Agile Nudge University Additional Resources

Expanded information, examples, and context for the minimally viable content presented in the May 2024 Agile Nudge University Bootcamp.

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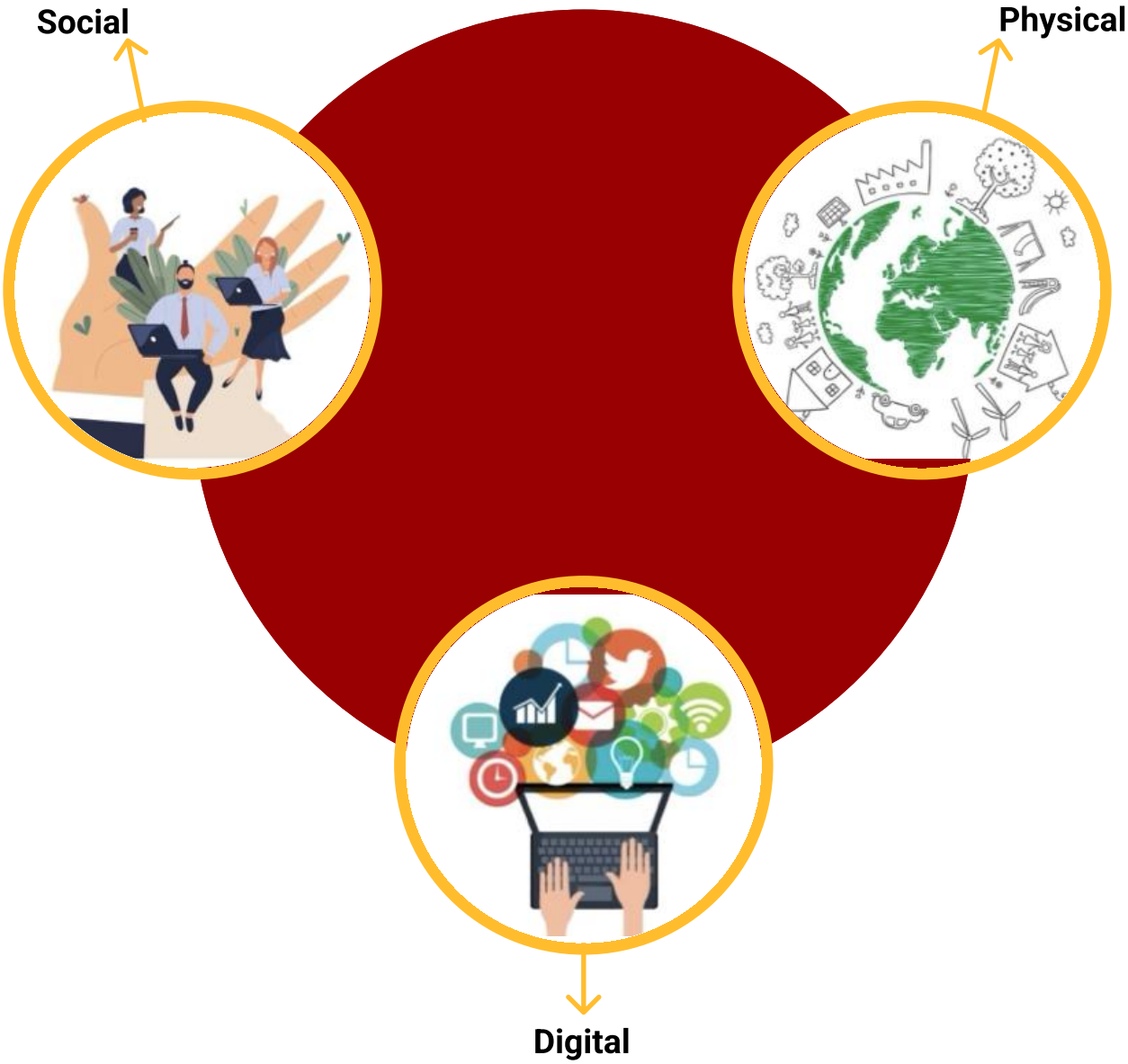
NUDGE

1.1 What is Nudge?

Architecting the social, physical and digital environment to facilitate certain behaviors without forbidding choice.



Richard H. Thaler and Cass R. Sunstein, 2008. Nudge.

1.2 Why Nudge?

To change the behavior of :

1 Yourself

2 A loved one

3 A group of individuals

1.3 Description of Nudge?

Nudges are designed by System 2 to leverage biases in System 1 to facilitate behavioral change. Nudges are effective if the targeted behavior is complex, infrequent, has no timely feedback.

1.4 Designing a Nudge?

Building Blocks for Nudge Design

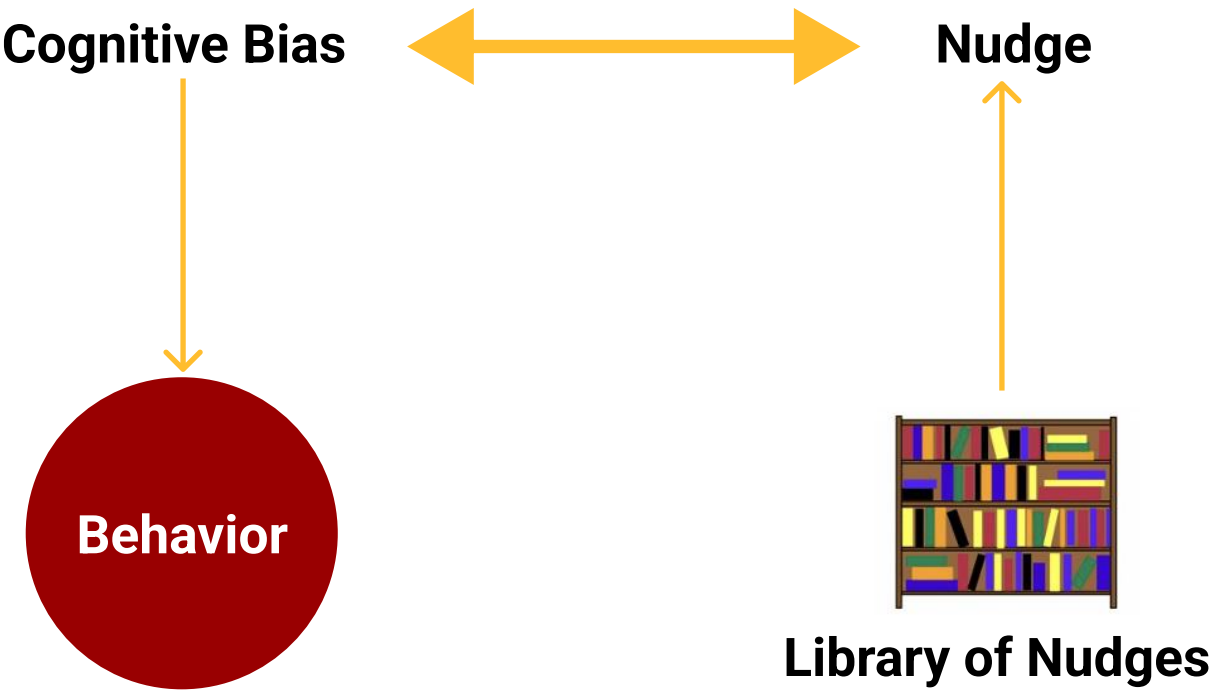
1 Mapping the Environment: Digital, Physical, Social

2 Search the Agile Nudge library for an existing nudge, or search the cognitive bias library (Agile Innovation.)

3 Run Sprint & Reflect

How to Nudge: Step-by-Step Process:

1.5 Nudge Library



Nudge Library

- Will contain evidence-based nudges gathered by:
  1. Reviewing the literature
  2. Discussions with colleagues
- Build and maintain the nudge library for the evidence-based nudge unit.
- If you don't have an evidence-based nudge, use Agile Innovation to design one!


1.6 MINDSPACE Checklist

This checklist is a quick way to know if your nudge is effective enough to use in a real world setting.

Each of the items represents a type of nudge or intervention.

Messenger We are heavily influenced by who delivers information.

1	2	3	4	5
Poor		Mediocre		Great

Incentives We are very loss adverse.

1	2	3	4	5
Poor		Mediocre		Great

Norms We are strongly impacted by our perception of what others are doing.

1	2	3	4	5
Poor		Mediocre		Great

Defaults We go with the flow and tend not to change preset options given.

1	2	3	4	5
Poor		Mediocre		Great

40-45= Grade A- Good to go!

35-39= Grade B- Proceed, but analyze the key elements that may be weak in MINDSPACE.

30-34= Grade C- Look for ways to improve the score in the areas that are weak in MINDSPACE.

25-29= Grade D- Make significant changes to adjust the MINDSPACE and re-score.

24 or less= Grade F- Make a new plan for the appropriate behavior change.

Salience We are drawn to information perceived to be novel and relevant.

1	2	3	4	5
Poor		Mediocre		Great

Priming We are impacted subconsciously by environmental cues.

1	2	3	4	5
Poor		Mediocre		Great

Affect We go with our gut feelings; our first; Emotional reaction.

1	2	3	4	5
Poor		Mediocre		Great

Commitments We seek to follow through on our public promises.

1	2	3	4	5
Poor		Mediocre		Great

Ego We want to feel good about ourselves.

1	2	3	4	5
Poor		Mediocre		Great

- Score each item 1-5 by checking the appropriate score.
- The higher the nudge score the more effective the nudge.
- Score items based on your own judgment.
- If your score is 35 or higher, your nudge is capable of affecting behavioral change.

1.7 EAST Checklist

The EAST checklist is a way to gauge the potential success of your new nudge prior to testing the new nudge in a series of real-world sprints.

The goal is to make your nudge Easy, Attractive, Social and Timely.

Easy Make the nudge easy for people to do; preset options; less effort; simple messages

1	2	3	4	5
Poor		Mediocre		Great

Social Title the nudge to something others are also doing; part of the norm; inspires commitment

1	2	3	4	5
Poor		Mediocre		Great

Attractive Make the nudge attractive; something people would want to do; entices

1	2	3	4	5
Poor		Mediocre		Great

Timely Nudge at the most opportune time for receptiveness; immediate costs or benefits

1	2	3	4	5
Poor		Mediocre		Great

- For each of the following four items, please use your own judgment to score your nudge compatibility with each item from 1-5.
- Sum the scores.
- The higher the total score, the more likely your nudge will be successful.
- If you score 15 or higher, your nudge has a good probability of making a behavioral change.

1.8 Example of Nudge

Etiquette-Based Medicine: Having good manners and behaviors when communicating with patients

- Beneficial for physician-patient relationship
- Example: physicians sitting at the bedside of a patient

Nudge: Attempt to predictably influence an individual's judgment, choice, or behavior by targeting subconscious routines and biases present in decision making.

Goal: Utilizing choice architecture to affect physicians' behaviors and improve physician-patient relationships.

Effect of chair placement on physicians' behavior and patients' satisfaction: randomized deception trial

thebmj

Iyer, R., Park, D., Kim, J., Newman, C., Young, A., & Sumarsono, A. (2023). Effect of chair placement on physicians' behavior and patients' satisfaction: randomized deception trial. *BMJ (Clinical research ed.)*, 383, e076309. https://doi.org/10.1136/bmj-2023-076309

Results

Overall: physicians sat in 43 of the 125 (34%) encounters. They spent an average of 9.8 minutes (standard deviation (SD) 12.5 minutes) sitting with the patient.

Experimental Group: 38/60 physicians sat at the bedside

Control Group: 5/60 physicians sat at the bedside

Statistical Analyses: odds ratio was 20.7 for a 95% confidence interval 7.2 to 59.4 and P<0.001

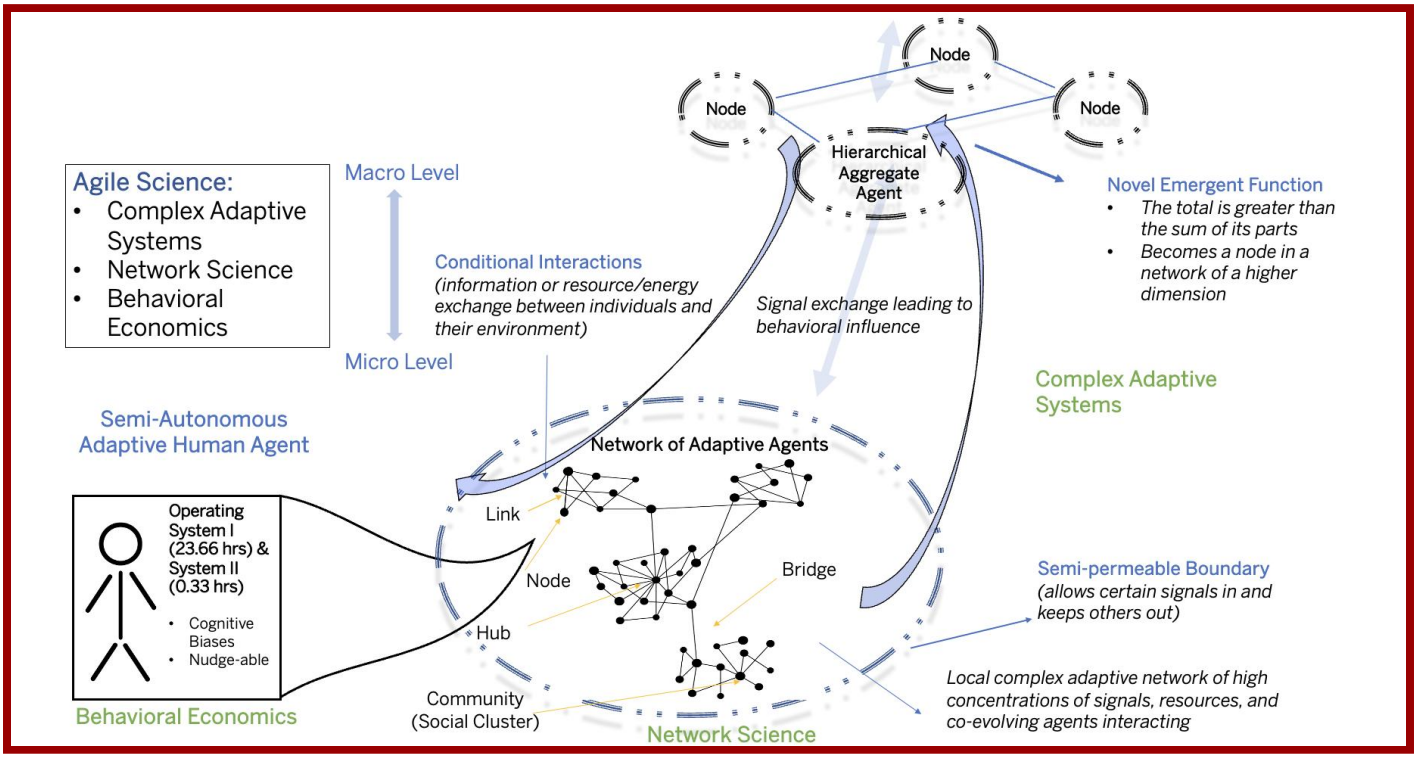
NNT Effect Size: 1.8 chairs needed to be placed for a hospitalist physician to sit

Patient Satisfaction: chair placement was associated with 3.9% improvement in TAISCH patient satisfaction (P=0.02) and 5.13 increase in HCAHPS score (P=0.04). Overall, 4.9% improvement in patients' satisfaction.

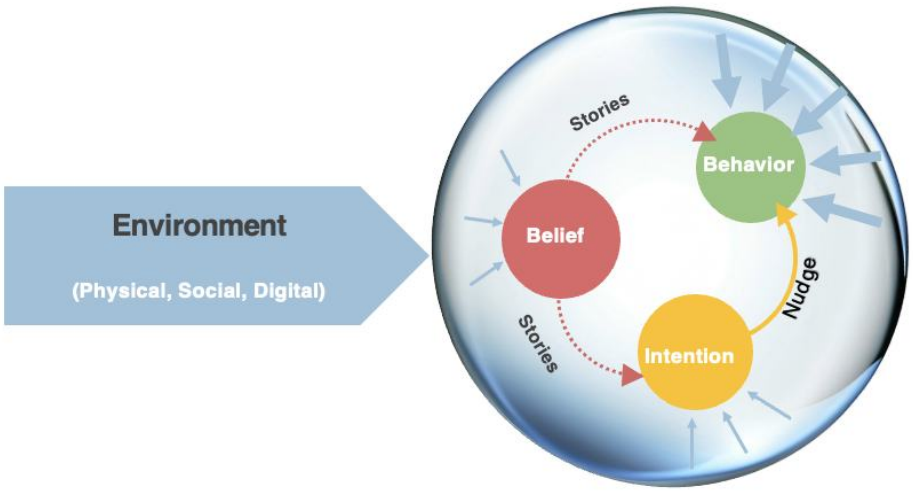
The Complex Adaptive Human Network

2.1 What is the Complex Adaptive Human Network?

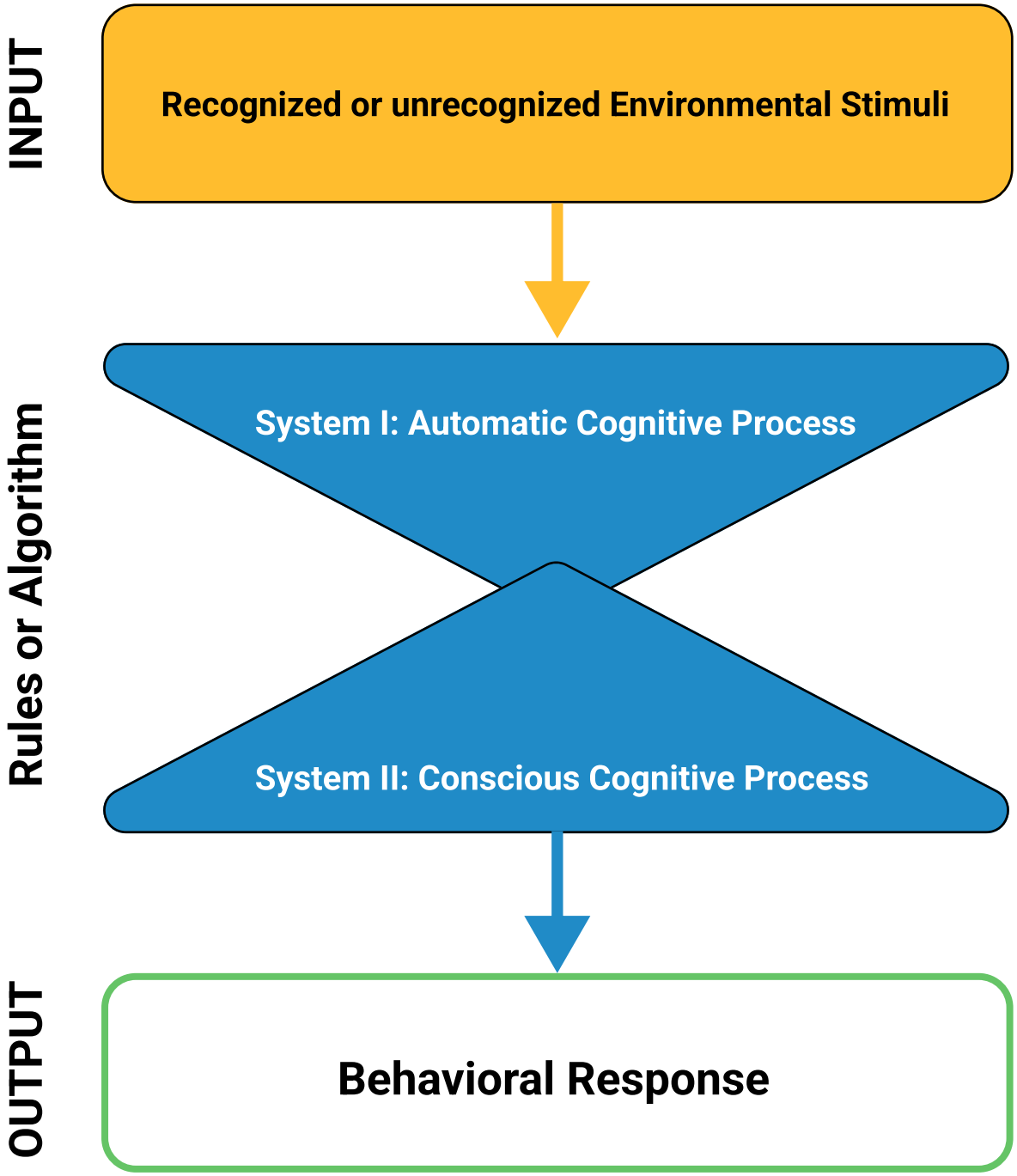
An open, dynamic, flexible network that is considered complex due to its composition of numerous interconnected, semi-autonomous, competing, and collaborating members. Individuals interact in a nonlinear way, and the number of connections an individual has does not follow a standard distribution.



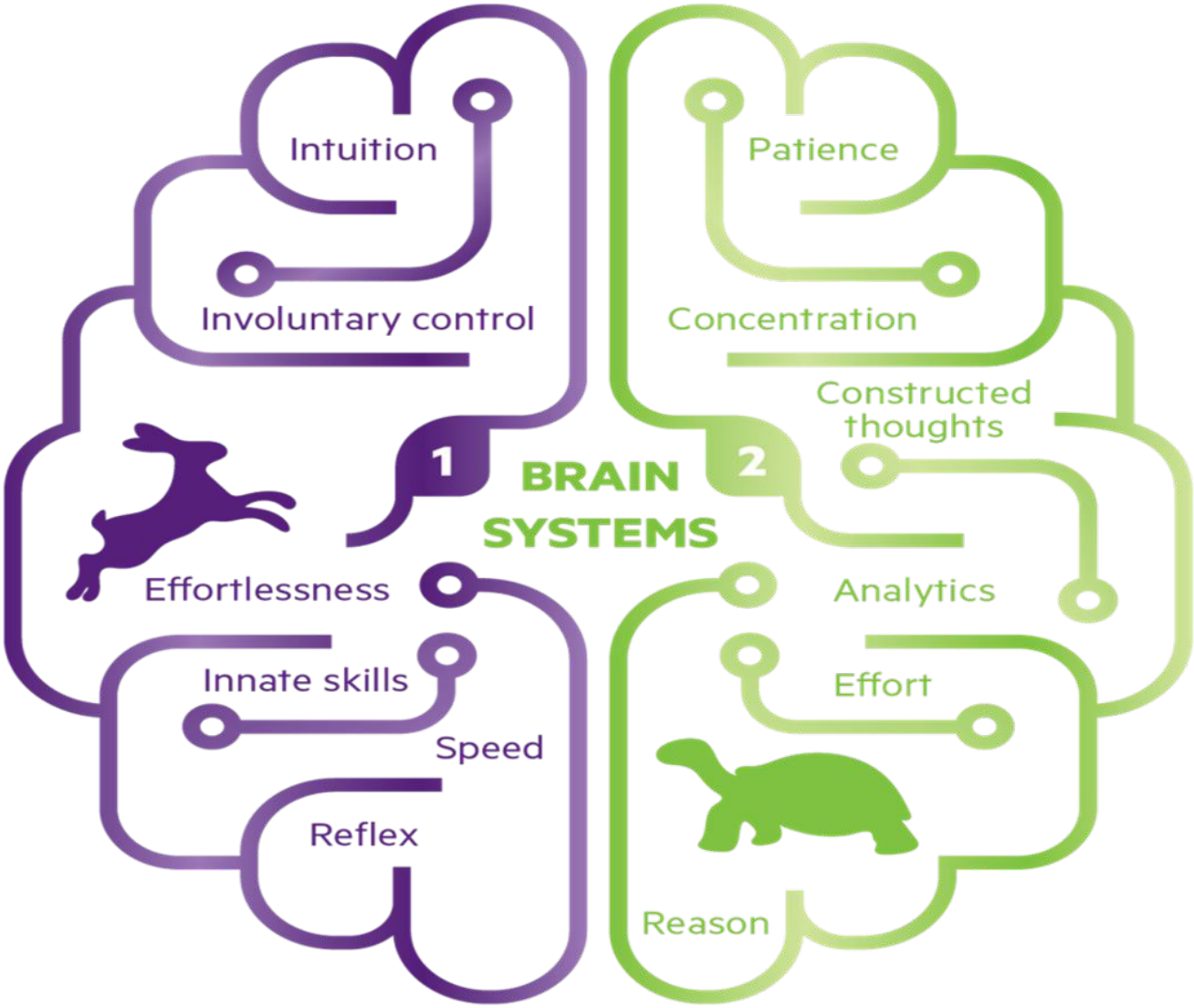
System 2 Develops tools, processes, and strategies to modify the environment to change beliefs, intentions, and behaviors



2.2 Social Cognitive Theories



2.3 Thinking Fast and Slow



2.4 The Cognitive Biases of System I

- **Too much information:**

So, we aggressively filter, and noise becomes signal.

- **Not enough Meaning:**

So, we fill in the gaps and signal becomes a story.

- **Need to act fast:**

So, we jump to conclusions and stories become decisions.

- **What should we remember?:**

We try to remember important bits and decisions inform our mental models of the world

Buster Benson: https://betterhumans.coach.me/cognitive-bias-cheat-sheet-55a472476b18

Too much Information

- We notice things that are already primed in memory or repeated often.
- Bizarre, funny, or visually striking things stick out more.
- We notice when something changed.
- We are drawn to details that confirm our own existing beliefs.
- We notice flaws in others more easily than flaws in ourselves.

Not Enough Meaning

- We find stories and patterns even in sparse data.
- We fill in characteristics from stereotypes, generalities, and prior histories whenever there are new specific instances or gaps in information.
- We imagine things and people we are familiar with or fond of as better than things and people we are not familiar with or fond of.
- We simplify probabilities and numbers to make them easier to think about.
- We think we know what others are thinking.
- We project our current mindset and assumptions onto the past and future.

Buster Benson: https://betterhumans.coach.me/cognitive-bias-cheat-sheet-55a472476b18

Need to Act Fast

- In order to act, we need to be confident in our ability to make an impact and to feel like what we do is important.
- In order to stay focus, we favor the immediate, relatable think in front of us over the delayed and distant.
- In order to get anything done, we are motivated to complete things that we have already invested time and energy in.
- In order to avoid mistakes, we are motivated to preserve our autonomy and status in a group, and to avoid irreversible decisions.
- We favor options that appear simple or that have more complete information over more complex, ambiguous options

What Should We Remember?

- We edit and reinforce some memories after the fact.
- We discard specifics to form generalities.
- We reduce events and lists to their key elements.
- We store memories differently based on how they were experiences.

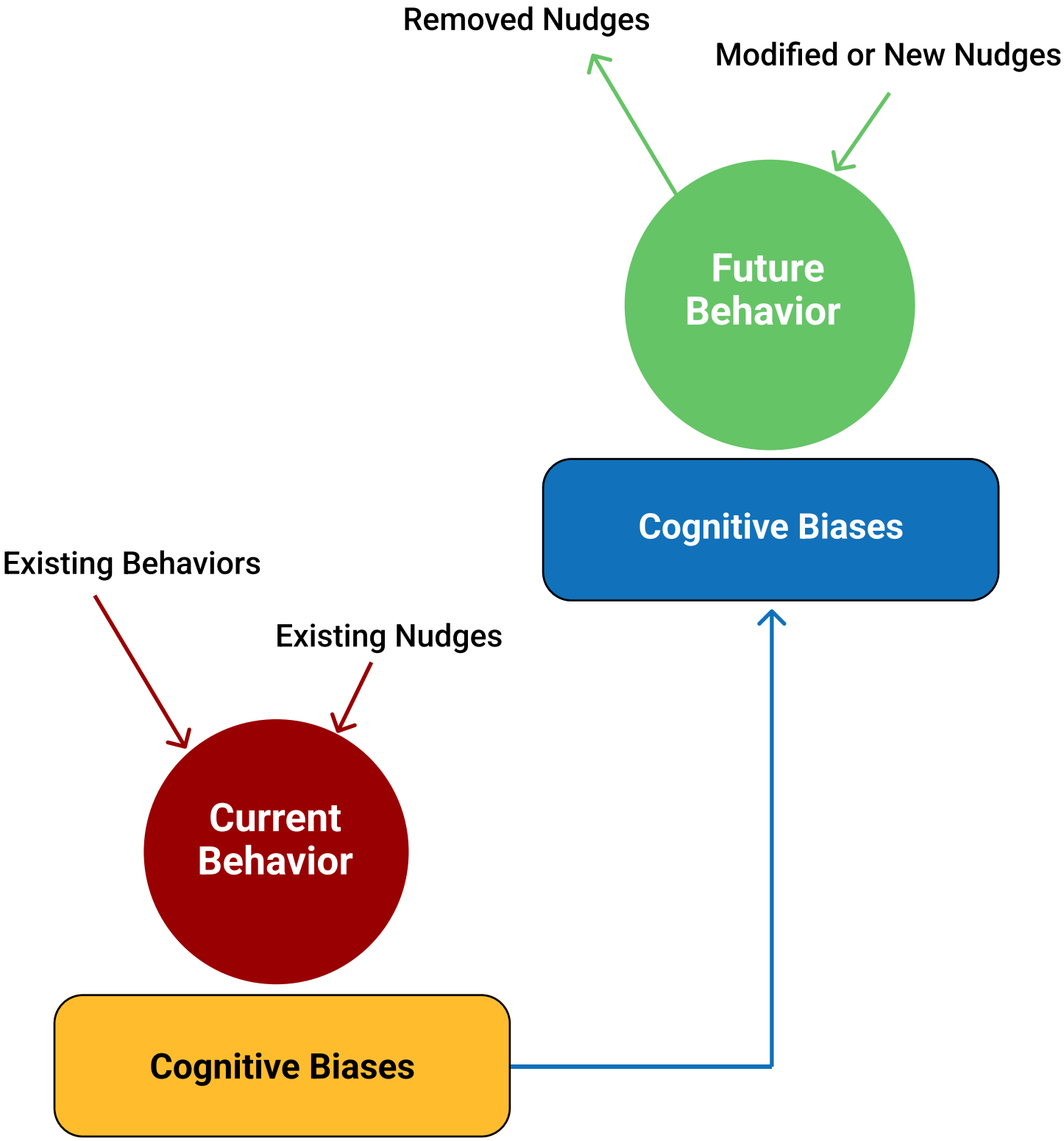
Buster Benson: https://betterhumans.coach.me/cognitive-bias-cheat-sheet-55a472476b18

2.5 System I vs System II

Low effort	Some effort	Much effort
Little awareness	Some Awareness	High Awareness
Low Motivation	Some Motivation	HIGH Motivation
$ Cheap	$$Some expenses	$$$$Very Expensive

Habit	**Choice**	**Education**
Mimicry	**Architecture**	**Coaching**
Heuristics	**Nudges**	
Intuition		

2.6 Mapping Cognitive Biases to Current and Ideal behavior



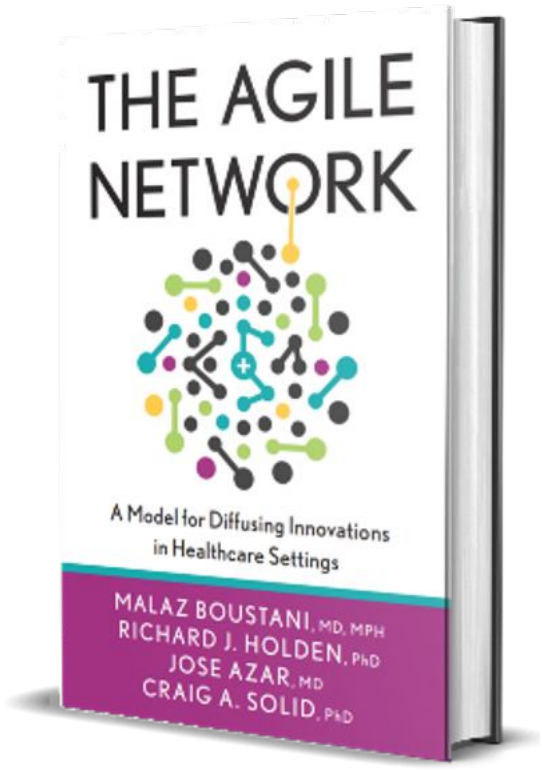
AGILE SCIENCE

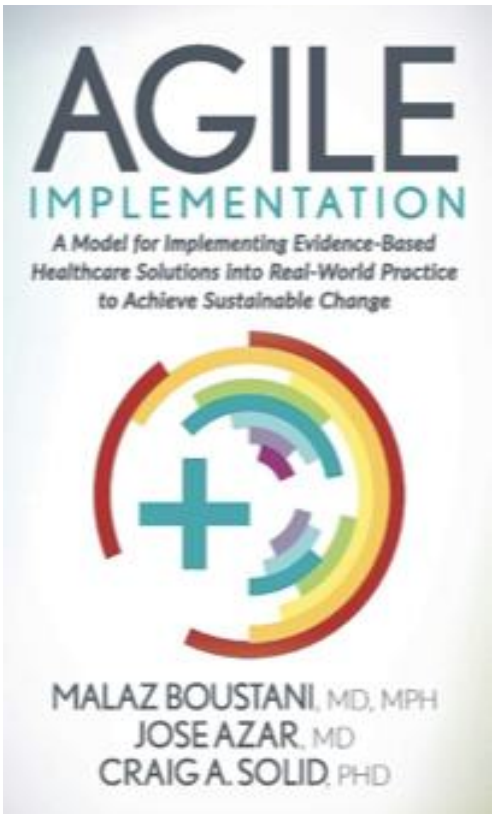
3.1 What is Agile Science?

Definition: Agile science is a rapidly evolving and adaptive process for knowledge discovery and acquisition within the dynamic, constantly changing and evolving real-world.

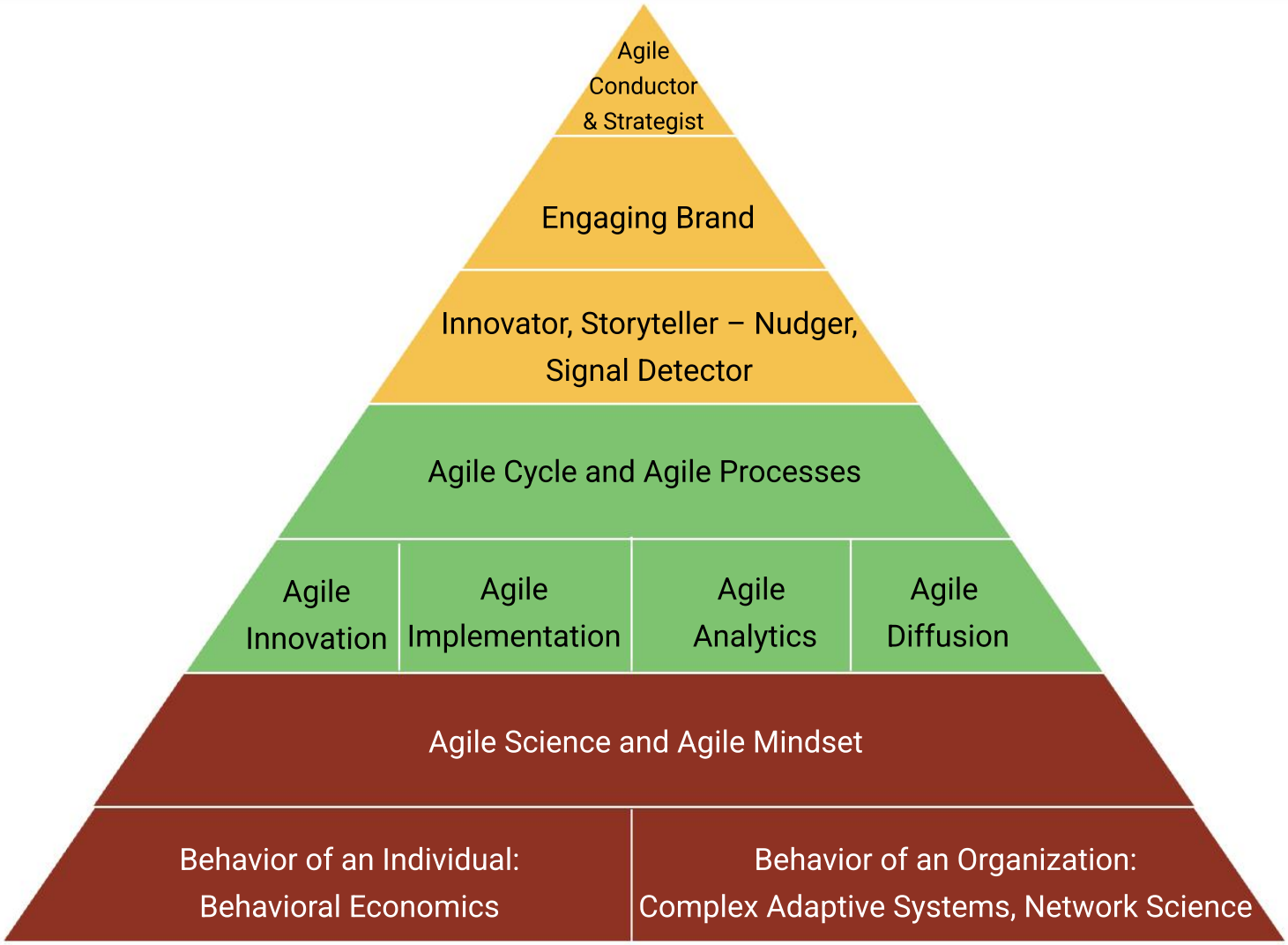
Purpose: Agile science integrates insights from behavioral economics, complexity science, and network science to understand, predict, and steer the behaviors of both an individual human and a social organization.

Outcome: Agile science provides insights to design scalable and effective human-centered strategies, processes, and tools, implement them into routine care and subsequently diffuse them across various social networks.





3.2 The Agile Pyramid



3.3 The Agile Conductor

Think like engineers (they dissect, organize, analyze, interpret)

OR

Test like scientists (they rely on rapid empirical testing)

OR

Observe like psychologists (they leverage behavioral insights)

OR

Draw like artists (they create appealing mockups)

*The best agile conductora are a combination of these!

3.4 The Agile Mindset

Safe Culture

Establish a psychologically safe climate where members:

- Feel comfortable giving and receiving feedback and direction,
- Have time and space to collaborate and exchange information,
- Foster appreciation for "good enough" rather than perfect solutions.

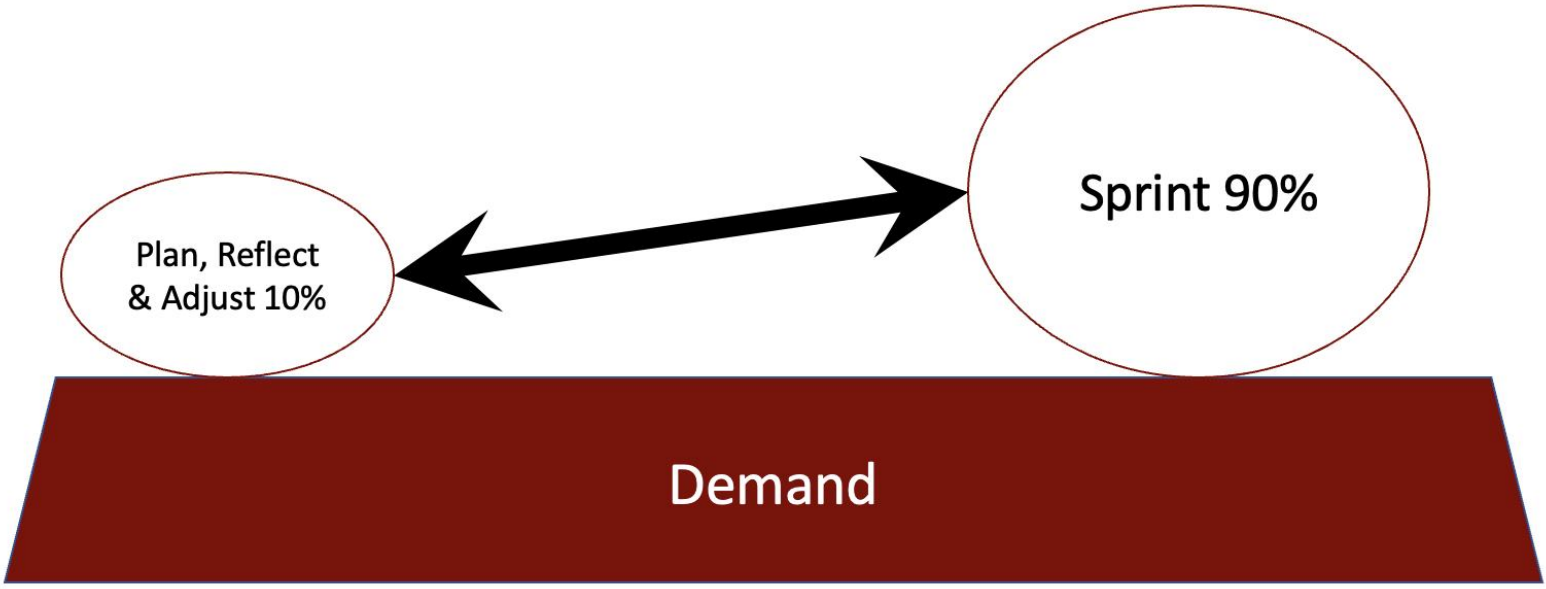
Feedback

- Embed sensors within the internal and external environment of the healthcare delivery network capable of capturing both signal and noise including gossip, rumors, and hallway conversations.
- Invest in timely, nonjudgmental, and actionable feedback loops.
- Activate networks of information flow, identifying information hubs, local communities, and bridges between communities, for rapid information spread.

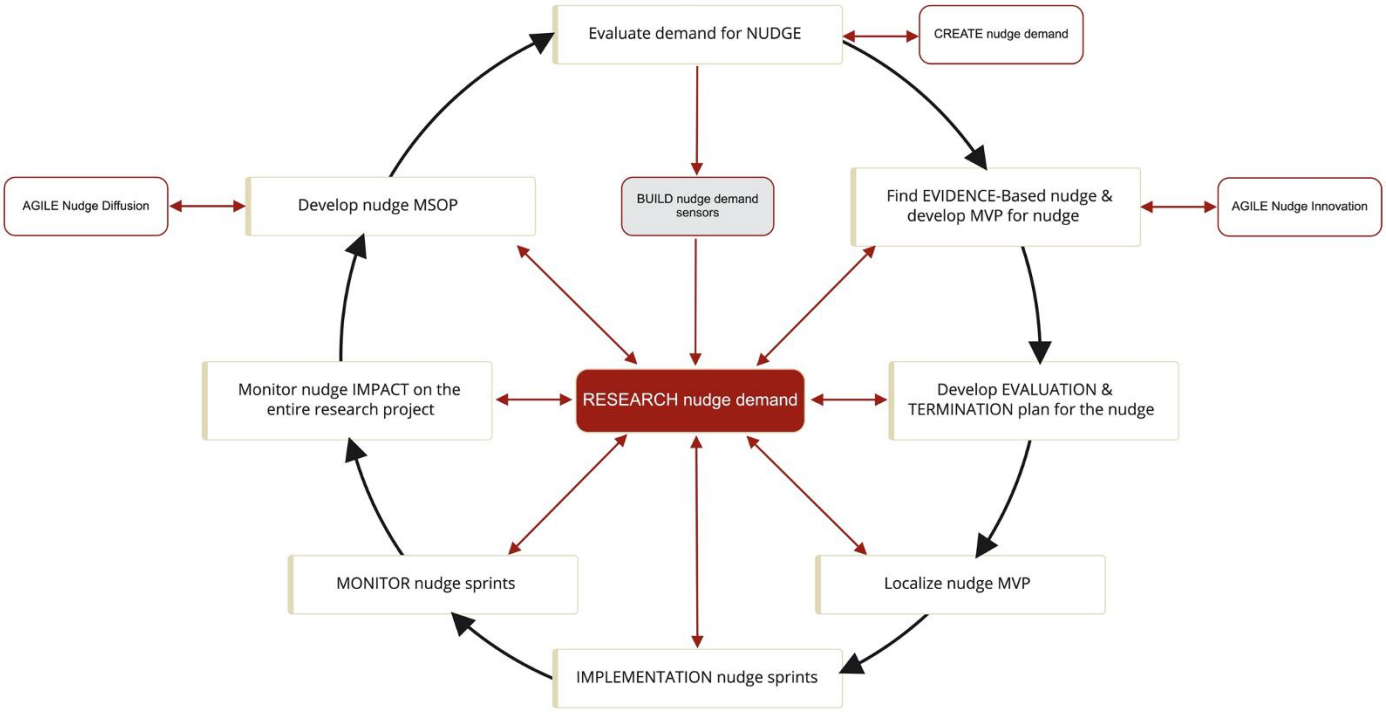
Sprints of Minimally Viable Prototypes

- Develop minimum viable products (MVPs).
- Quickly test their performance in real systems through rapid experimentation.
- Conduct sprints in the target local environment to evaluate the MVP and revise based on gathered feedback.


3.5 The Agile Cycle



3.6 Agile Implementation



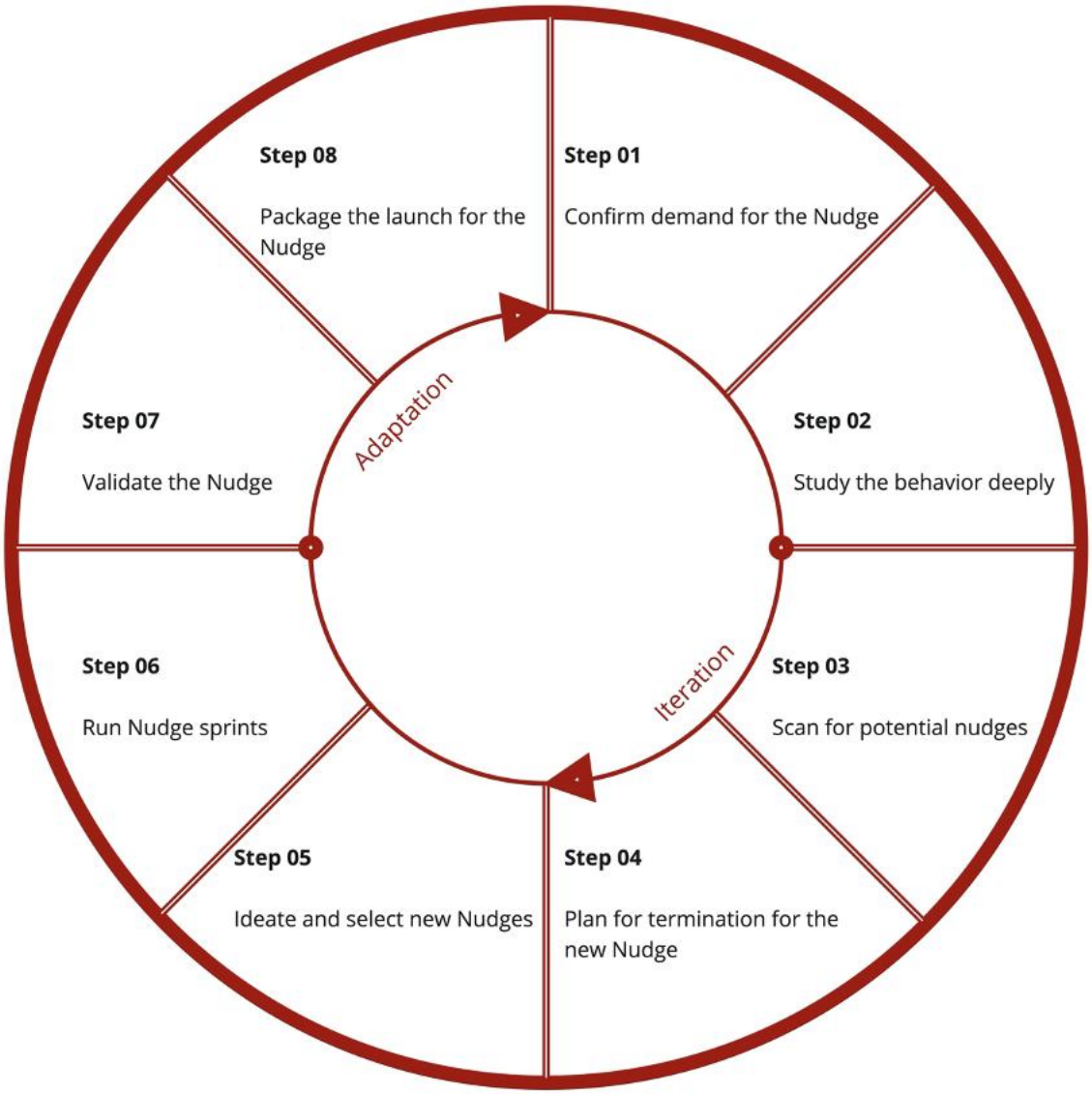
1 **Map the digital, physical, and social environment surrounding the people who are targeted for behavioral changes:**

- Who is the person who is targeted, what is their current behavior that needs to be changed?
- Who are the people interacting with the targeted person and do they have any behavior that is contributing to the current problem behavior of the target person?
- Is there any existing messenger that could be used as nudge carrier or a nudge?
- Are there any existing digital, physical and social artifacts (or nudges) that are contributing to the problem behavior of the targeted person?
- De-Nudge any existing nudges to the current problem behavior.

2 **Search the Nudge Library to identify existing evidence based nudges that are targeting the behavior to overcome or that may lead to the targeted behavior.**

3 **Select existing Nudge to test its compatibility with MINDSPACE checklist and EAST checklist.**

3.7 Agile Inovation



If there is no evidence-based Nudge to test, then:

- Select a cognitive bias to build on a new nudge
- Select the milieu of the nudge (digital, physical, social);
- Use the MINDSPACE to select a category of nudge to design;
- Create the first MVP nudge
- Check the MVP Nudge compatibility with EAST.


3.8 Shared Components of Agile Implementation and Agile Innovation

Define a termination plan for both the selected or the new nudge and define a termination plan to stop working on the targeted behavior.

- Who will make the decision to terminate?
- When will the decision be made?
- What criteria will be used?

Run a series of Sprints to test the selected or designed minimally viable Nudge.

3.9 Agile Diffusion 2.0

Minimally Viable Nudge into a New Social Norm

Planning

- Identify the special community in the periphery of the network to incubate the targeted behaviors
- Select or design then localize Minimally Viable (physical, digital or social) Nudge
- Develop a termination plan for both the sprints and the entire social movement

Executing

- Sprints to test the MVN and Monitor the number of people who have adopted the new behaviors.
- When you reach the local tipping point of 25% of the community people adopting the new behaviors, identify people with strong ties (wide bridges) to transport the new behavior into another community.
- When 25% of the entire network HUB's contacts have adopted the new behavior, the HUB would finally adopt the new behavior and a new Social Norm will start spreading across the entire network.

The Building Blocks of Diffusing a New Social Norm

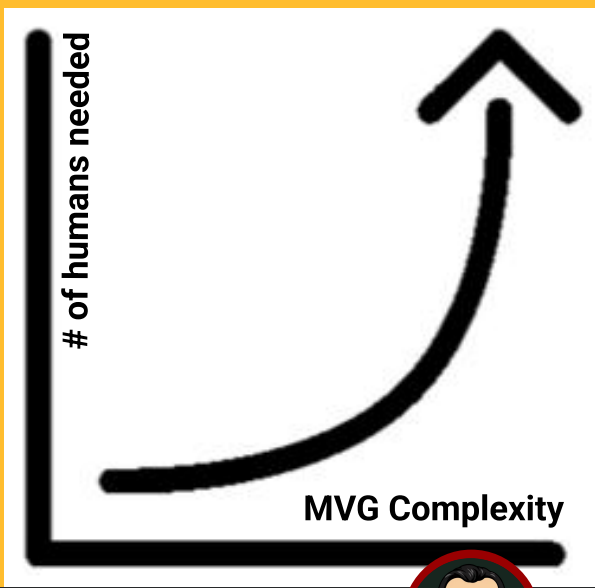
The Message
- ROI: 0.01 X
- Control: 100 X

The behavior of the Messenger
- ROI: 1.0 X
- Control: 1.0 X

The development of local Social Norm
- ROI: 100X
- Control: 0.01 X

3.10 Mapping an Agile Strategy to Reach Your Goal

1. Set your Minimally Viable Goal (MVG)
2. Set your Minimally Viable Capitals
3. Set your Minimally Viable Demand
4. Map your MVG into Minimally Viable Daily Activities
5. Recruit Minimally Viable Number of people to complete the daily activities.
6. Design the Minimally Viable Dashboard



3.11 Demand

Level of Complexity = Capital Invested

Measuring Complexity:

- Size of Network
- Nonlinearity in Relationships
- Sensitivity to Context and Time

4 Types of Capital:

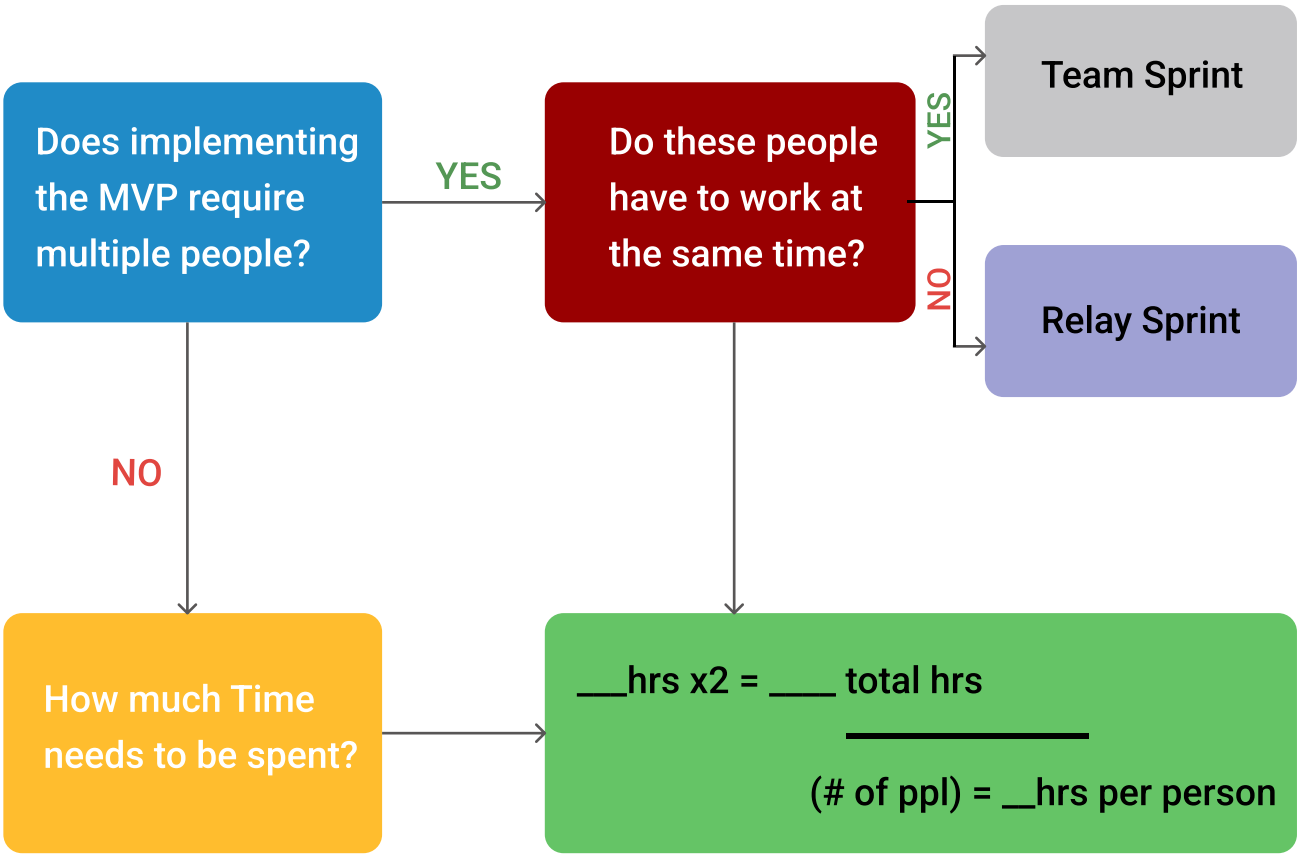
- Financial
- Social
- Anxiety
- Time

3.12 Termination Plan

- Who will Make the Call?
- When will they Decide to Make the Call or Not?
- What Criteria will they use to Make the Call or Not?

Sprint

4.1 Sprinting



Block the least spaced-out amount of time to meet this # of hrs

4.2 Question to Answer When Sprinting

- What is the data being collected?
- What is the End Date?
- What is the Evaluation Date?
- Where is Data being Collected?
- How frequently is data collected?

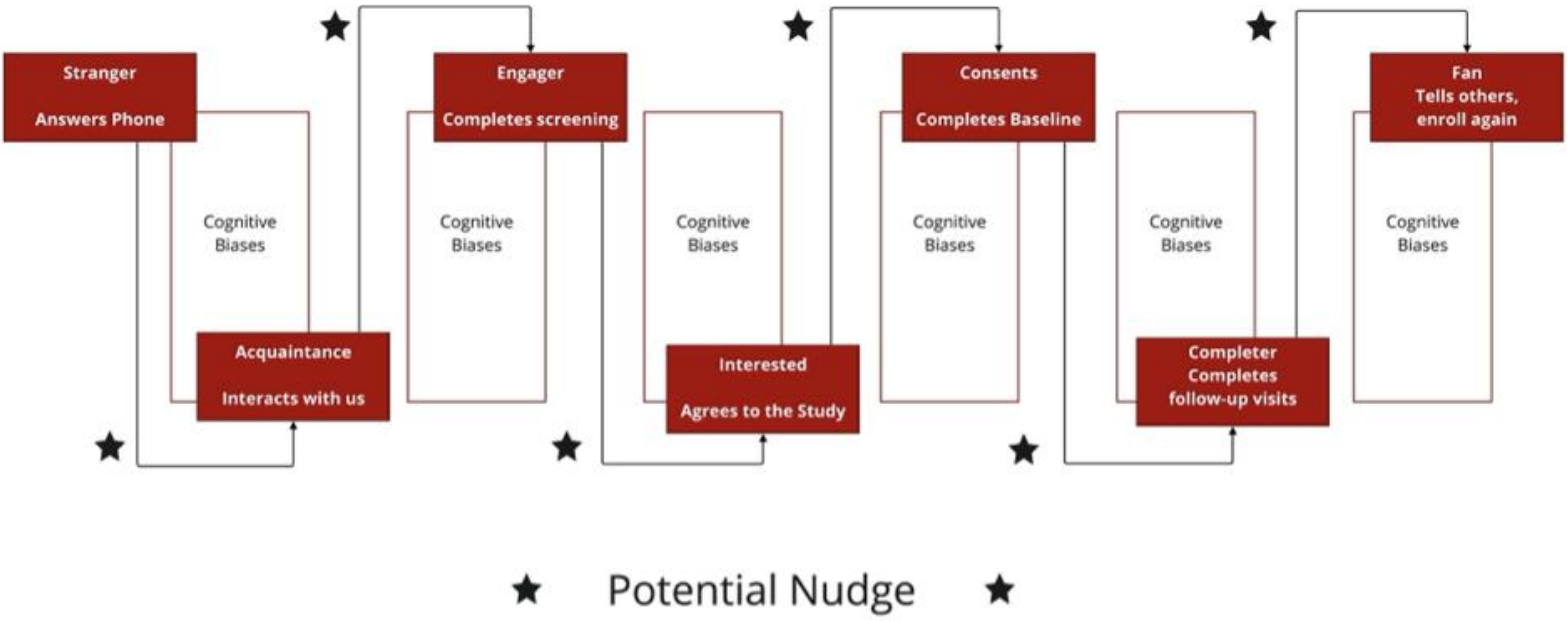

4.3 Monitoring

- Sprints allow early insight into successes, failures, and opportunities for modifications prior to starting the next sprint.
- Adjustments are followed by additional sprint cycles with continued monitoring and reflection.
- Whole-system monitoring detects unintended or adverse consequences as early as possible.


4.4 Minimally Standardized Operating Procedure

- Develop an MSOP if evidence-based healthcare service met all internal goals.
- The manual is updated on a regular basis and helps spread the successful evidence-based healthcare service across other practices and communities.
- Should describe minimum requirements for implementation including how to scale and standardize the EB solution.

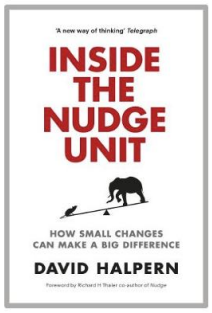

Recruitment & Retention Map

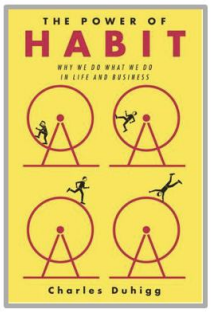


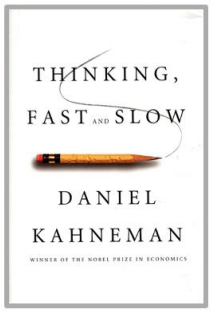
Tools

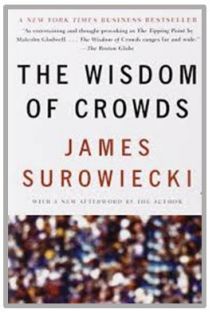
- Nudge Library
- Cognitive Biases Library
- Agile Nudge+ Software
- Agile recruitment GPS

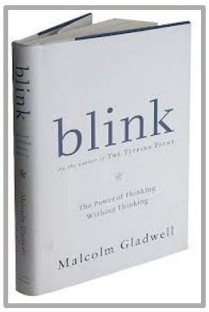

Recommended Books

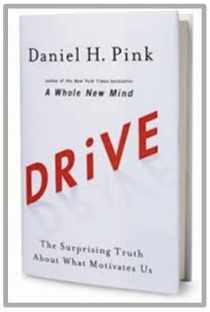


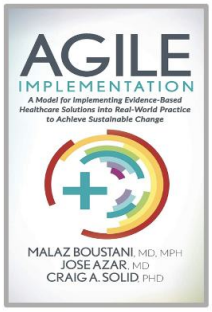


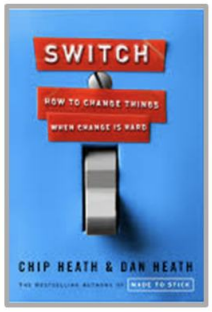


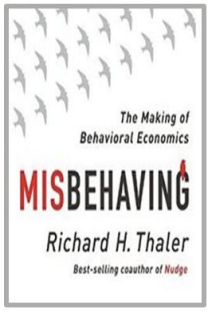


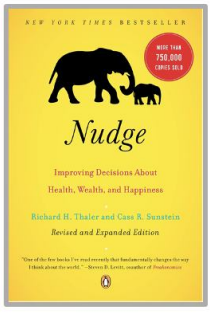


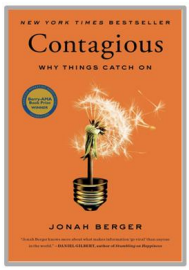


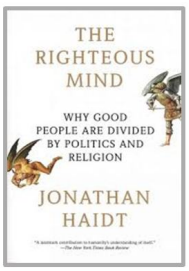


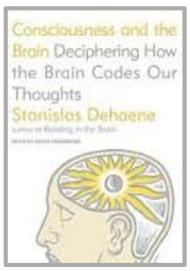


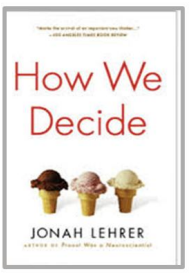


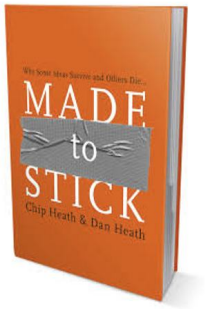


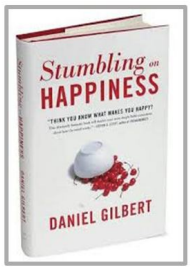


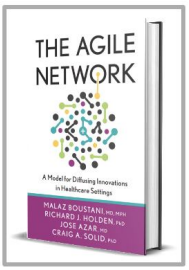


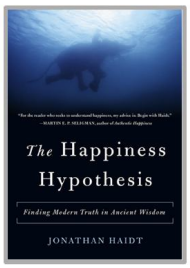


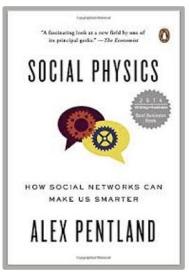


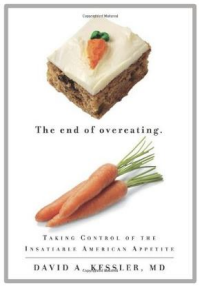


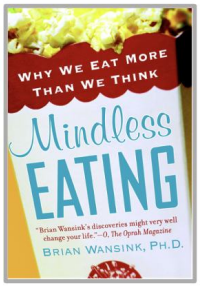


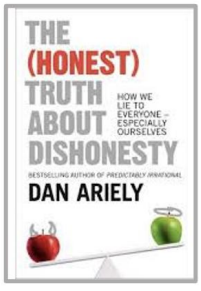


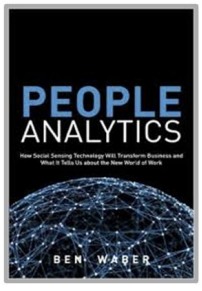


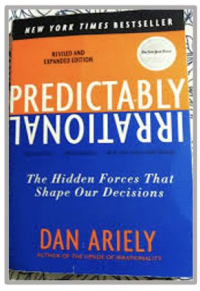


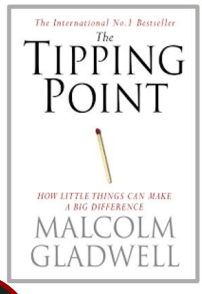


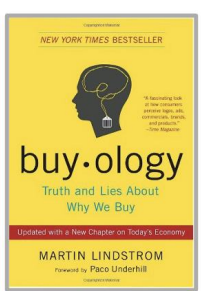


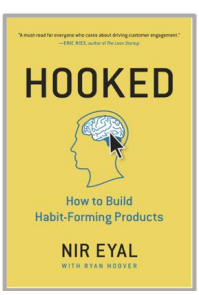


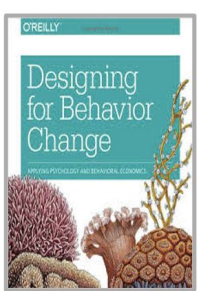


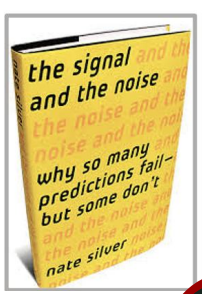












Nonjudgmental, actionable, timely....

Agile Reflection

EMOTIONAL FOOTPRINT

- **Number**
  -10 to +10
- **TWO English words**
- **What you found**
  - Interesting
  - Surprising
  - Actionable

+

What is a **behavior(s)** of yours which you would like to **change** based on the discussion/ presentation?

what would you need to design and then sprint to accomplish this?

- Artifact
- Nudge
- Ritual

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