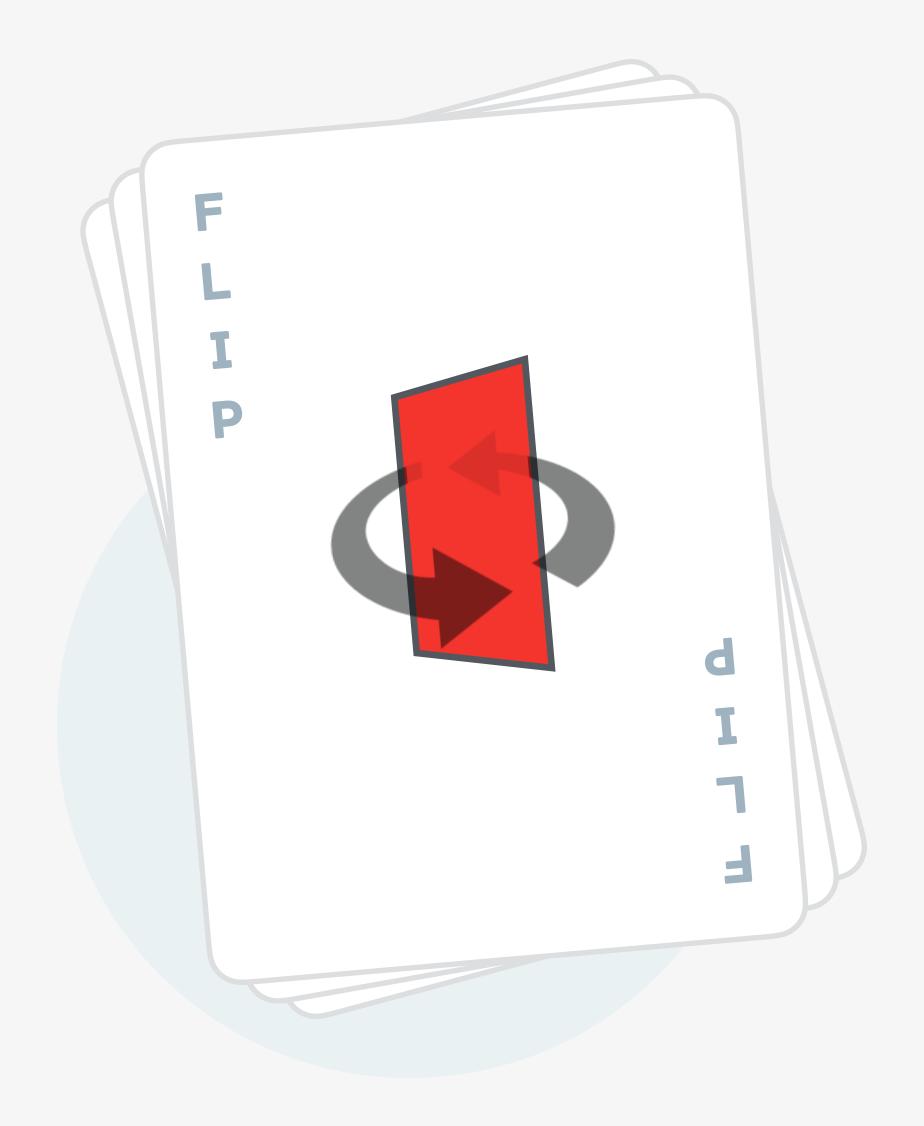
### THE REAL TAKEAWAY:

From Passive Learning...





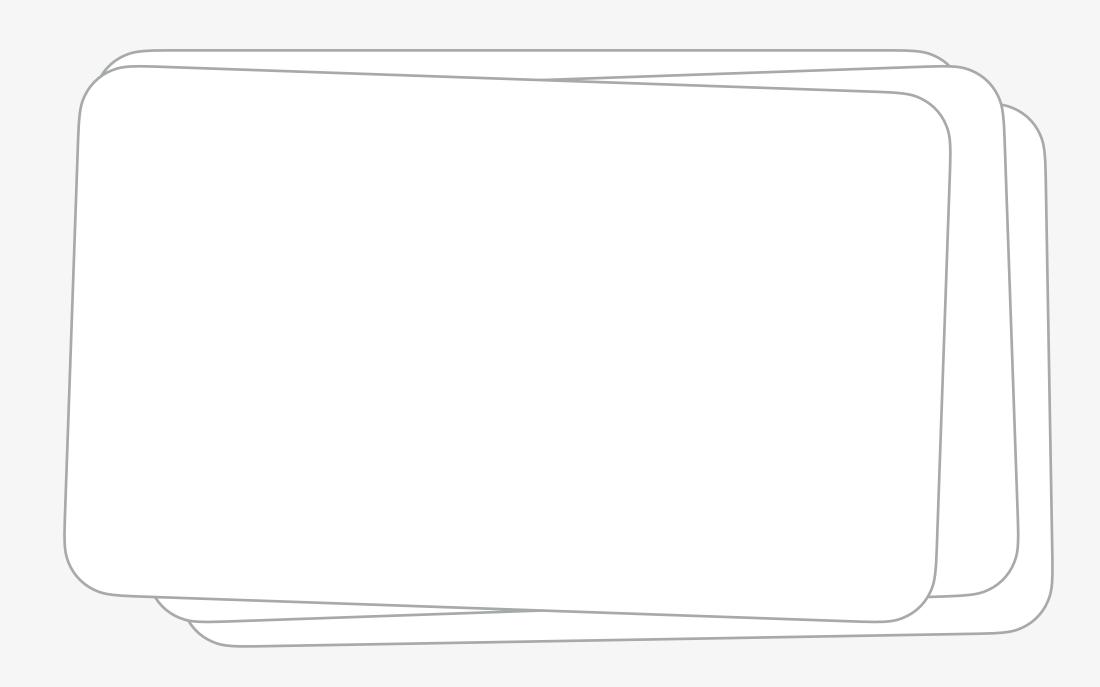
...To Active Learning



# Distinguishing Between Facts and Beliefs

(SORTING SPURS DIALOGUE)

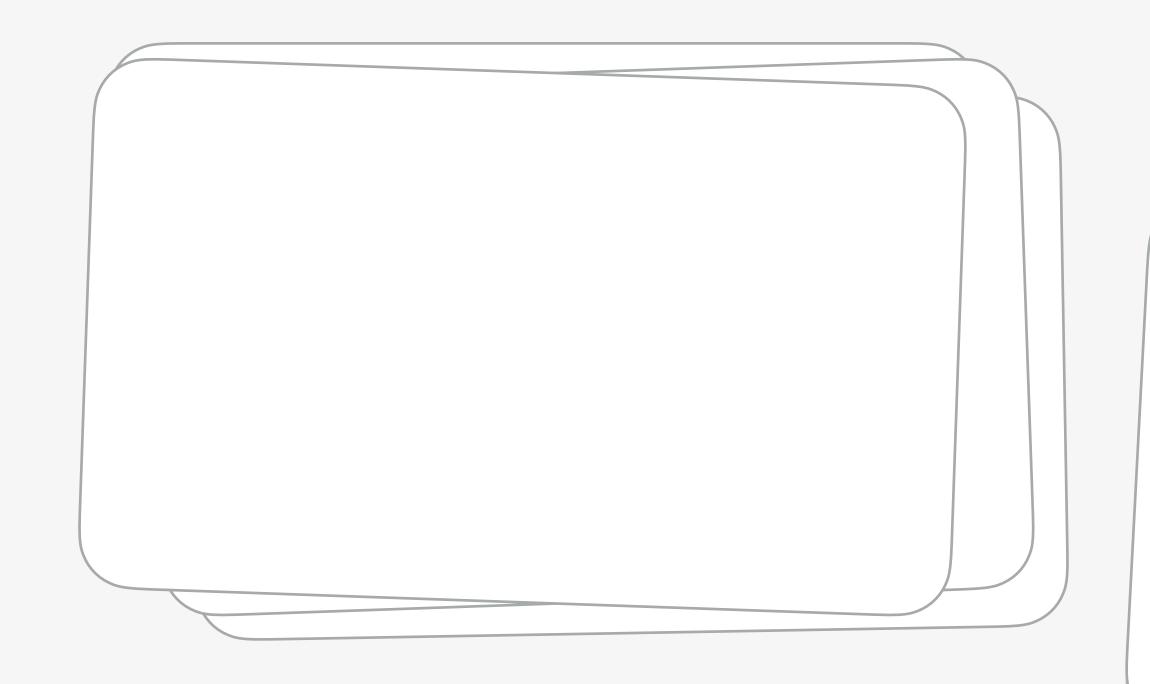




STEPHEN USED SLIDES IN HIS TALK

STEPHEN GAVE
THE WORST TALK
EVER AT TORCHI!

TEPHEN USED IDES IN HIS TALK



STEPHEN GAVE
THE WORST TALK
EVER AT TORCH!

TEPHEN USED
IDES IN HIS TALK

TO BE SUCCESSFUL, THIS PROJECT NEEDS 3 PEOPLE, MINIMUM

I WAS EXCLUDED FROM THAT MEETING

### Fact or Belief?

OUR RESEARCH DOES NOT SUPPORT THIS DECISION

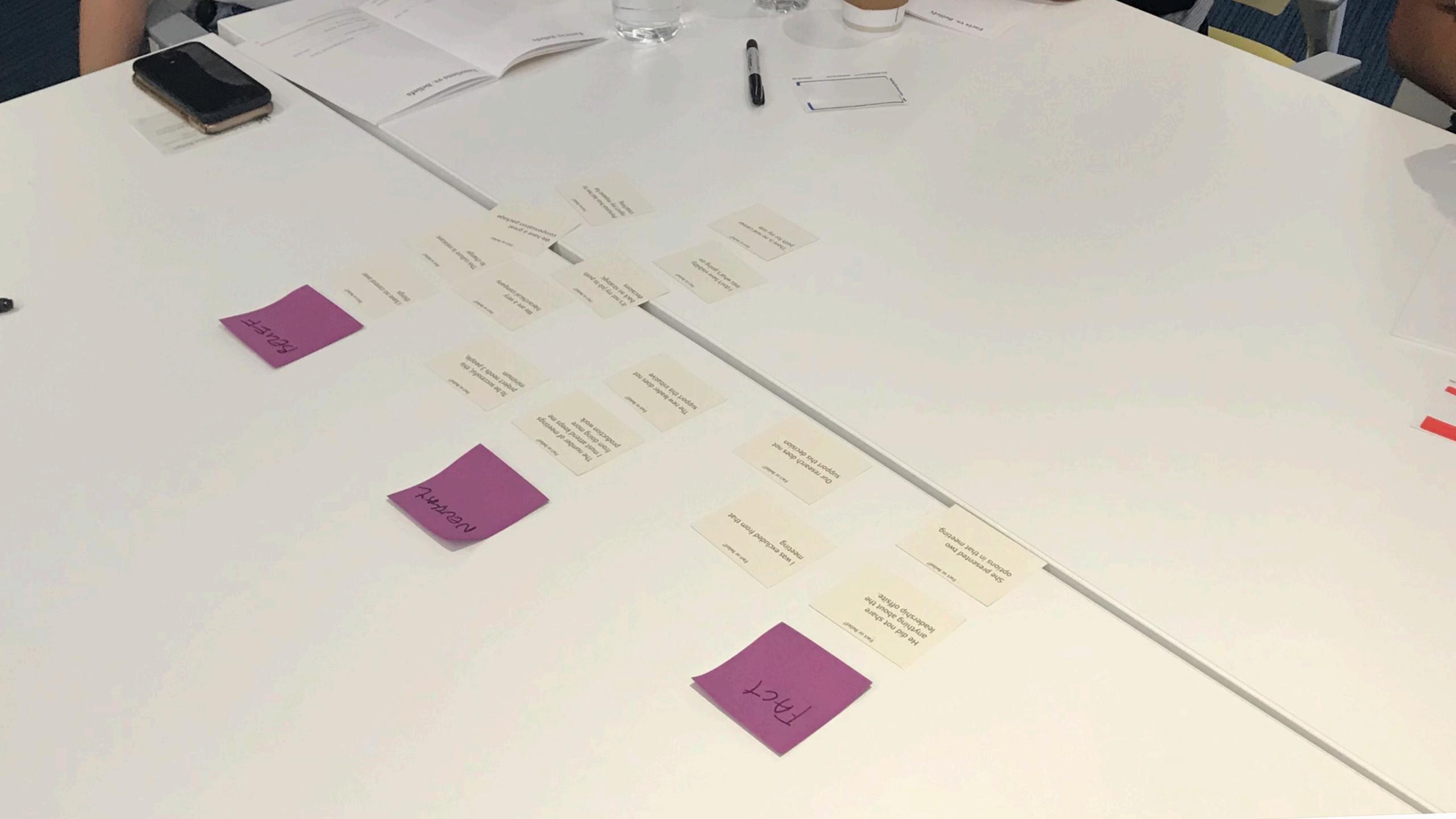
### Fact or Belief?

THE NEW LEADER
DOES NOT SUPPORT
THIS INITIATIVE

### Fact or Belief?

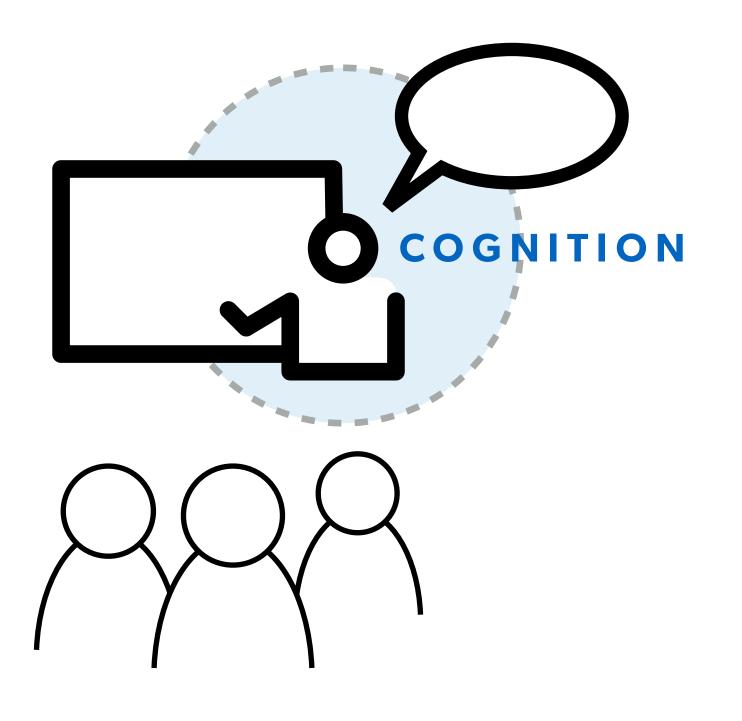
THIS CULTURE IS
RESISTANT TO CHANGE

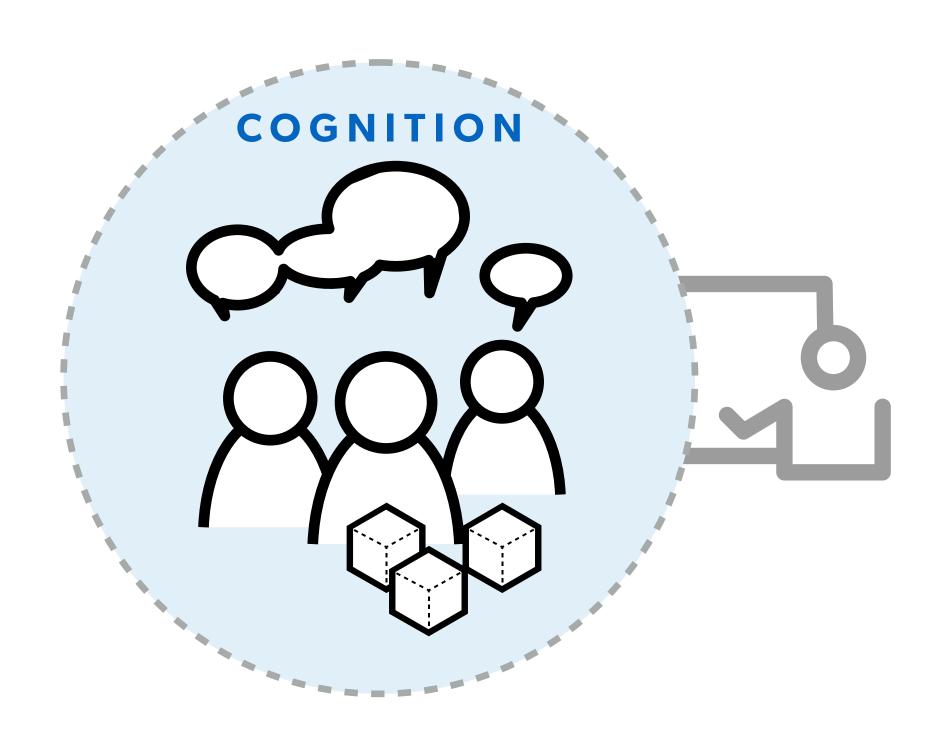




### THE REAL TAKEAWAY:

From Passive Learning...





...To Active Learning



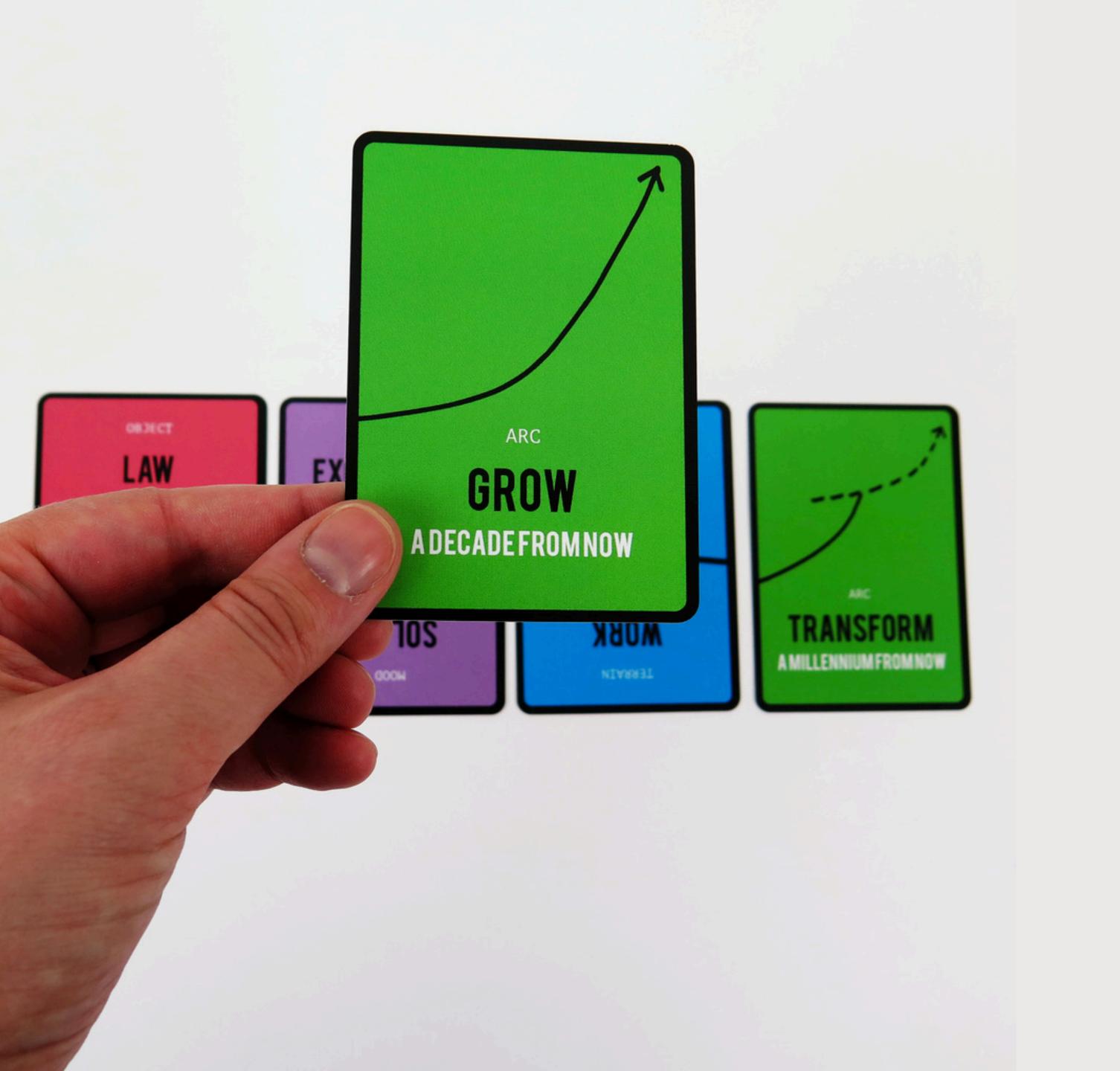


## The Thing from the Future

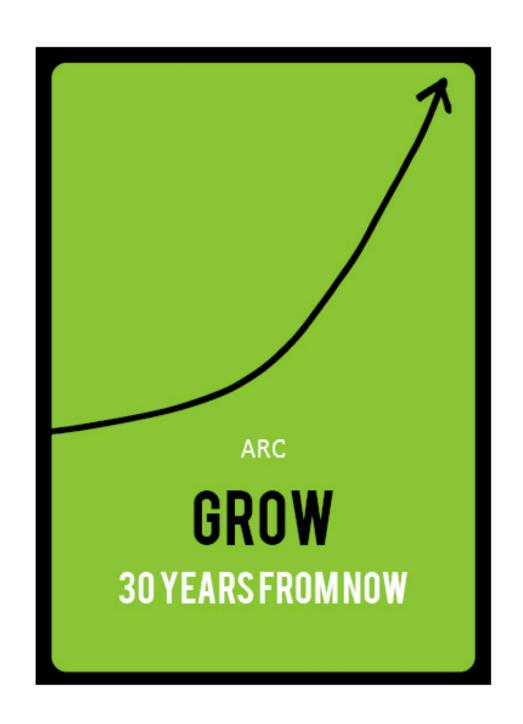
(COMBINATOREAL CREATIVITY SUPPORTS IDEA GENERATION)



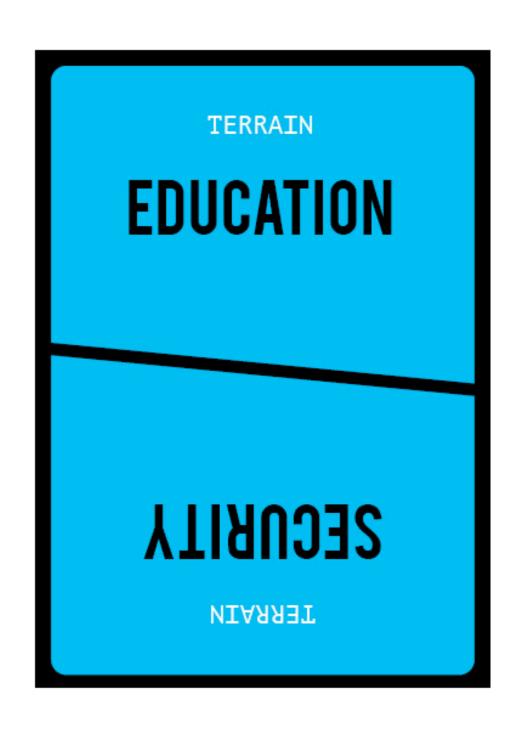




### A PRE-DEFINED SET OF CONSTRAINTS USED TO CHANNEL BRAINSTORMING ABOUT OBJECTS FROM POSSIBLE FUTURES:



ARC cards broadly describe different kinds of possible futures. The main (top) text of each Arc card specifies one of four generic images of alternative futures. The bottom text on each Arc card describes the "time horizon" — the distance into the future that players must project their imaginations.



TERRAIN cards describe contexts, places, and topic areas. In a completed prompt, the terrain card describes where – physically or conceptually – the thing from the future might be found. Two terrains appear on each card in order to provide richer possibilities for the deck.



**OBJECT** cards describe the basic form of the thing from the future.



**MOOD** cards describe emotions that the thing from the future might evoke in an observer from the present.



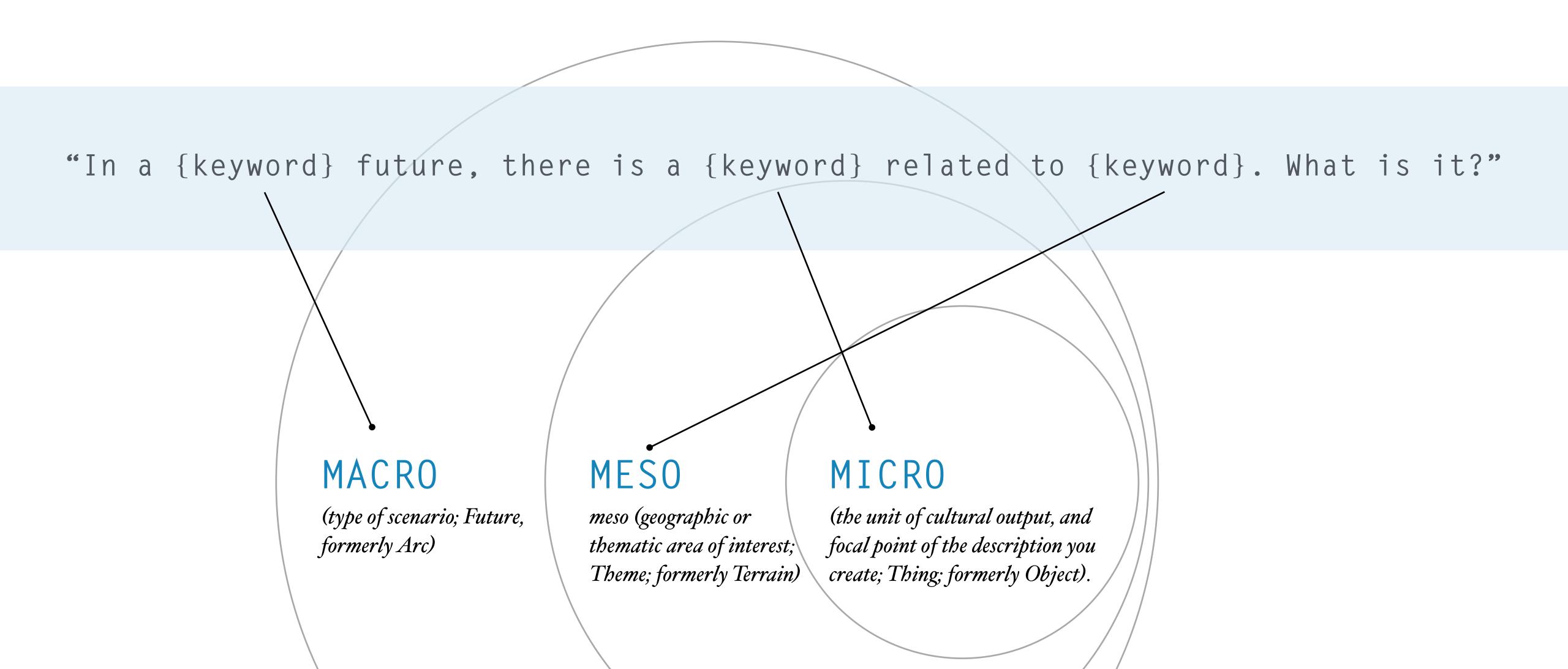
- + SIMPLER STRUCTURE (JUST THREE SUITS)
- + ADDITION OF A MAD-LIBS PHRASE

  (FORMED BY SEQUENCING THE THREE CARD TYPES)

"In a {keyword} future, there is a {keyword} related to {keyword}. What is it?"

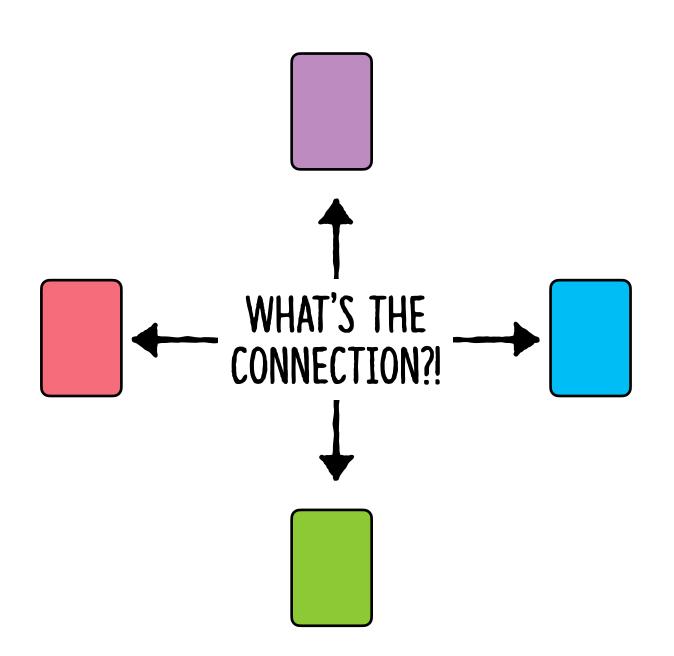


### + + A WELL-CONSIDERED STRUCTURE OF CONSTRAINTS, THAT OFFERS "THREE COMPLEMENTARY LEVELS OF ABSTRACTION..."

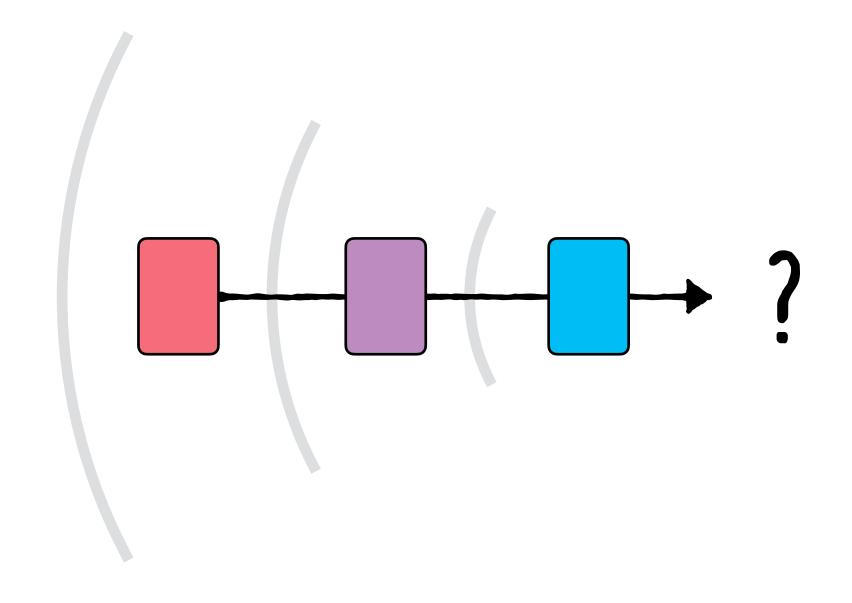


### + BOTH VERSIONS USE CONSTRAINTS TO FACILITATE BRAINSTORMING, BUT IN SUBTLY DIFFERENT WAYS:

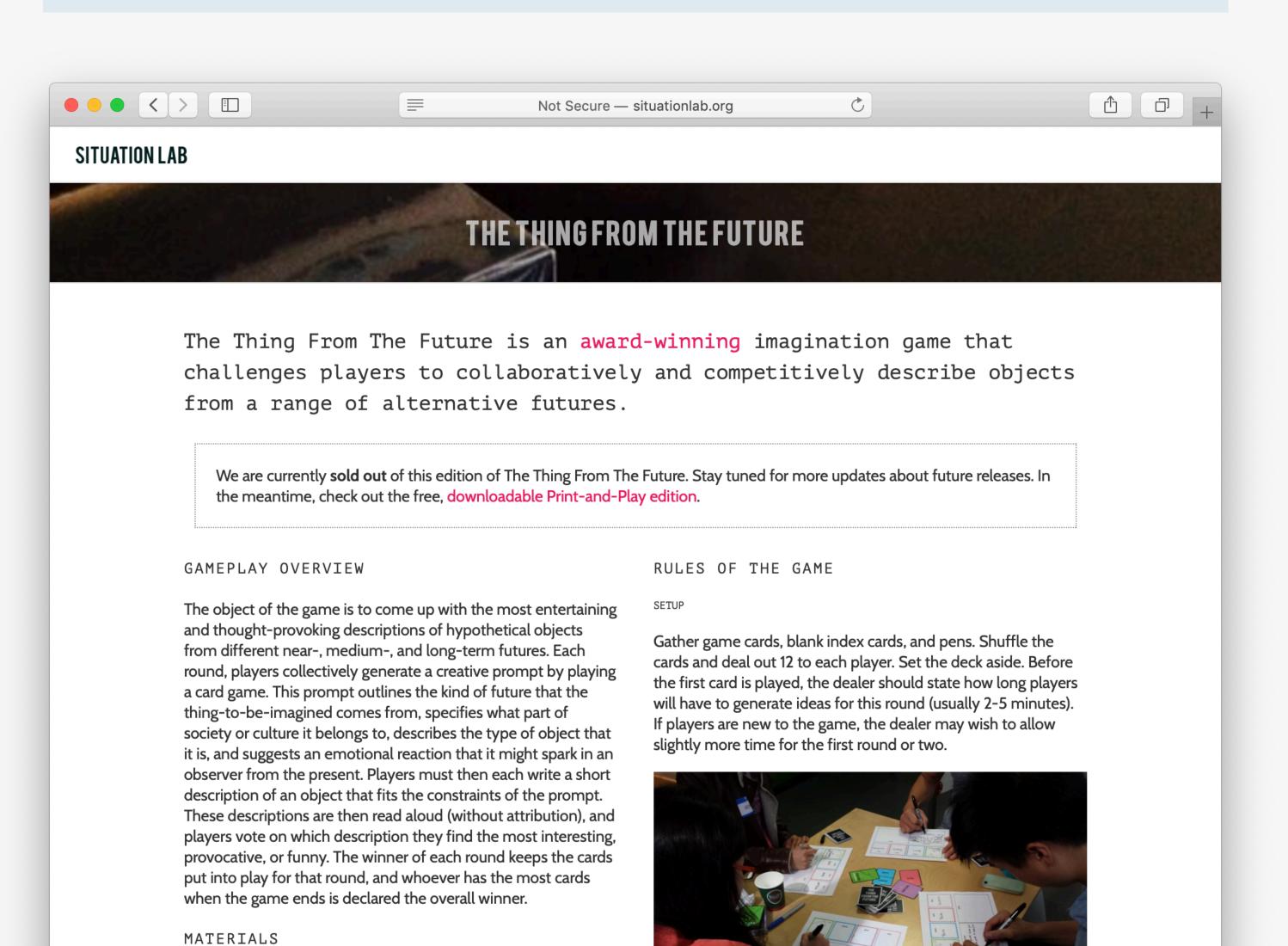
VERSION 1.0 FELT LIKE AN EXERCISE IN "COMBINATORIAL CREATIVITY," WHERE YOU ARE CHALLENGED TO IMAGINE SOMETHING BASED ON FOUR RANDOM THINGS.



WITH VERSION 2.0, THESE CONSTRAINTS FEEL MORE NATURAL, WITH ONE CONSTRAINT LEADING INTO THE NEXT, LEAVING YOU TO IMAGINE WHAT FOLLOWS:



#### http://situationlab.org/project/the-thing-from-the-future/

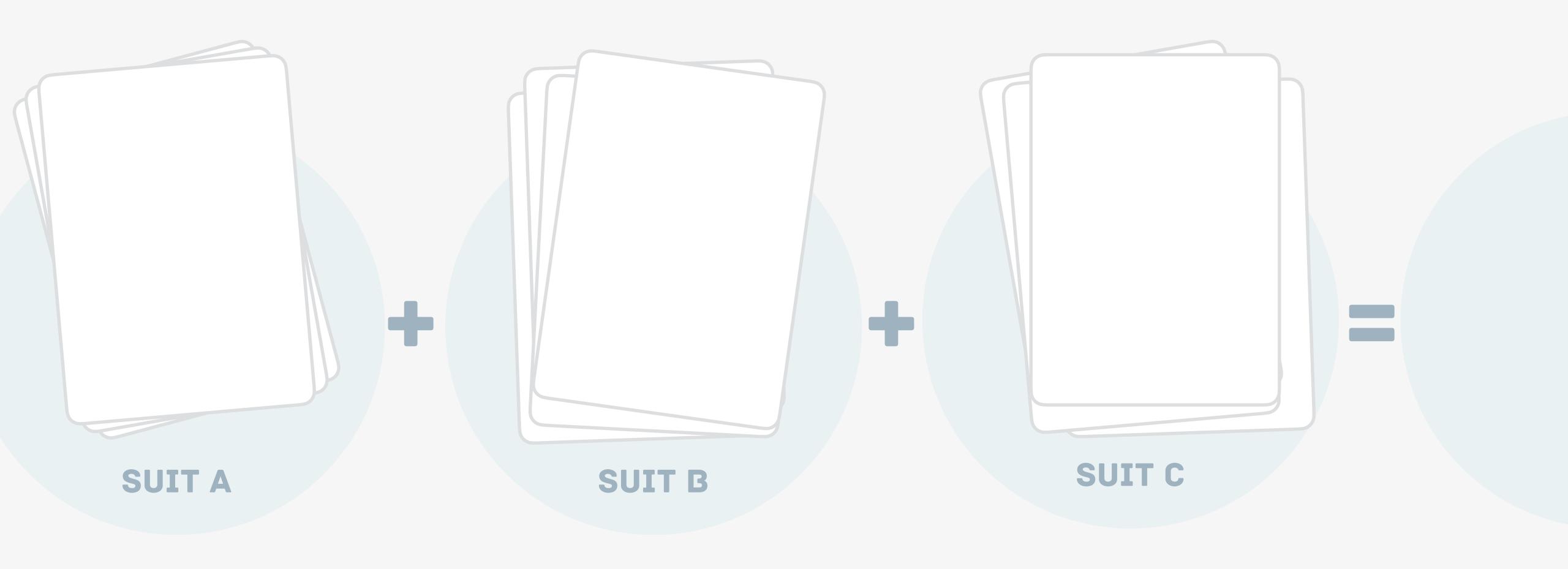


NUMBER OF PLAYERS

In addition to the deck of 108 game cards, a supply of blank

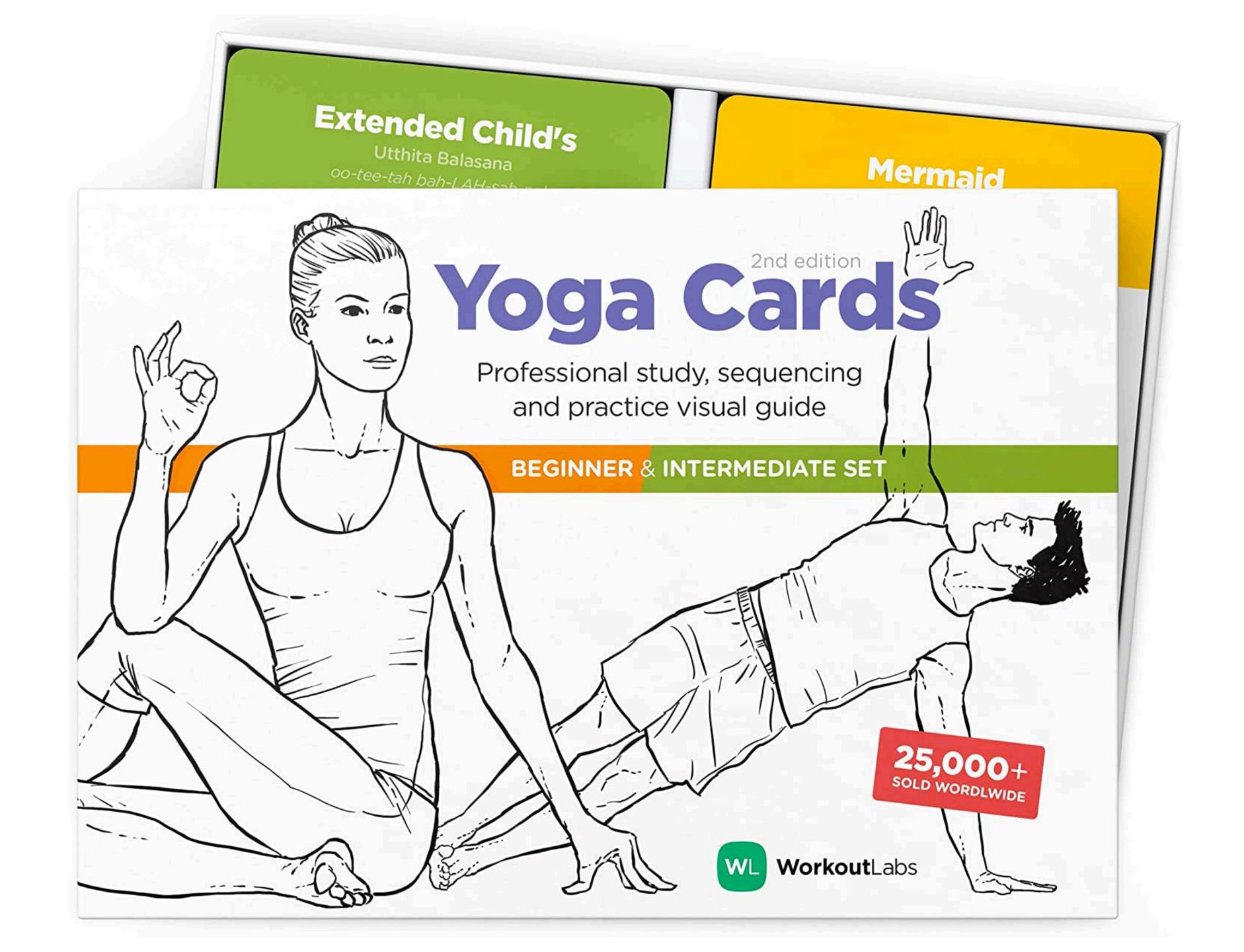
index cards and a pen for each player is required.

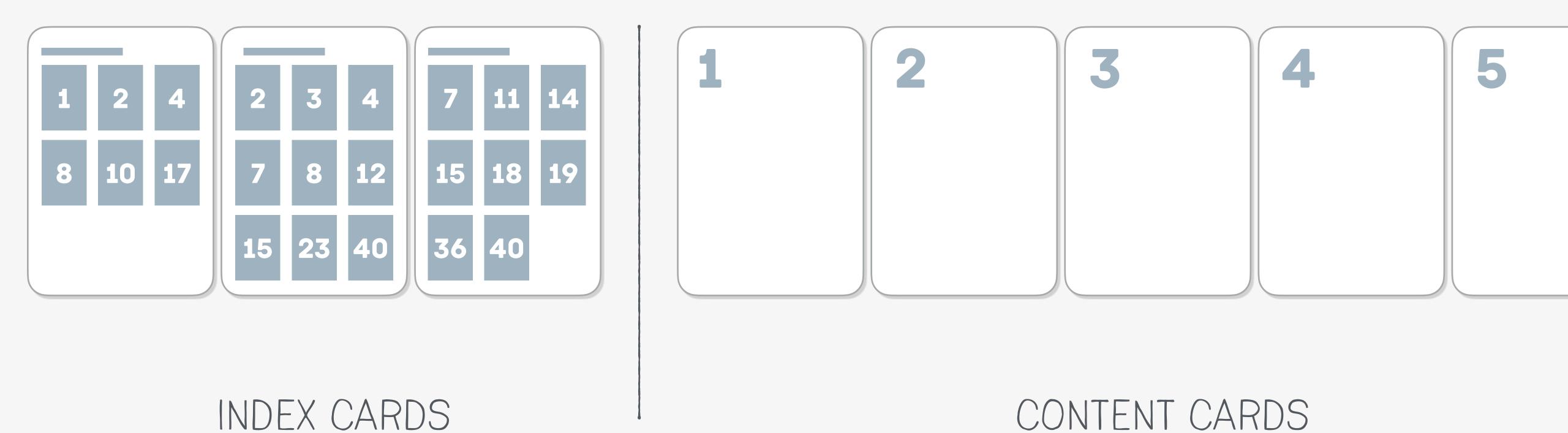
THE ROUND



# Personalizing your Yoga Workout!

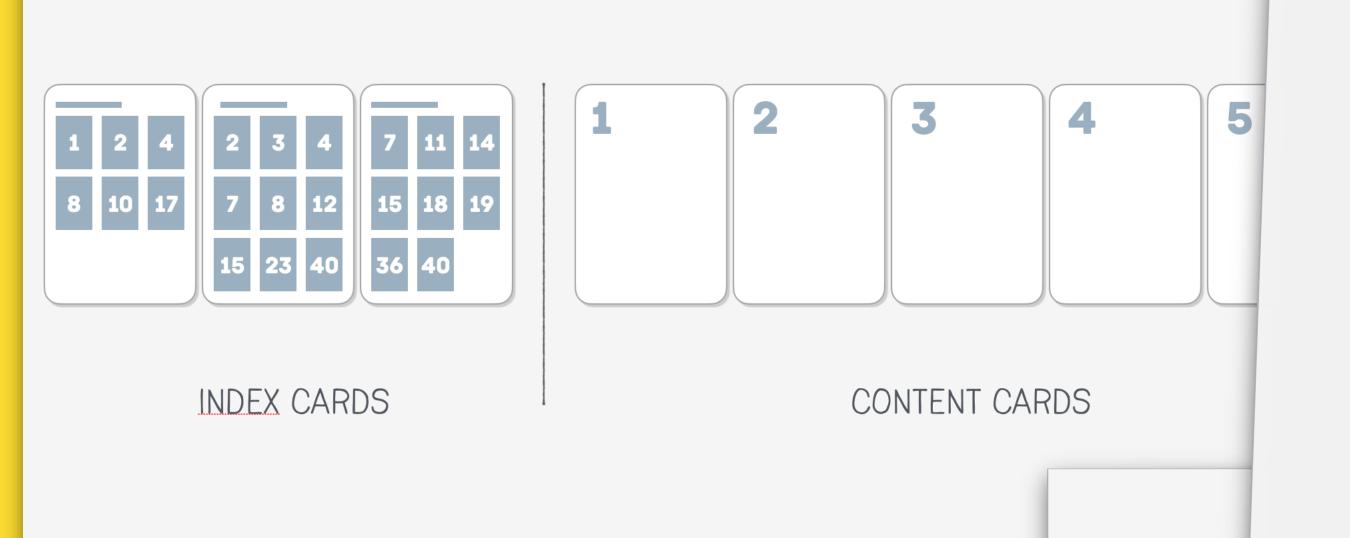
(INDEX CARDS ALLOW A ONE TO MANY RELATIONSHIP)

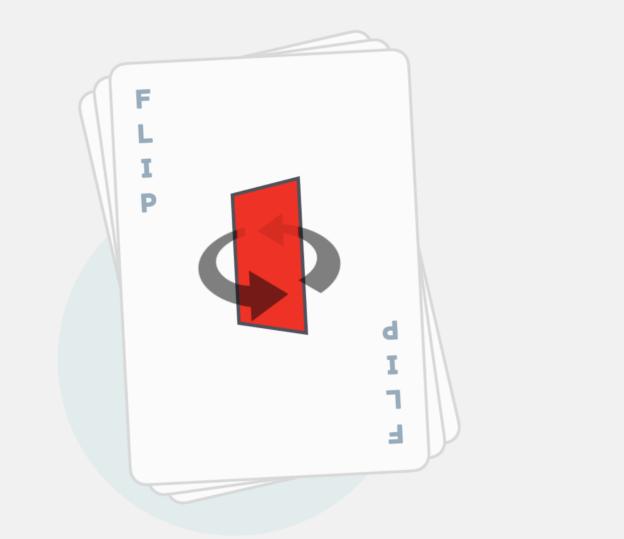


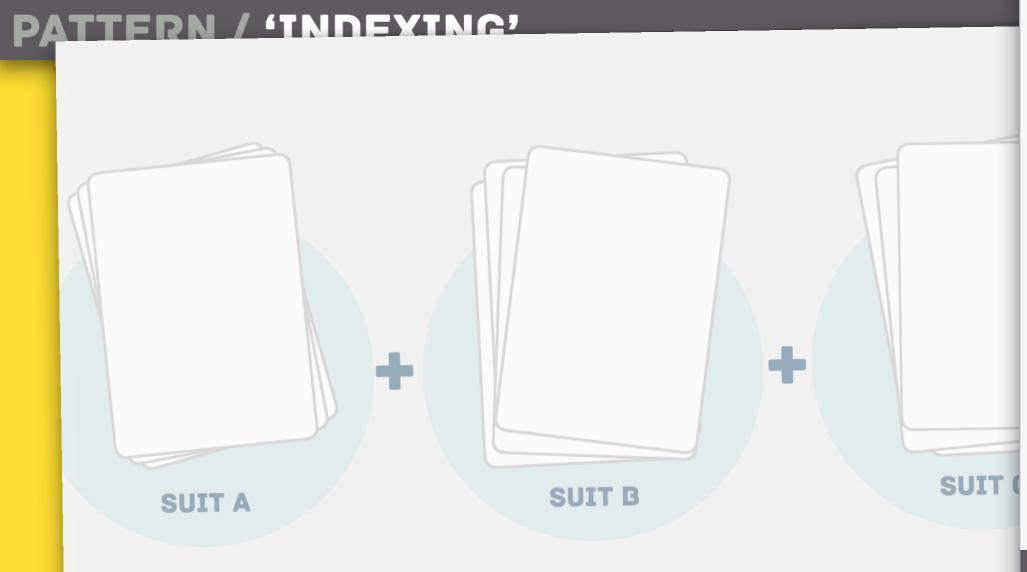


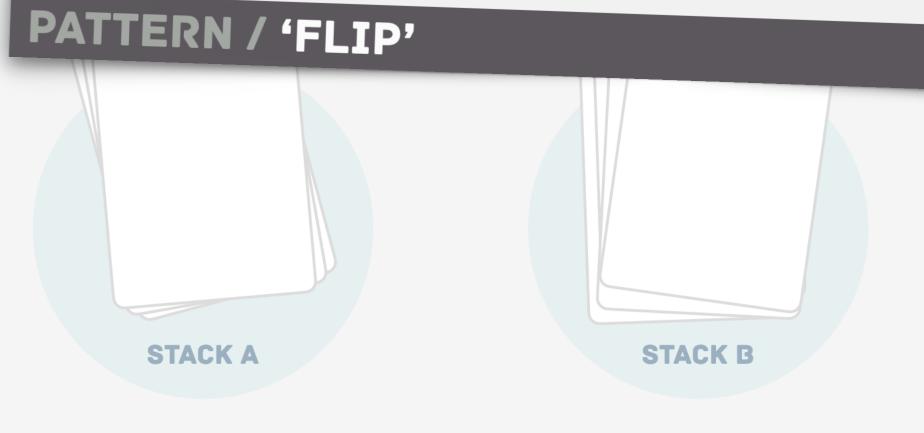
# Why all this is interesting... (to me!)





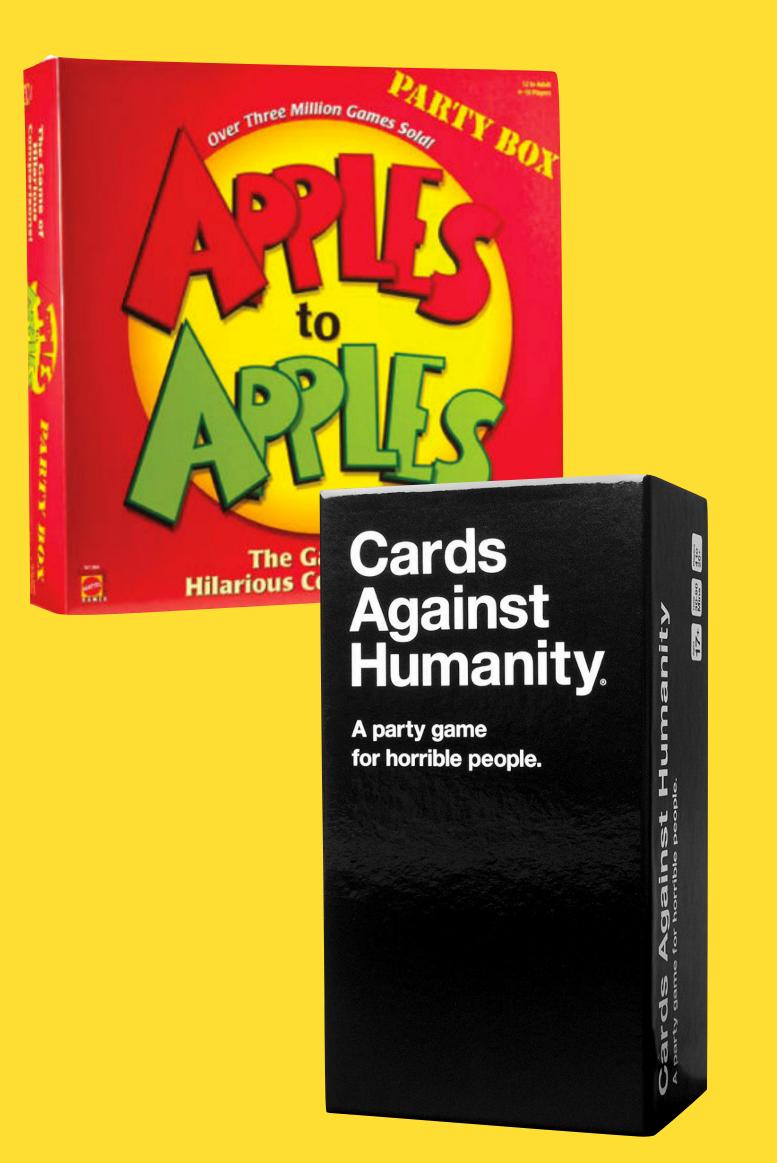


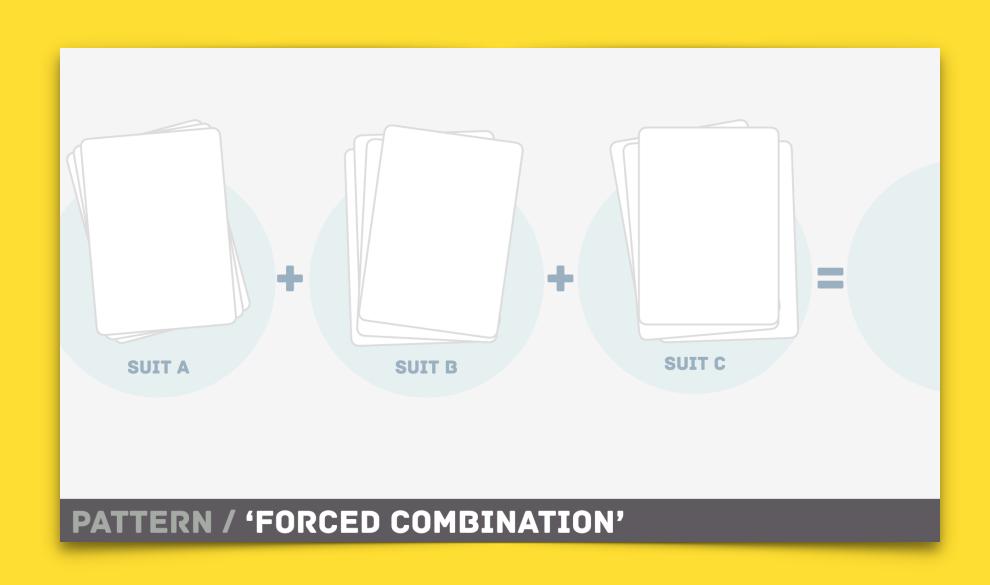




PATTERN / 'FORCED SORTING'

#### PATTERN / 'FORCED COMBINATION'



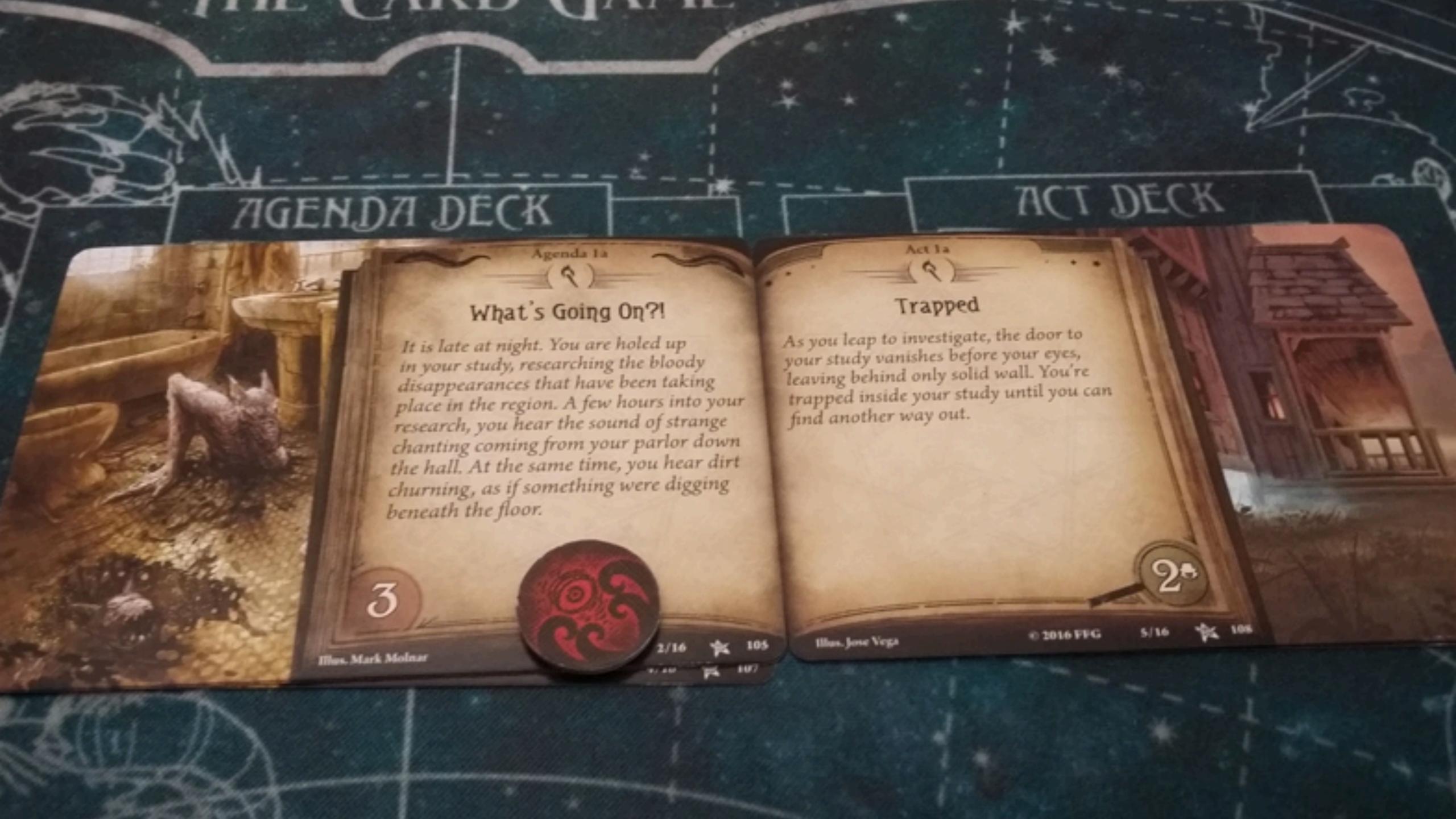








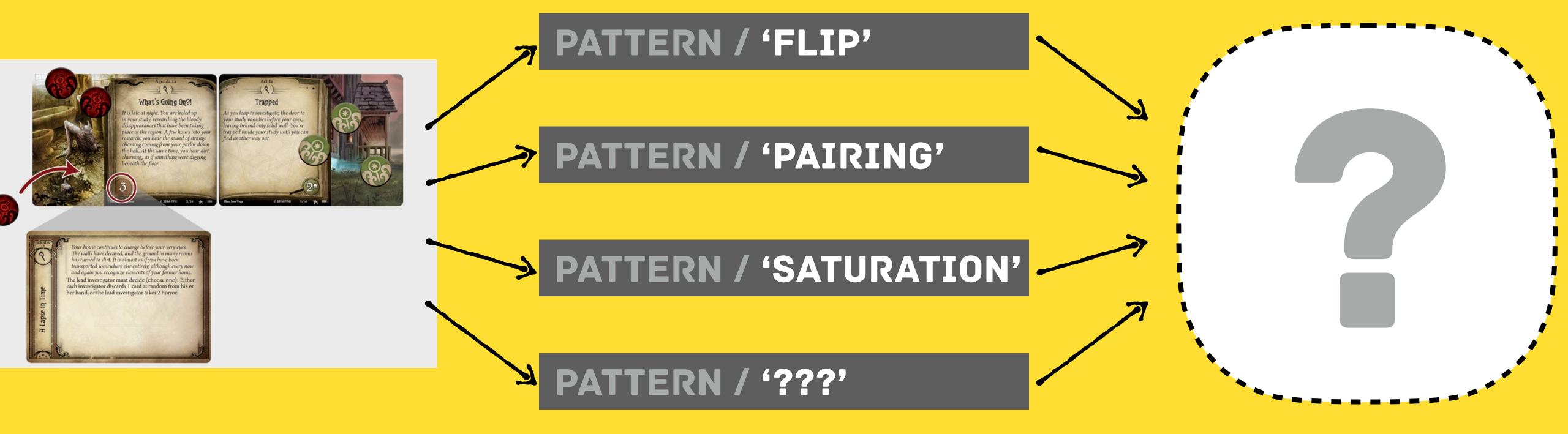












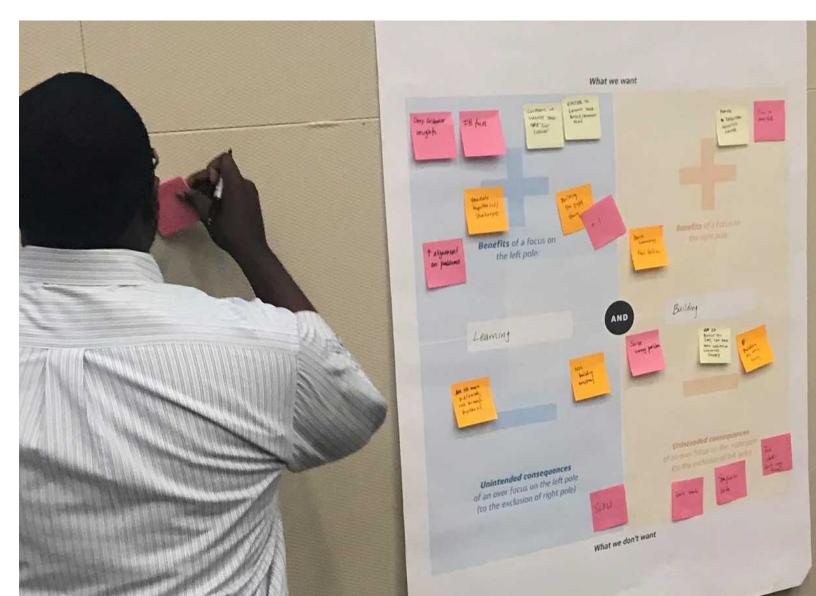
**Games**Work Context

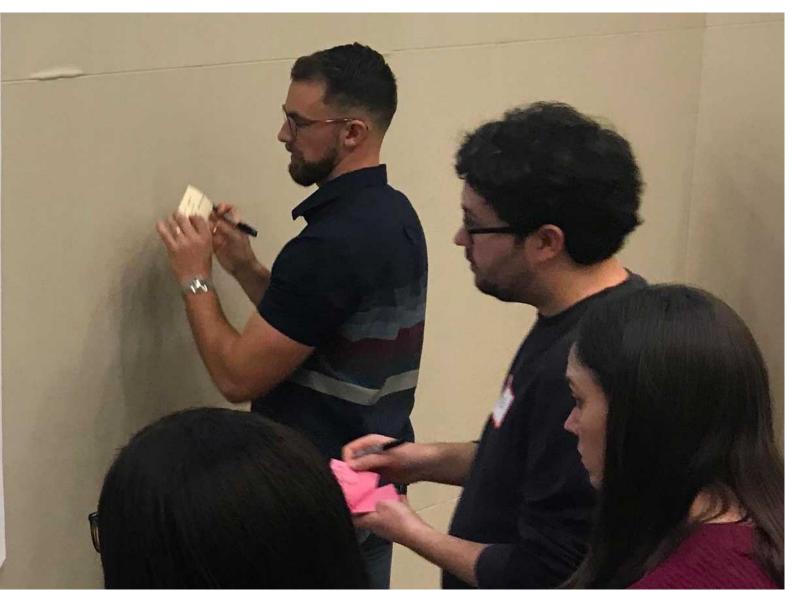




CARD DECKS
TILES
CANVASES
MAPS
MODELS
REFLECTION QUESTIONS
GAMES

'things to think with'





ANALOGIES

EXPLORABLE EXPLANATIONS

GAMEBOOKS

SIMULATIONS

DATA VISUALIZATIONS

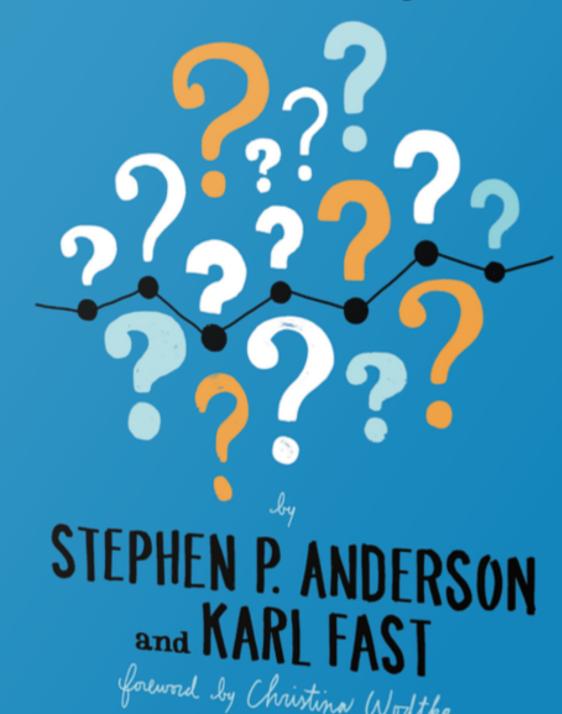
ETC.



When we bring ideas into the world (in a thoughtful, structured way) we extend our ability to think about and discuss complex topics.

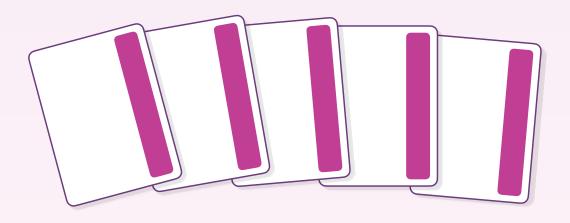
### FIGURE IT OUT

Getting from Information to Understanding



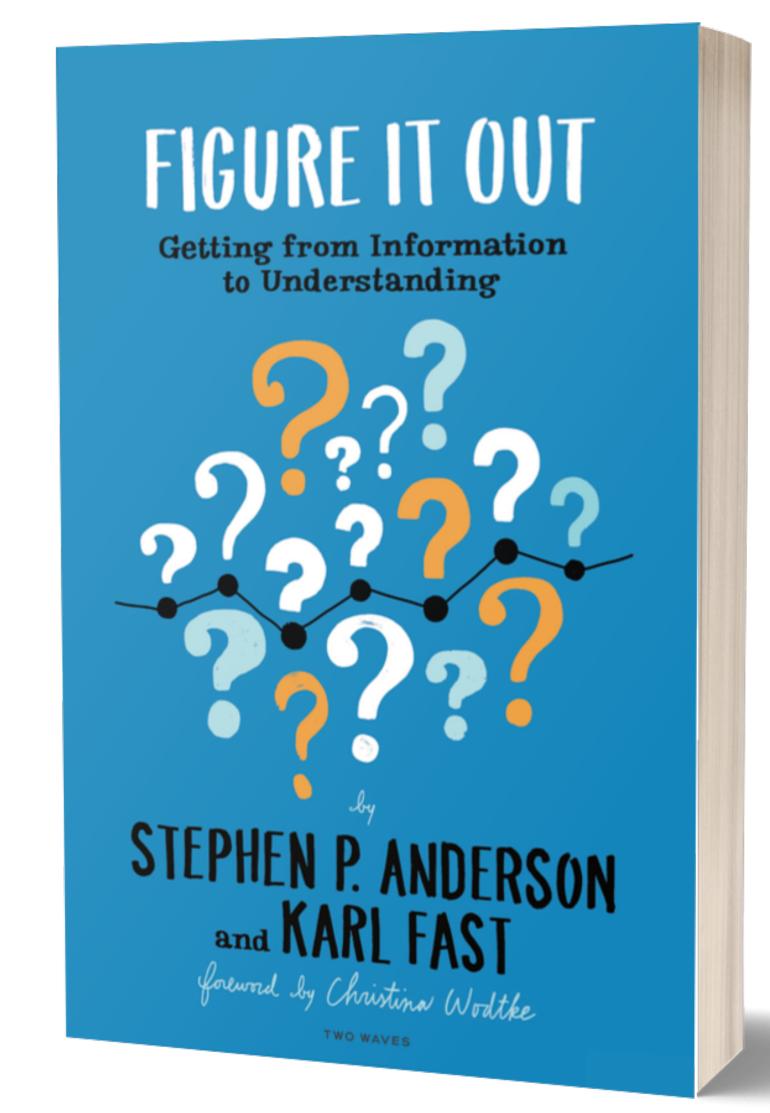
TWO WAVES





A community of working professionals who share and create 'things to think with'.

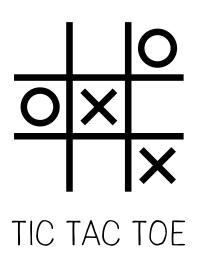
TheMightyMindsClub.com





### HOW DO WE ASSESS A SITUATION AND MAKE DECISIONS?

### Cynefin









CLEAR

COMPLICATED

COMPLEX

CHAOTIC

SENSE CATEGORIZE RESPOND

SENSE ANALYZE RESPOND PROBE
SENSE
RESPOND

ACT
SENSE
RESPOND

-ORDERED

UNORDERED.

HOW DO I REFLECT ON PURPOSE AND CAREER GOALS?

### "What's Worth Doing" Cards

"I'm trying to figure out what's next for me. What I've been doing no longer excites me. But, I'm not sure what I want to do.

### 



### What's Worth Doing? Cards for your next step.

What's Worth Doing is a deck of cards created by friends from Stanford, MIT, IDEO, and Experience Institute to help you with life's big and small decisions.

The tool uses a simple hexagon shape to help you create a mind map around three main questions: (1)
What challenges do you want to address? (2) What kind of people do you enjoy working with? (3) What do you like to make?

You'll be challenged to sort through 85 cards quickly and then draw connections across your mind map to see what types of interesting and meaningful projects you might do next.

The cards help you navigate transitions and dive deeper into your work by designing small projects that allow you to learn, grow, and change your life, work, or world for the better.

