VARIETY

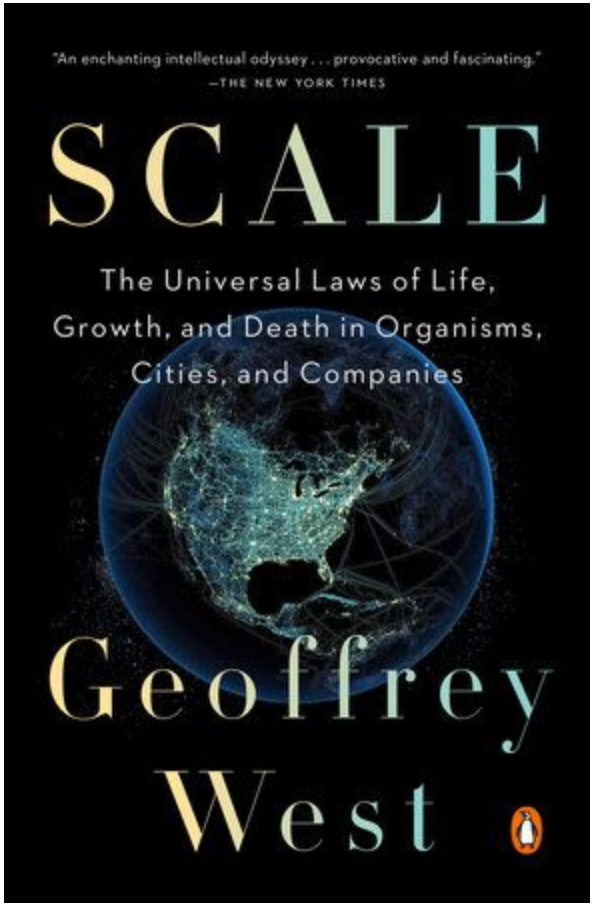
The Spice of Life and the Secret to Scale

@catswetel #qconlondon

DISCLAIMER

What is scale?

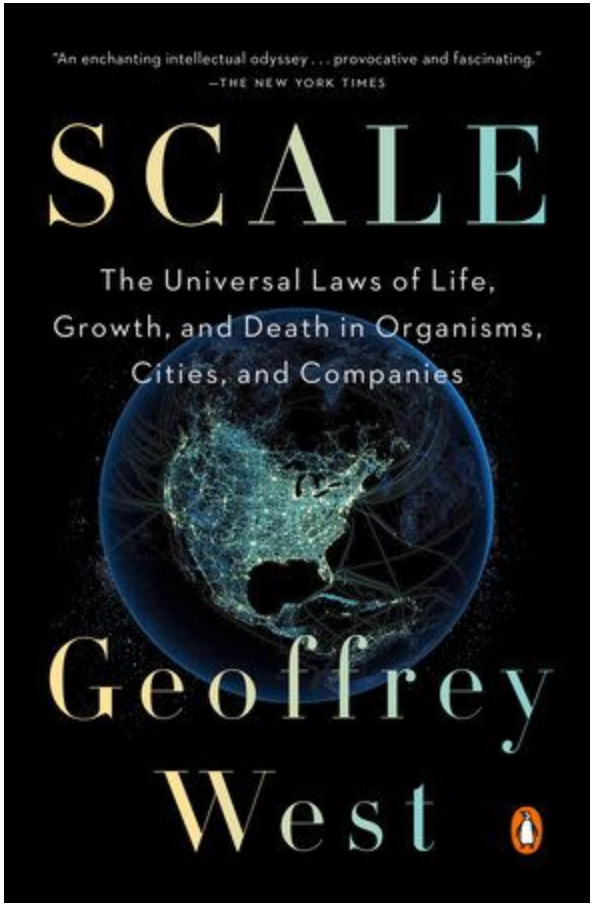
“How things change with size”



“How a system responds when its size changes”

Santa Fe
Institute

“How things change with size”



“How a system responds when it's size changes”

Why are we trying to scale?

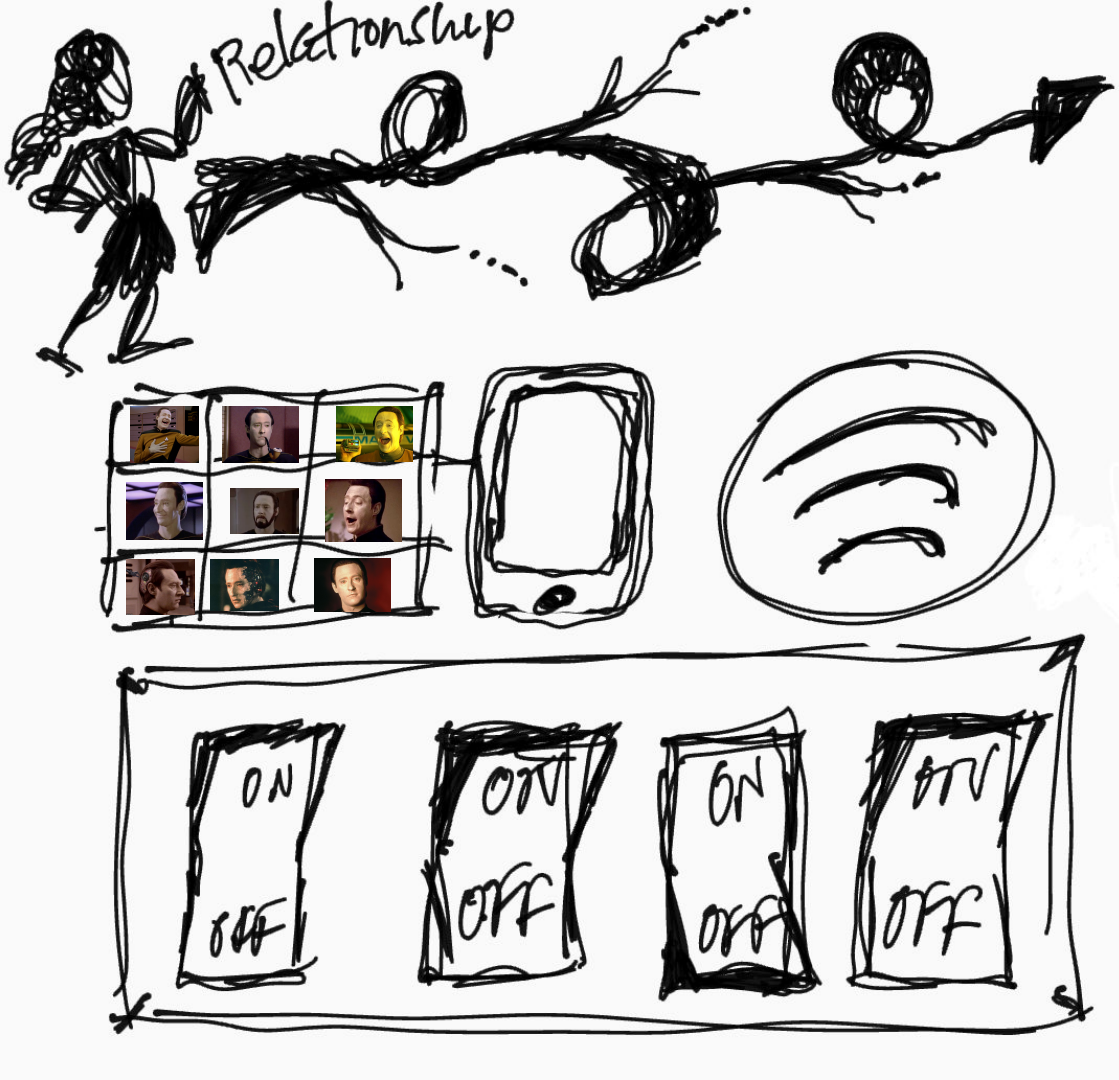
Not a rhetorical question

Why are we (on the culture track) trying to scale?

What are we (on the culture track) seeking to optimize?

idea!

idea! vs ecosystem



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Unit Cost

Engagement

Unit Cost

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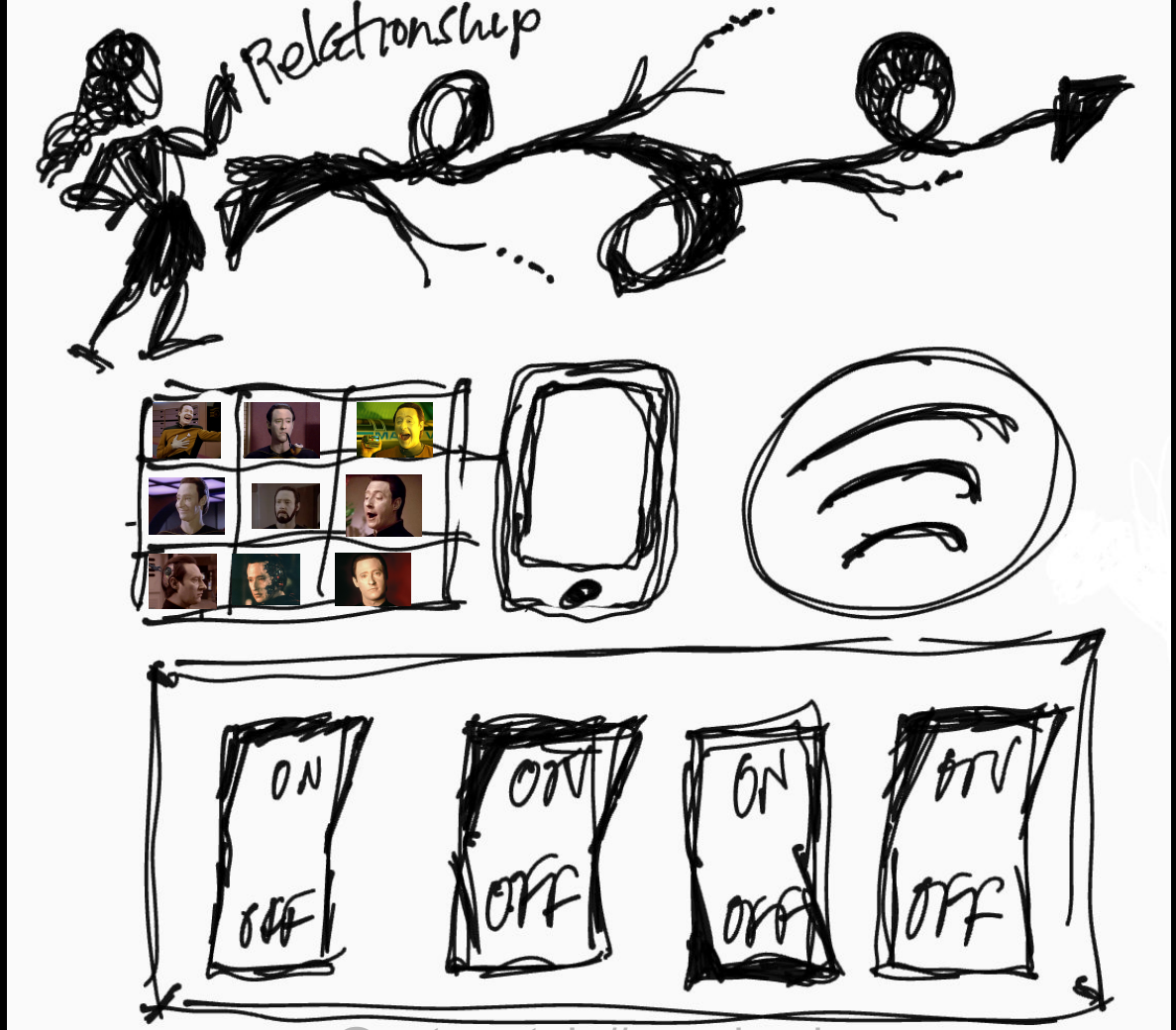
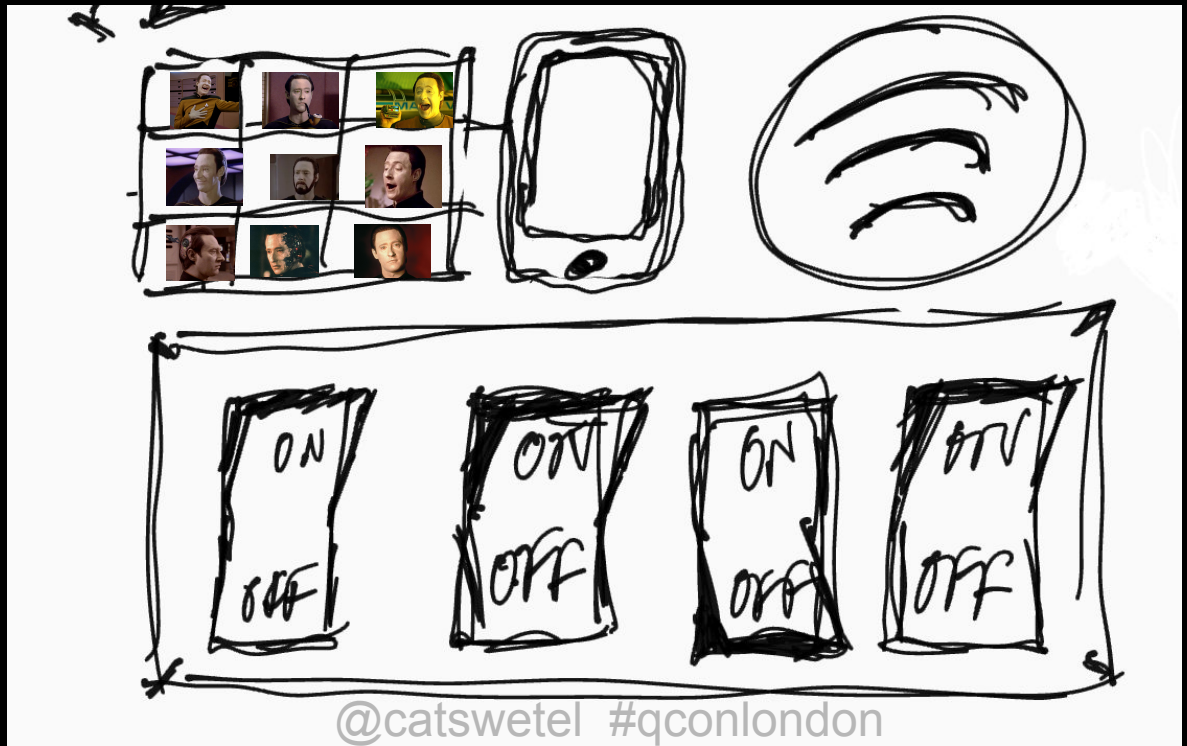


Differentiation

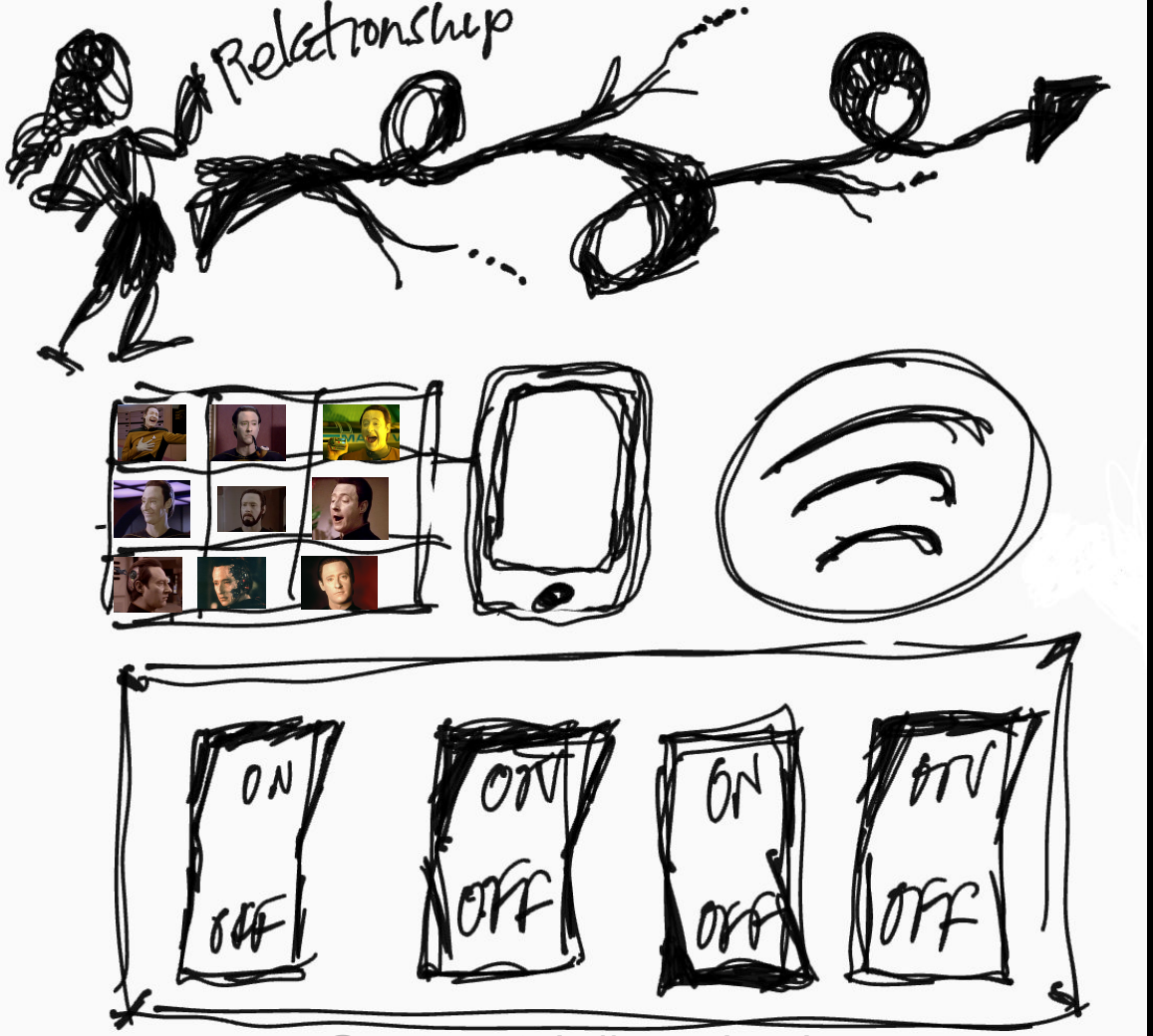
Engagement

Unit Cost



Demand Side Economy of Scale

Supply Side Economy of Scale



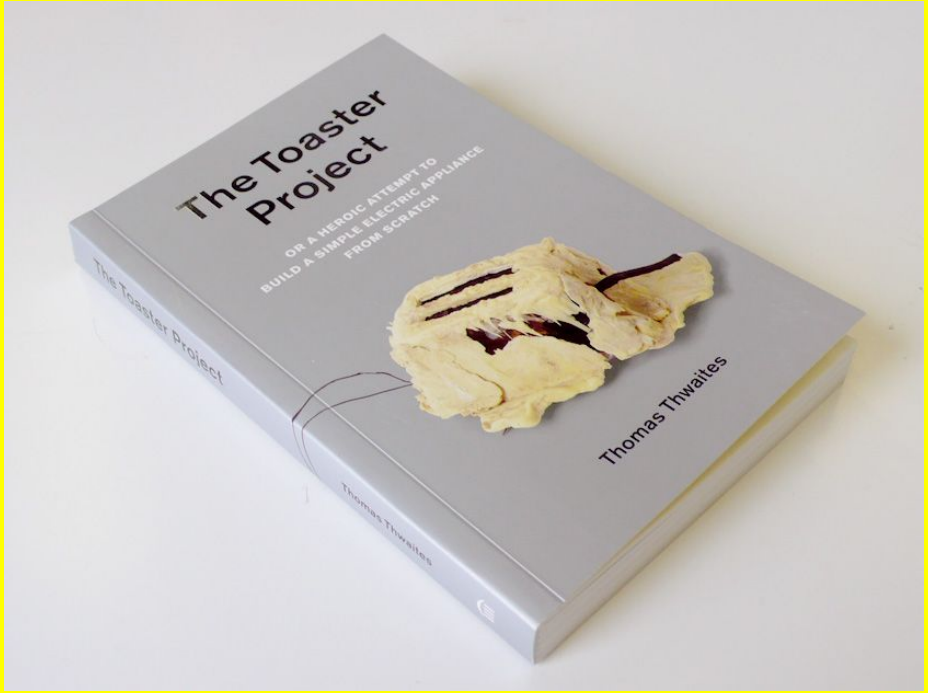
High Variety

Low Variety

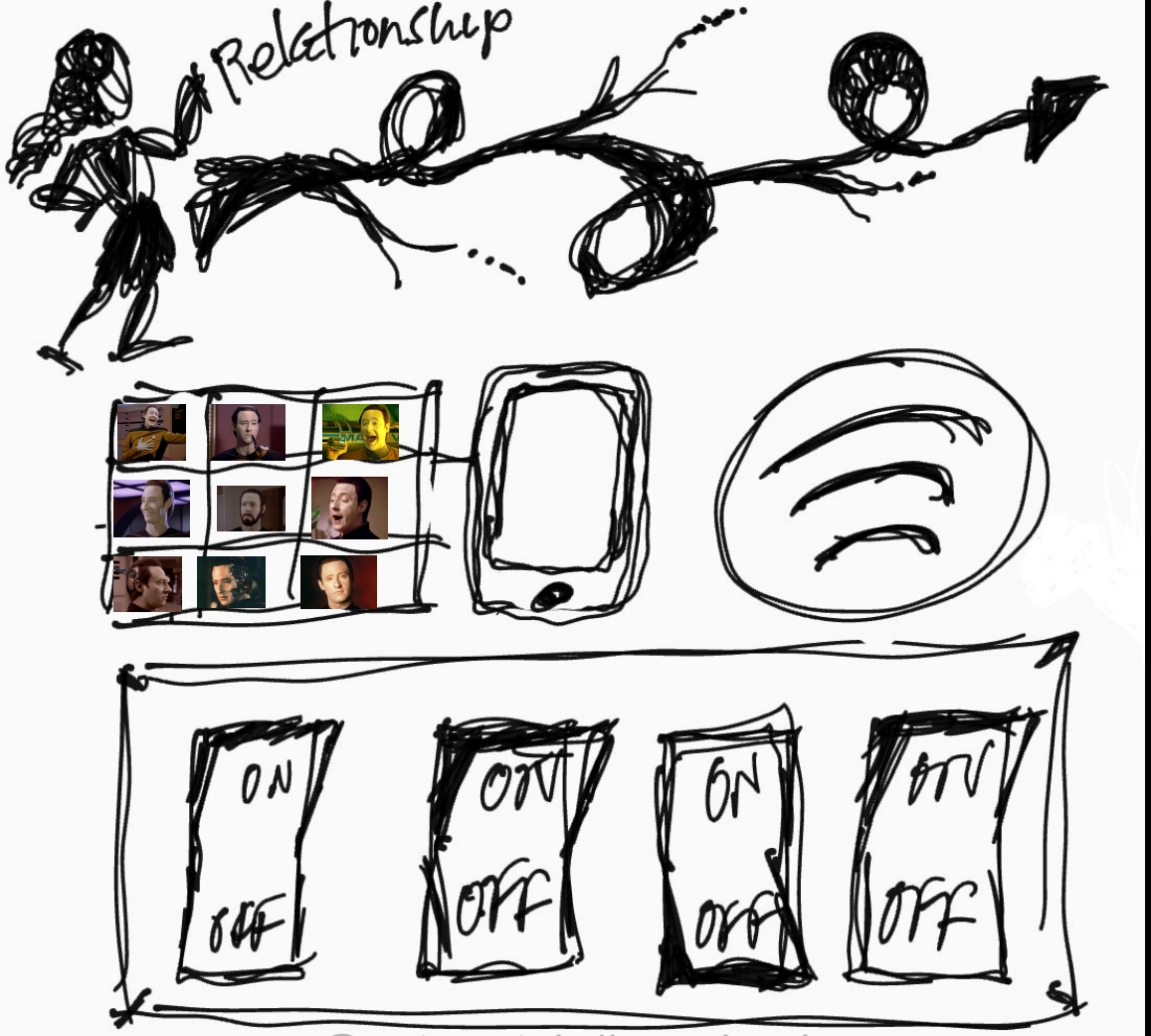
High Variety

enabled by...

Low Variety



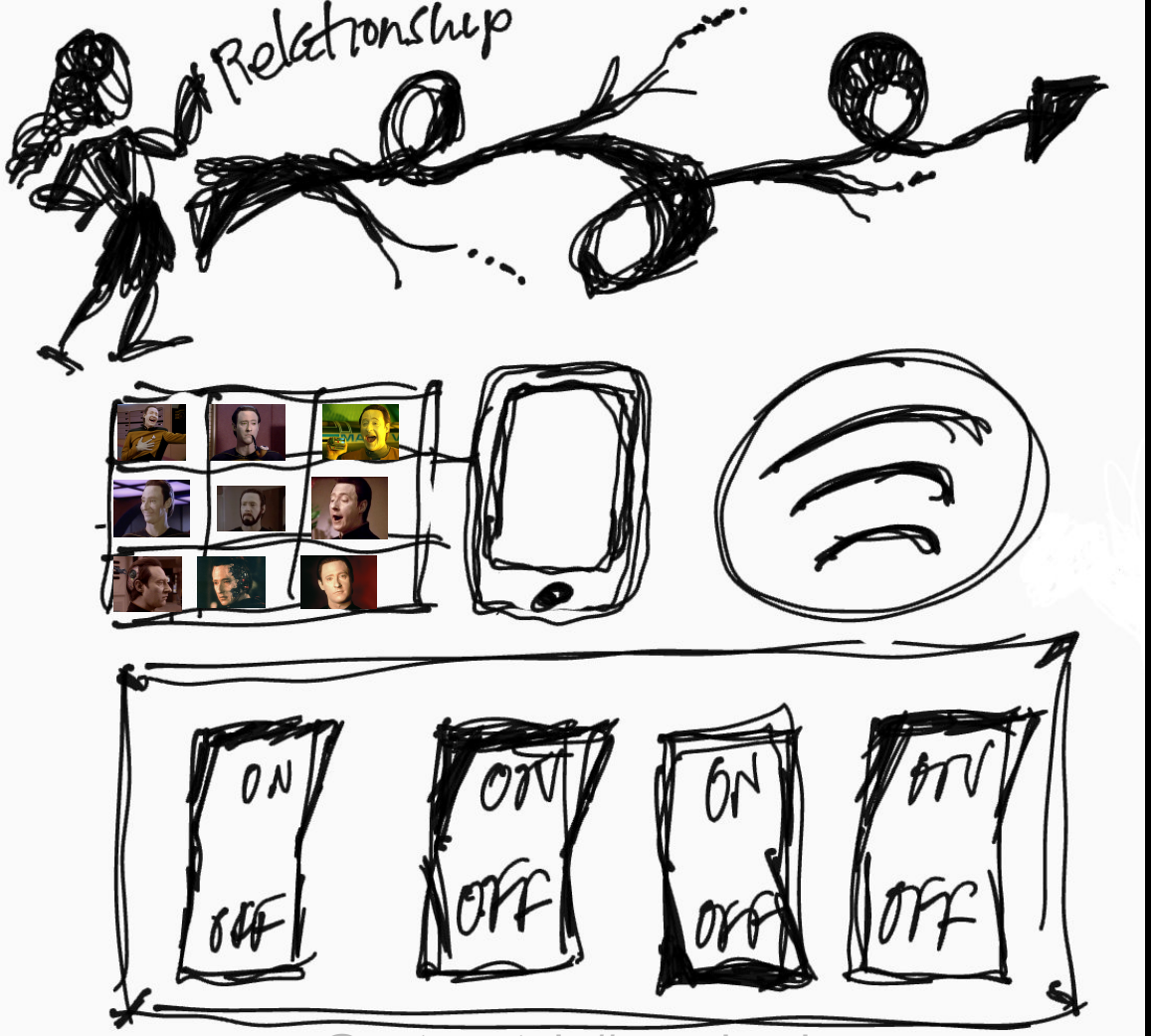
Never make a toaster from scratch.



High Variety

enabled by...

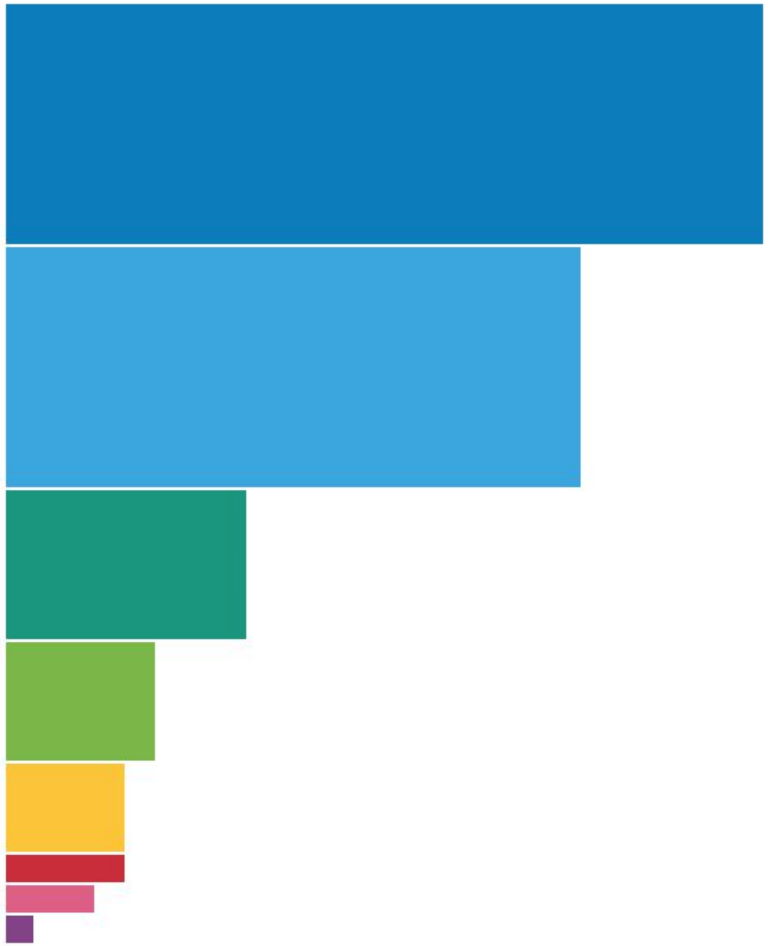
Low Variety



High Variety

enabled by...

Low Variety

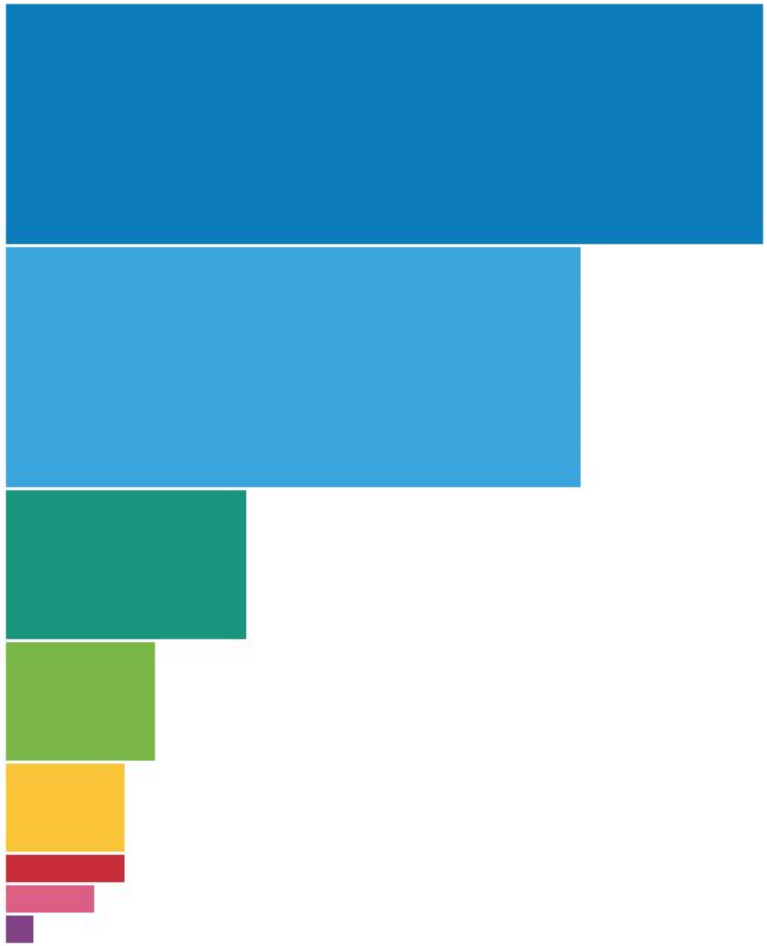


Corporate Strategy

Business Unit Strategy

Sprint Goal
Test First, etc.

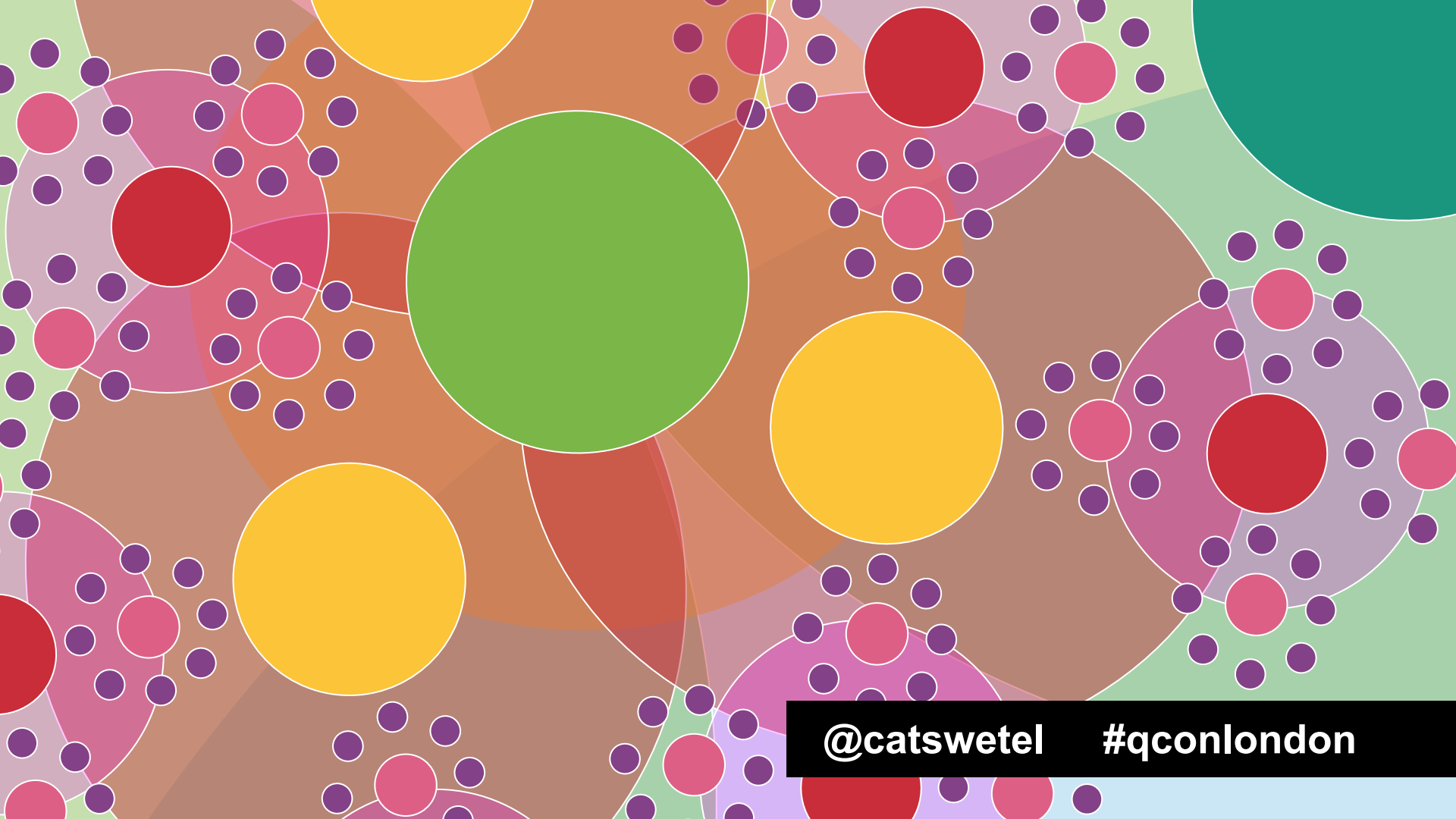
Requisite Organization Elliott Jaques



Requisite Organization Elliott Jaques

Low Variety

High Variety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“The larger the variety of actions available to a system, the larger variety of the perturbations it is able to compensate.”

Ashby’s Law of Requisite Variety

“The larger the variety of **actions** available to a system, the larger variety of the perturbations it is able to compensate.”

Ashby’s Law of Requisite Variety

What actions are available to a system?

A question only you can answer

Reality & Facts

Selected Reality

Reality & Facts

Interpreted Reality

Selected Reality

Reality & Facts

Assumptions

Interpreted Reality

Selected Reality

Reality & Facts

Conclusions

Assumptions

Interpreted Reality

Selected Reality

Reality & Facts

Beliefs

Conclusions

Assumptions

Interpreted Reality

Selected Reality

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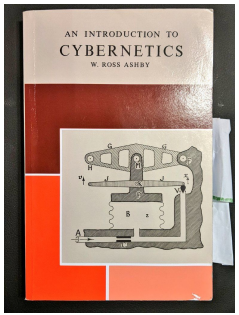
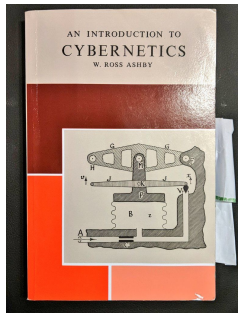
Ladder of Inference

Chris Argyris

“The larger the variety of actions available to a system, the larger variety of the perturbations it is able to compensate.”



Ashby’s Law of Requisite Variety



Actions

Beliefs

Conclusions

Assumptions

Interpreted Reality

Selected Reality

circumstances ---> **Reality & Facts**

Actions

Beliefs

Conclusions

Assumptions

Interpreted Reality

Selected Reality

Do your intents / OKRs contain rules, habits, and freedoms?

Reality & Facts

Actions

Beliefs

Conclusions

Assumptions

Interpreted Reality

Selected Reality

Reality & Facts

Do your intents / OKRs contain rules, habits, and freedoms?

...and are those intents/OKRs refreshed at a regular cadence?

Actions

Beliefs

Conclusions

Assumptions

Are your intents / OKRs shared (horizontally and vertically)?

Interpreted Reality

Selected Reality

Reality & Facts

Strategy deployment?

Intent

What I want right now

How will we know when we've arrived?

Intent

Reason for change

What I want right now

What will happen if we don’t get it

Intent	What I want right now
Reason for change	What will happen if we don’t get it
Current state	**What I notice**

Intent	What I want right now
Reason for change	What will happen if we don’t get it
Current state	What I notice
Rules, habits, and constraints	**Define the playing field**

Intent	What I want right now
Reason for change	What will happen if we don’t get it
Current state	What I notice
Rules, habits, and constraints	Define the playing field
Leading indicators	**Stories and metrics**

Intent	**What I want right now**
Reason for change	**What will happen if we don’t get it**
Current state	**What I notice**
Rules, habits, and constraints	**Define the playing field**
Leading indicators	**Stories and metrics**

Episode Name

A3?

TITLE:

DATE:

OWNER:

background

current situation

experiment

analysis

results

hypothesis

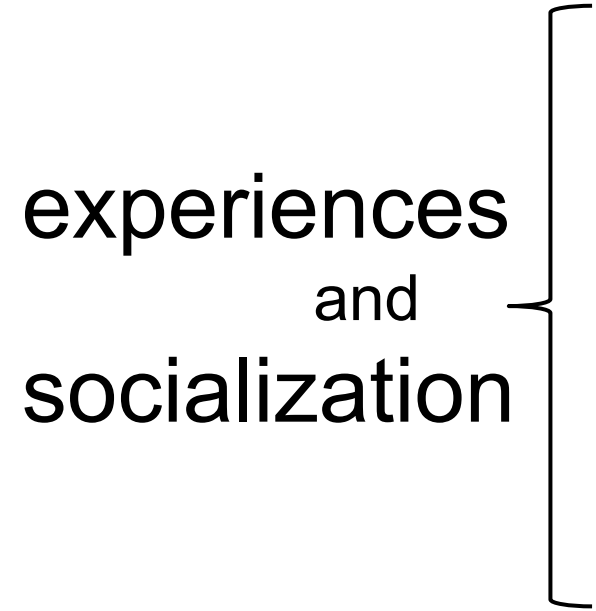
insights

Account **of**

then

Account **for**

Researching Your Own Practice: The Discipline of Noticing
by John Mason



Actions

Beliefs

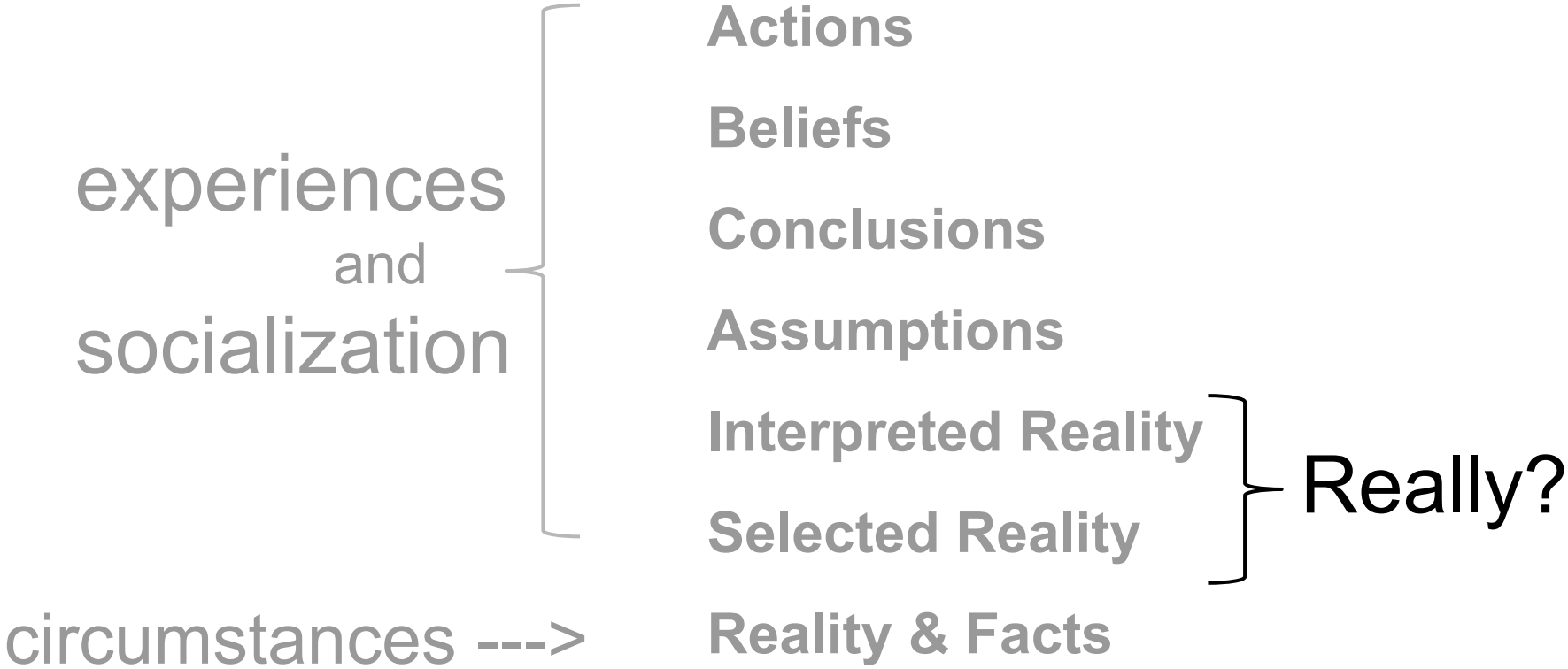
Conclusions

Assumptions

Interpreted Reality

Selected Reality

circumstances ---> Reality & Facts


experiences
and
socialization
Actions
Beliefs
Conclusions
Assumptions
Interpreted Reality
Selected Reality
Really?
circumstances --->
Reality & Facts

Actions

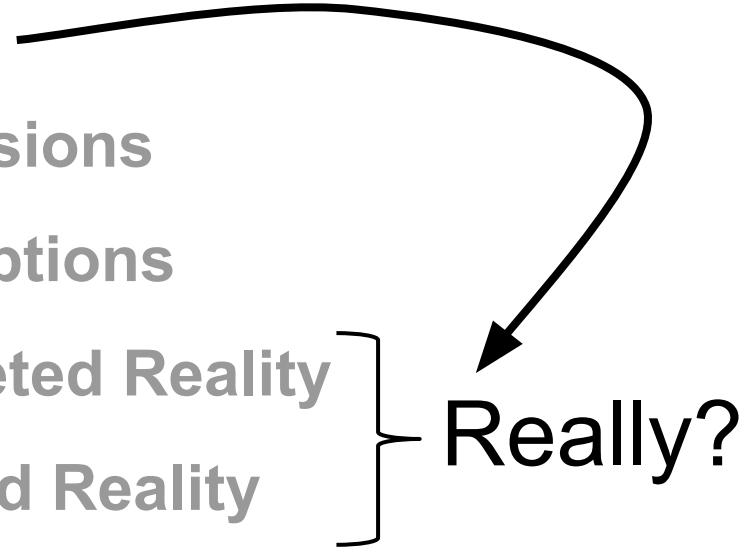
Beliefs

Conclusions

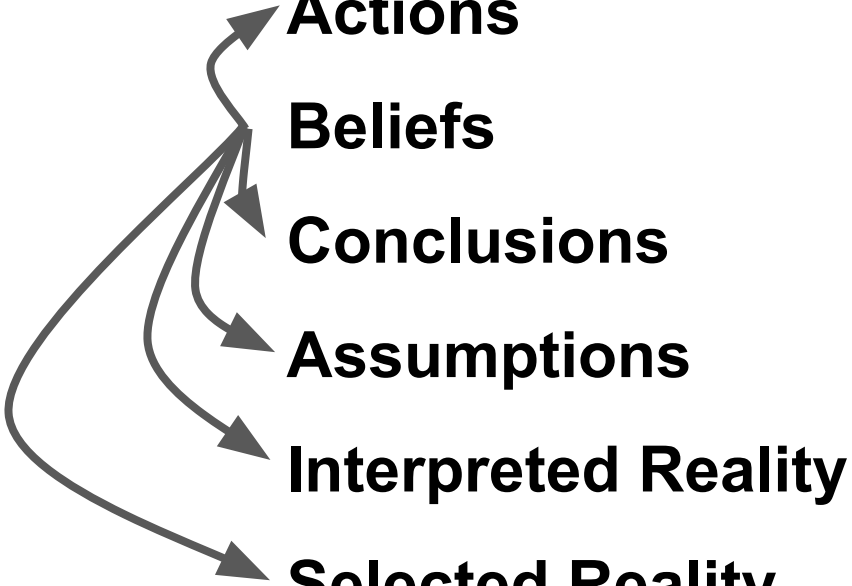
Assumptions

Interpreted Reality

Selected Reality



Reality & Facts


Actions
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Reality & Facts

“The larger the variety of actions available to a system, the larger variety of the perturbations it is able to compensate.”

Ashby’s Law of Requisite Variety

If we want a variety of actions available, we need a variety of people from a variety of circumstances with a variety of experiences.

“Organizations which design systems ... are constrained to produce designs which are copies of the communication structures of these organizations”

Conway’s Law

What if our thinking patterns manifest in our systems? What if our users end up with the same thinking patterns?

With great power comes great responsibility.

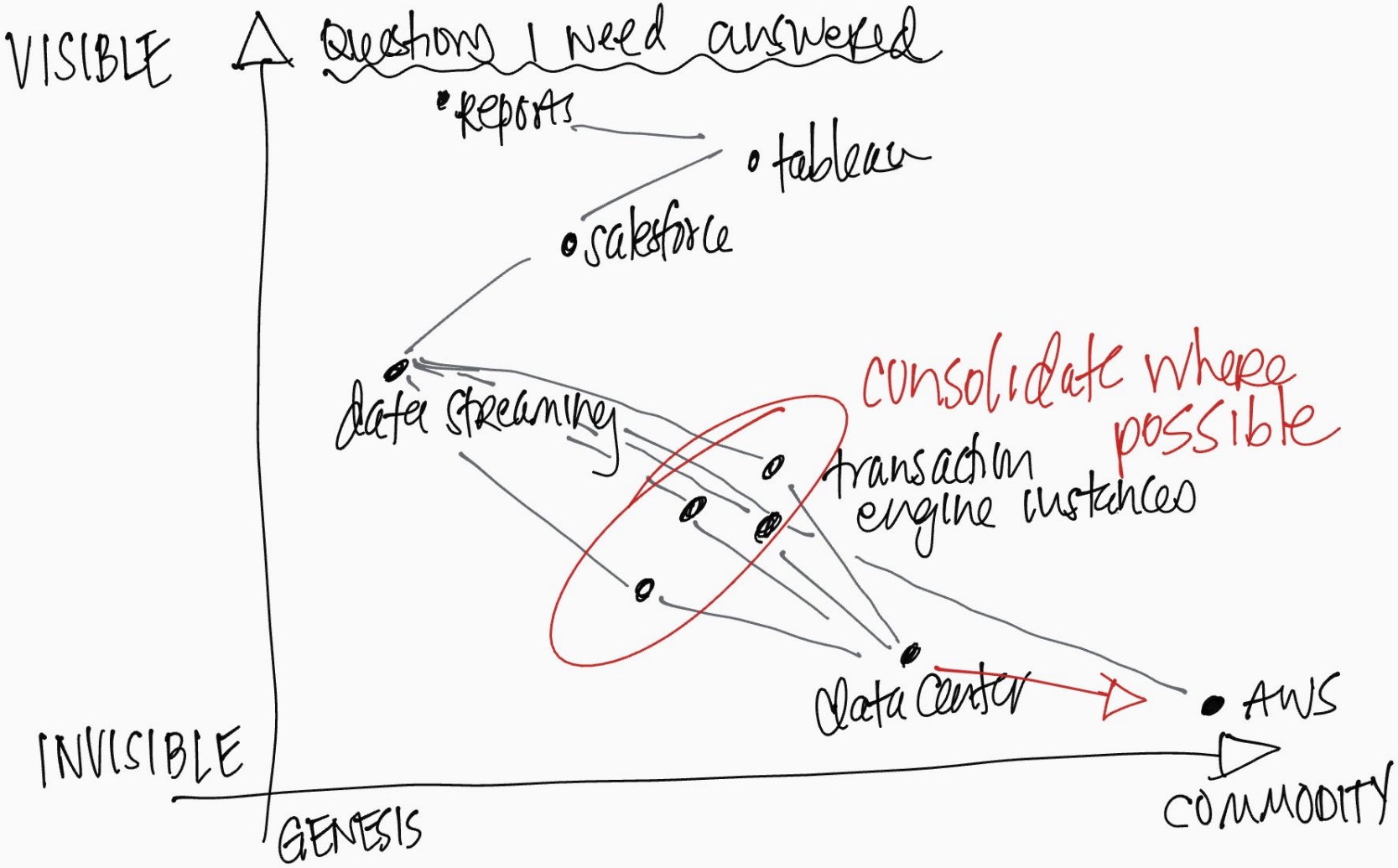
I am catswetel everywhere.
I like talking to people.

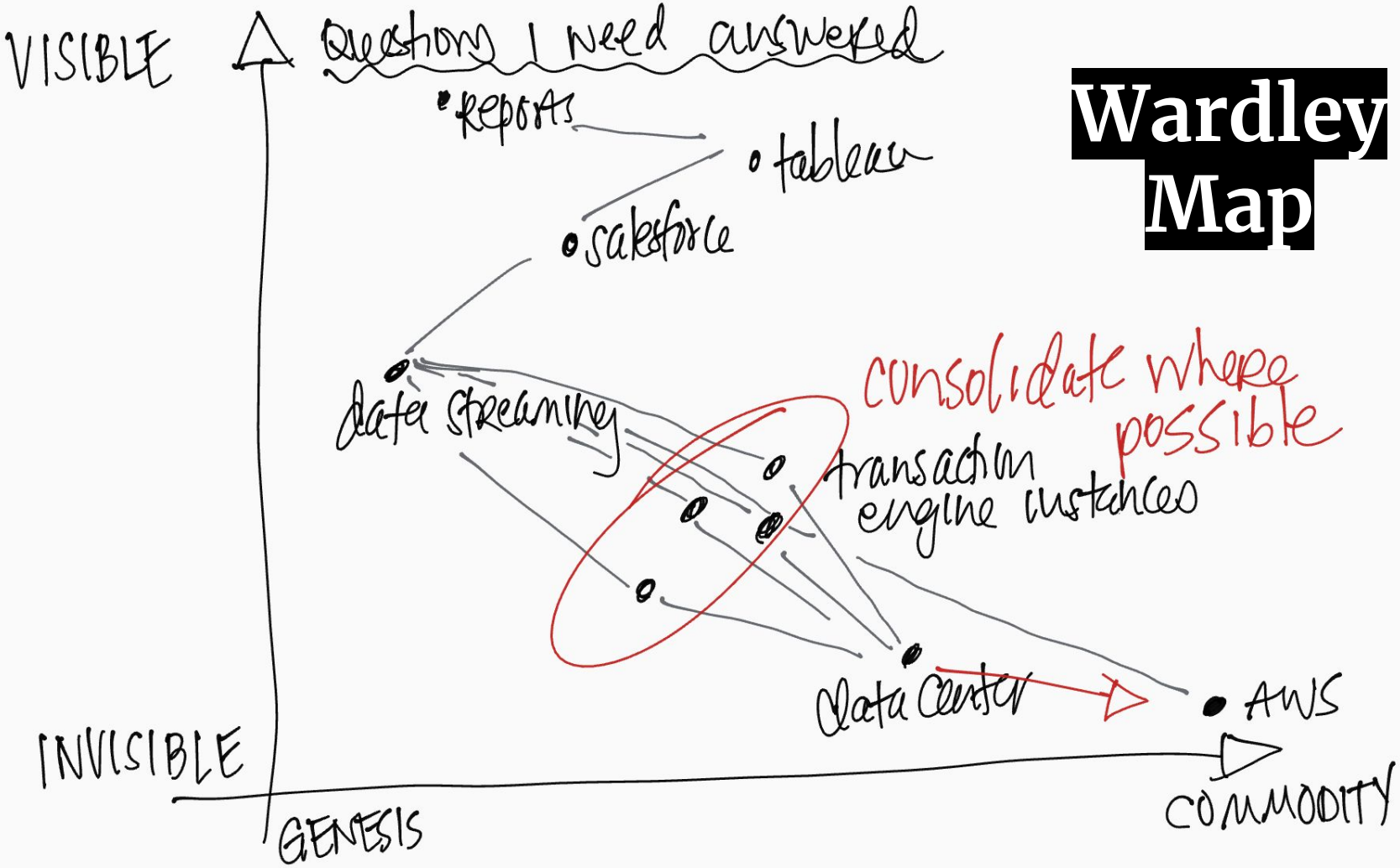
THE FOLLOWING SLIDES WERE NOT PRESENTED! THEY CAME UP IN THE QUESTIONS!

“Development Teams are cross-functional, with all the skills as a team necessary to create a product Increment”

The Scrum Guide

What skills *should* be necessary?


VISIBLE
Questions I need answered
reports
tableau
salesforce
data streaming
consolidate where possible
transaction engine instances
data center
AWS
INVISIBLE
GENESIS
COMMODITY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Wardley Map