Center for
Health Innovation &
Implementation Science

Indiana University School of Medicine

Artifacts, Ritual, Nudges, Stories, & Group-based Non verbal Video Production

October Weekend Residency
10/18/2020

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Jose Azar, MD, Chief Quality and Safety Officer, IUH Academic Health Center
Andrew O'Brien, MD, Assistant Professor of Medicine, CHIIS

“It's a dangerous business, Frodo, going out your door. You step onto the road, and if you don't keep your feet, there's no knowing where you might be swept off to.”

Who are **YOU** really?

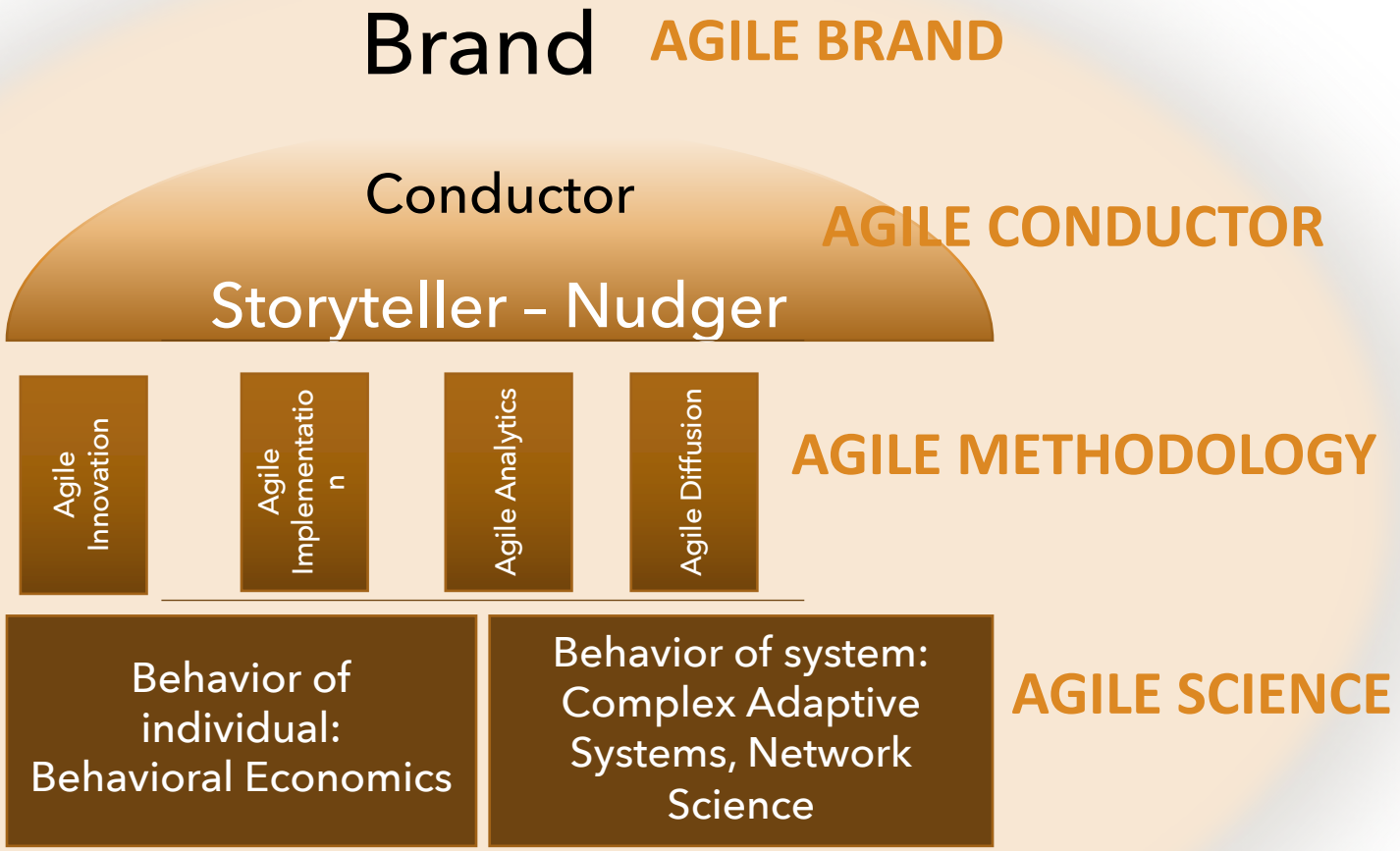
WHY are you here?

WHAT is your story?

Our Adult Learning Philosophy

- Deploy or Die
- Rapid Experimenting
- Investing in Feedback Loops
- Networking
- Questioning
- Multisensory deep Observing
- Allowing time for Associate Thinking
- Learning form the Bayesian Scientist
- Checking Assumptions
- Self caring is not selfishness
- Allocating Time for Reflection
- Embracing Personalization
- Becoming a Choice architect
- Leading at least 150 humans

Building an Army of 6,000 Agile Change Agents



Our Principles of Agile Mindset

- Safe Culture
- Feedback
- Sprints of Minimally viable prototypes

My Story!

Becoming a Physician Scientist!

A Journey of 10,000 Hours

Timeline

- 1994: MD and Immigrated to the USA
- 1996-1999: Residency program at community hospital in Cleveland.
- **1999-2002**: Geriatric Fellowship + K30 + MPH (**Basic Research Skills**)
- **2002-2005**: 13 failed external grant submissions (**Basic Experimentation and Vital Failure Skills**)
- 2005-2010: Beeson K23 (**Leadership Skills**)
- 2007: First R01 (**Mentorship skills**)
- 2009: Second R01 (**Mentorship Skills**)
- 2010: Third R01 (**Mentorship Skills**)
- 2012: Fourth R01 (**Mentorship Skills**)
- 2012: CMMI grant (**Implementation and Dissemination skills**)
- 2013: Founding Director Center for Health Innovation and Implementation Science (**Administration leadership Skills**)
- 2013: Chief Innovation and Implementation Officer at IUHealth (**Administration leadership Skills**)
- 2014: Richard M Fairbanks Chair in Aging Research (**Growth Skills**)
- 2015: Great Lakes Practice Transformation Network (**Network engineering skills**)
- 2015: SECBCI (**Network Engineering Skills**)
- 2019: Director Senior Care Innovation (**Network Engineering Skills**)

10,000 Hours of Research Practice

- **1999-2000**:
  - 25% research; 10 hrs / week X 46 = 460 hrs
- 2000-2002:
  - 80% research: 32 hrs / week X 92 = 2,944 hrs
- 2002-2005:
  - 70% research: 28 hrs / week X 138 = 3,864
- 2005- 2007:
  - 75% research: 30 hrs / week X 92 = 2,760

- By 2007 (**first R01**) I crossed the professional tipping point with accumulating **10,028** hrs of research practice

The Minimally Specified Criteria for A Successful Scientist

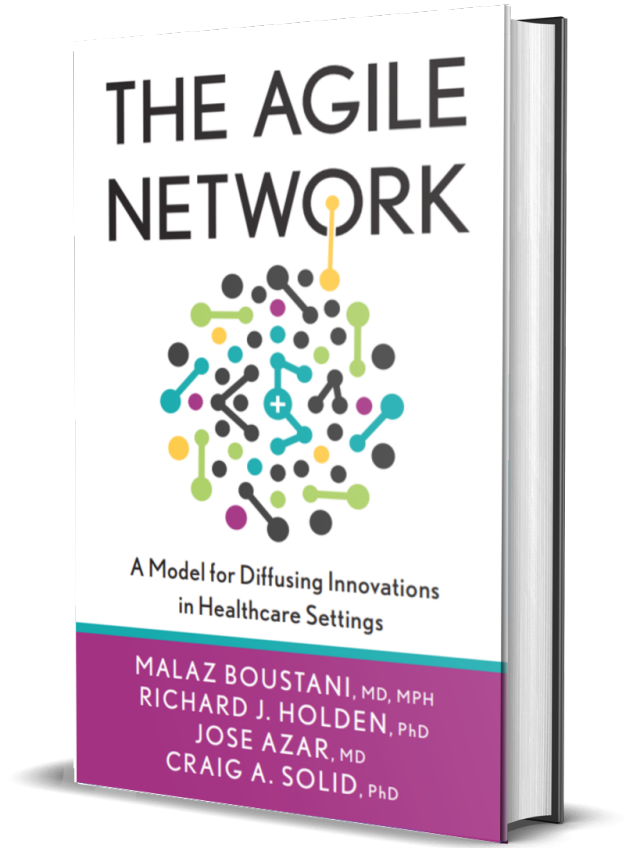
- 10,000 hours of research practice and training
- Receiving successful mentoring
- Acquiring the Innovator DNA
- Developing, maintaining, and controlling a research laboratory
- Developing and maintaining a successful and evolving messaging and communication strategy
- Growing intellectual (human) and financial capitals
- Mastering the science of network engineering.

The Minimally Specified Criteria for Successful mentorship

- Primary mentor and mentorship panel who put mentee first
- 30-60 minutes of face-to-face weekly meeting with primary mentor
- 30-60 minutes of face-to-face monthly meeting with mentorship panel
- 30-60 minutes of face-to-face weekly attendance of leadership development

The Innovator's DNA

- Questioning
- Observing
- Experimenting
- Networking
- Associate thinking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Building the Foundation

1. Behavioral Economics
2. Complex Adaptive Network
3. Network Science

Illustrated by Beth Traylor: Cohort 2019 CHIIS

Building Structure – The Agile Processes

- Agile Implementation
- Agile Innovation
- Agile Analytics
- Agile Diffusion

Illustrated by Beth Traylor: Cohort 2019 CHIIS

Tools for Success

- Storytelling
- Nudge
- Branding

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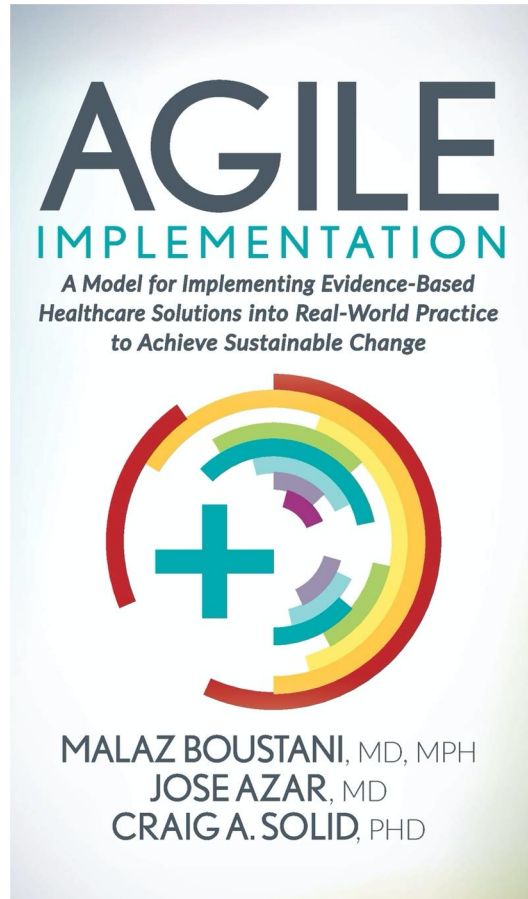
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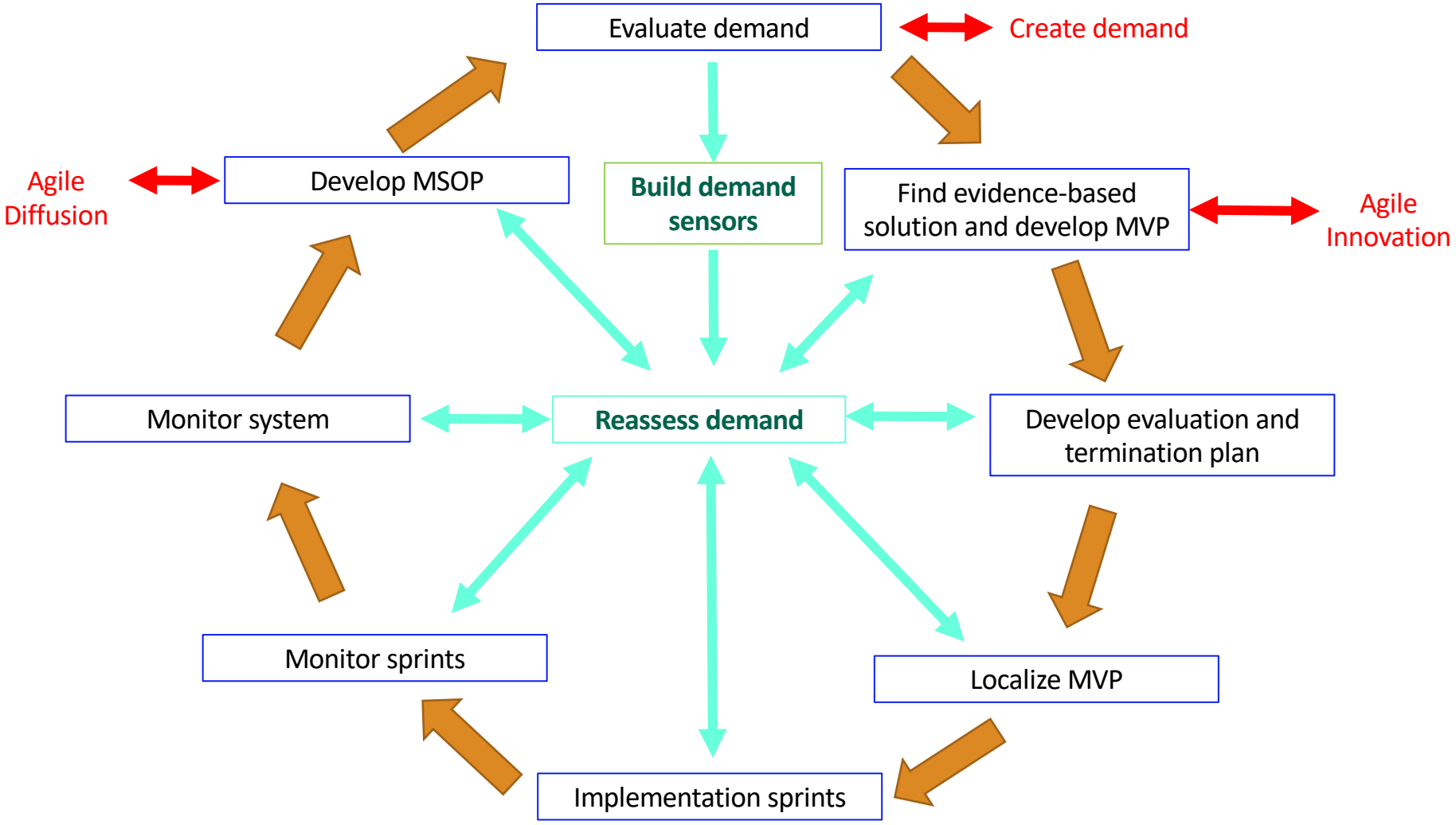
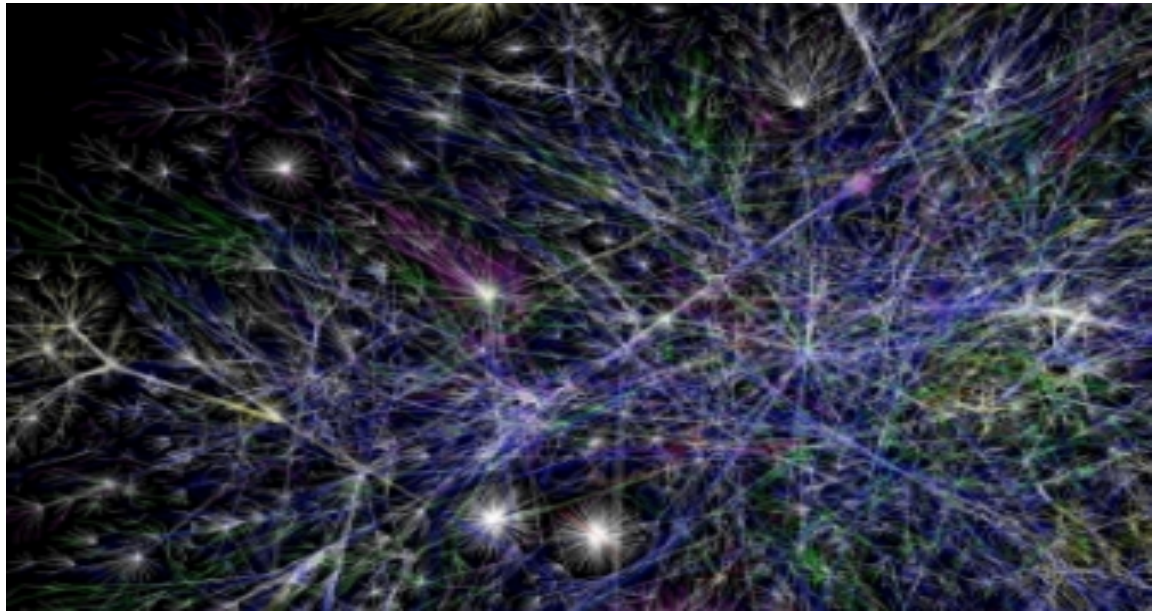


Illustrated by Andrew O'Brian: Cohort 2019 CHIIS

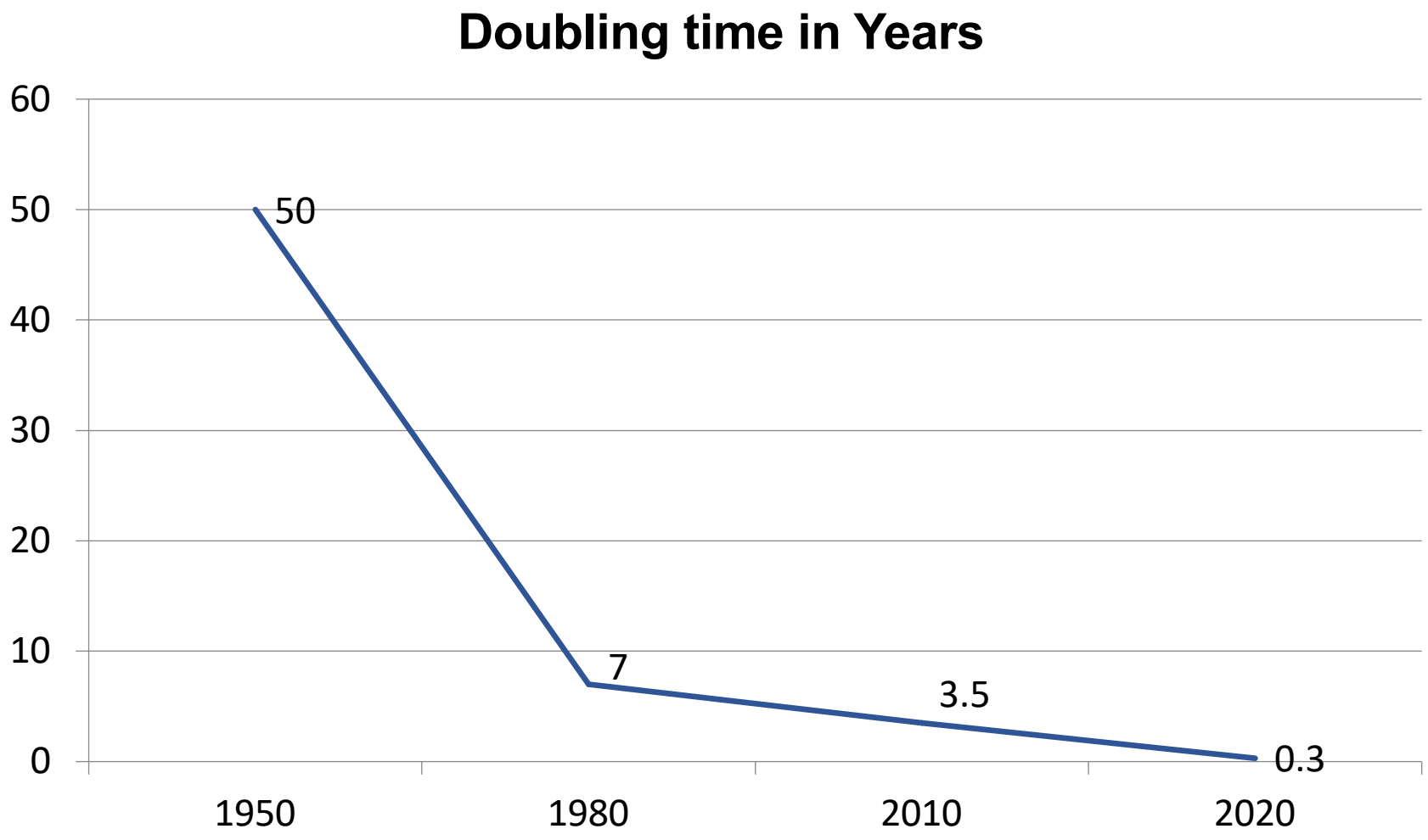
Our Innovation philosophies

- Conversion of a new idea or a new **match** into a successful, scalable, and sustainable solution that provides high value for human everywhere.
- Successful conversion depends on
  - The innovator DNA*
    - Questioning, deep observing, experimenting, networking for discovery, and association
  - Diversity
  - Limited resources
  - **Harvesting Luck**
  - Agile mindset
  - Agile Innovation



*By Jeffrey H Dyer, Hal B Gregersen, and Clayton M Christensen

Growth in Medical Knowledge

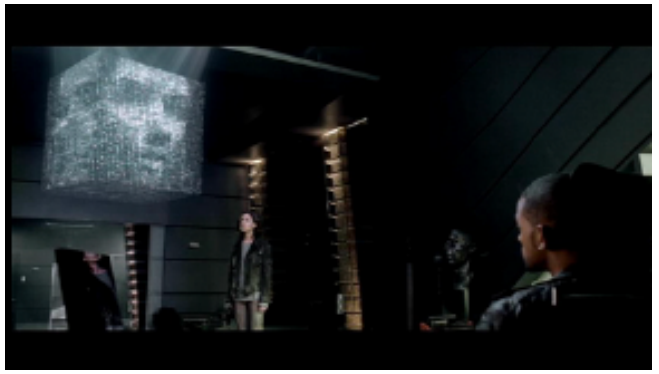


Densen P. Challenges and opporunity facing medical educaiton. Trans Am Clin Climatol Assoc 2011;122:48-58

CHIIS
Center for Health Innovation & Implementation Science

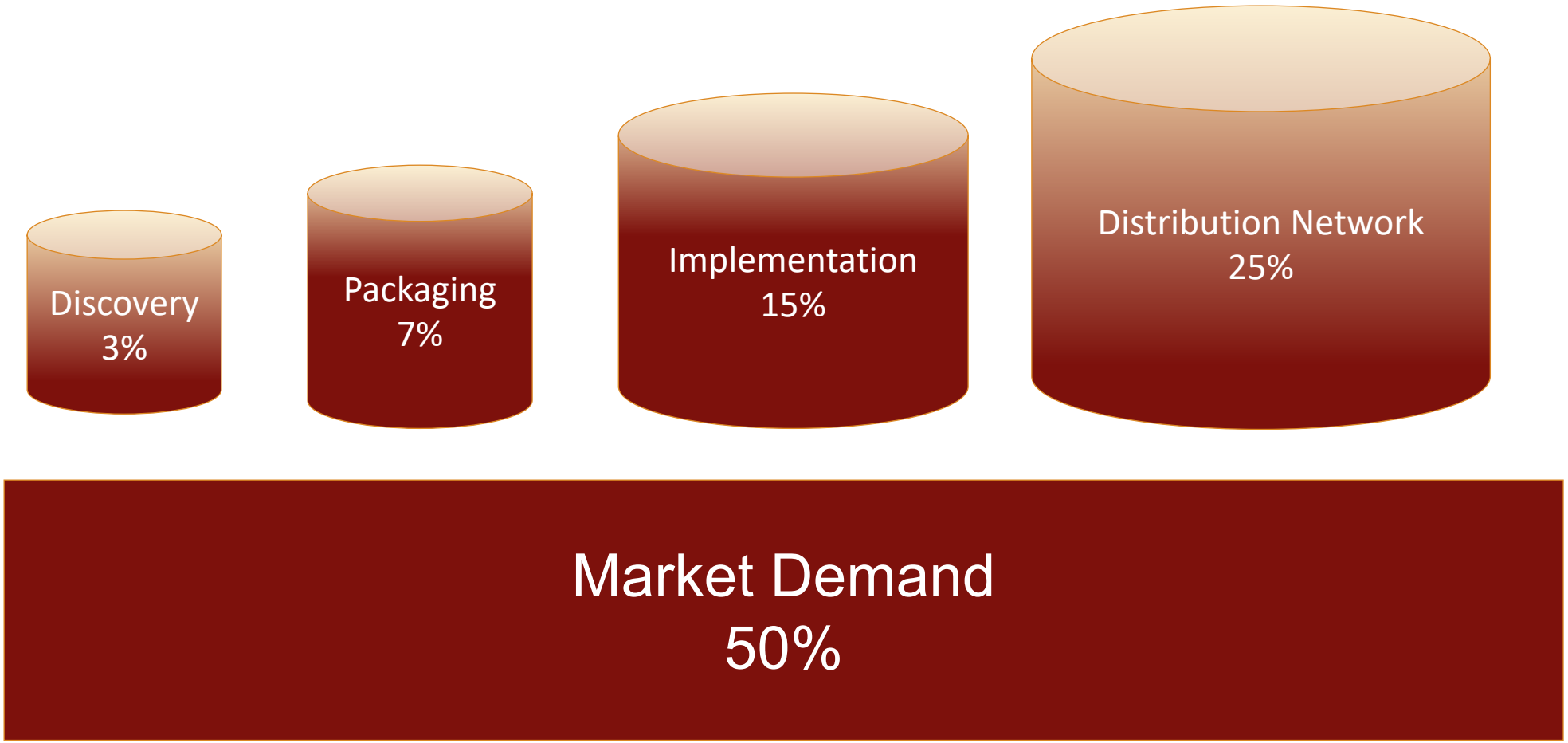
HealthCare 2.0: Agile Network

- A collision of insights from five industries:
  - Health care (Precision Medicine and Population Health)
  - Hospitality (Brand Loyalty, Great and Personalized Customer experience)
  - Retail (Reliability, Scalability, Convenience, Network Distribution)
  - Technology (Automation, Constant innovation)
  - Banking (Automation, security).



- Agile network where highly engaging avatars provides personalized answers to 90% of healthcare related questions

The Optimal Discovery-to-Delivery Resource Allocation



AGILE: Ask Google?

“Able to move quickly and easily”

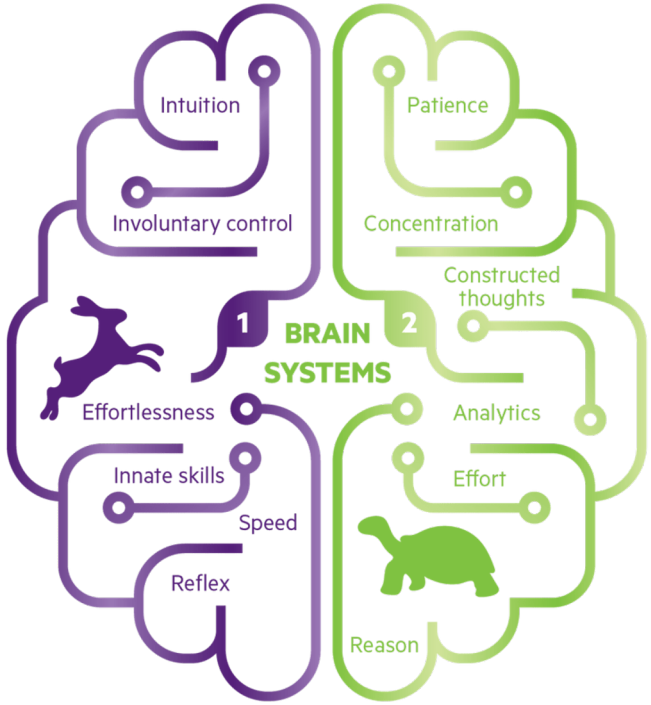
“Able to think and understand quickly”

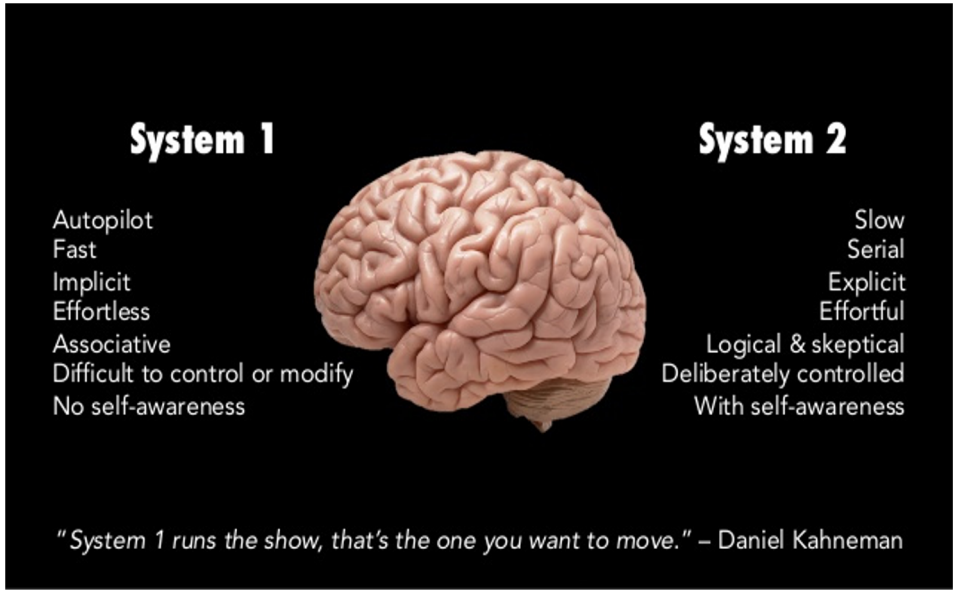
“Relating to or denoting a method of project management, used especially for software development, that is characterized by the division of tasks into short phases of work and frequent reassessment and adaptation of plans”

“Agile methods replace high-level design with frequent redesign”

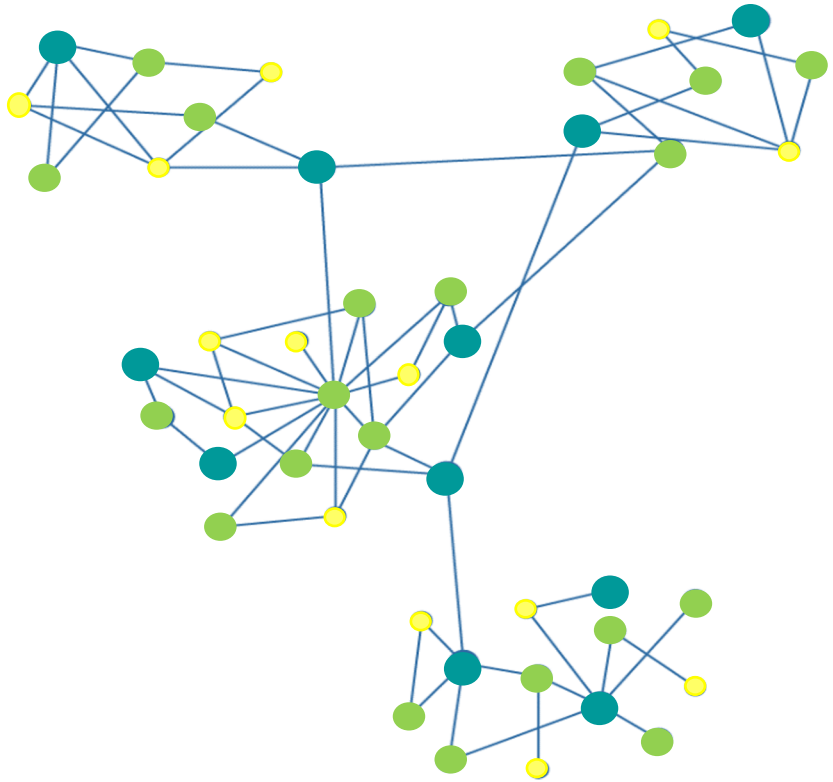
Agile Science

Behavioral Economics





Network Science

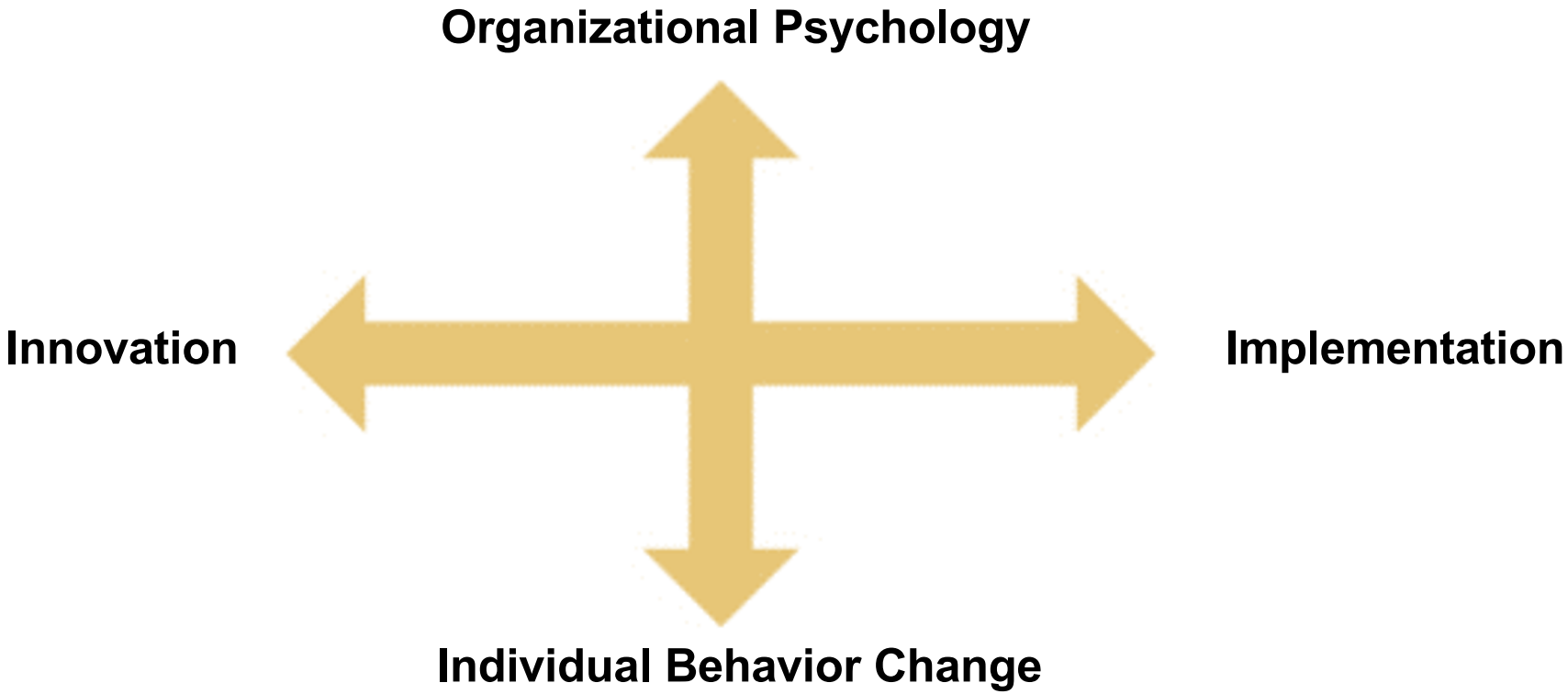


COMPLEX ADAPTIVE SYSTEM

Kevin Dooley, defined Complex Adaptive System (CAS) as “a group of semi-autonomous agents who interact in interdependent ways to produce system-wide patterns, such that those patterns then influence behavior of the agents.”

AGILE Processes

Never Ending, Dynamic Dance



The Agile Innovation Process

Planning:

1. Confirm Demand

Verify support for solving the correct problem

2. Study the Problem

Investigate the current state to identify needs

3. Scan for Solutions

Scout and analyze existing solutions

4. Plan Evaluation and Termination

Determine when to proceed with solution or stop and reflect

Execution:

5. Ideate and Select

Collect ideas and select top candidates

6. Do Innovation Sprints

Prototype, test, prototype, test, prototype, test

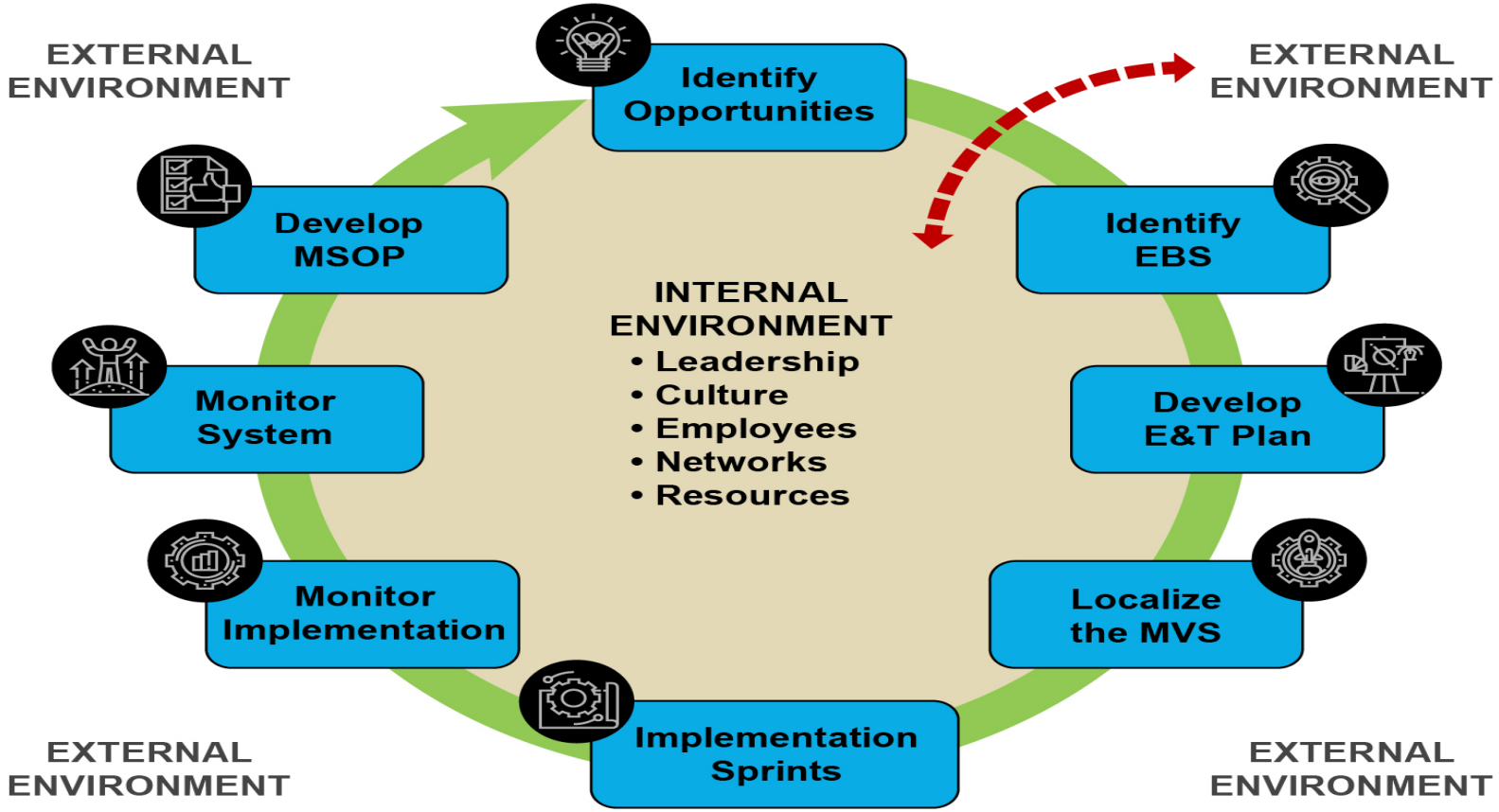
7. Validate Solutions

Test for expected and unexpected results

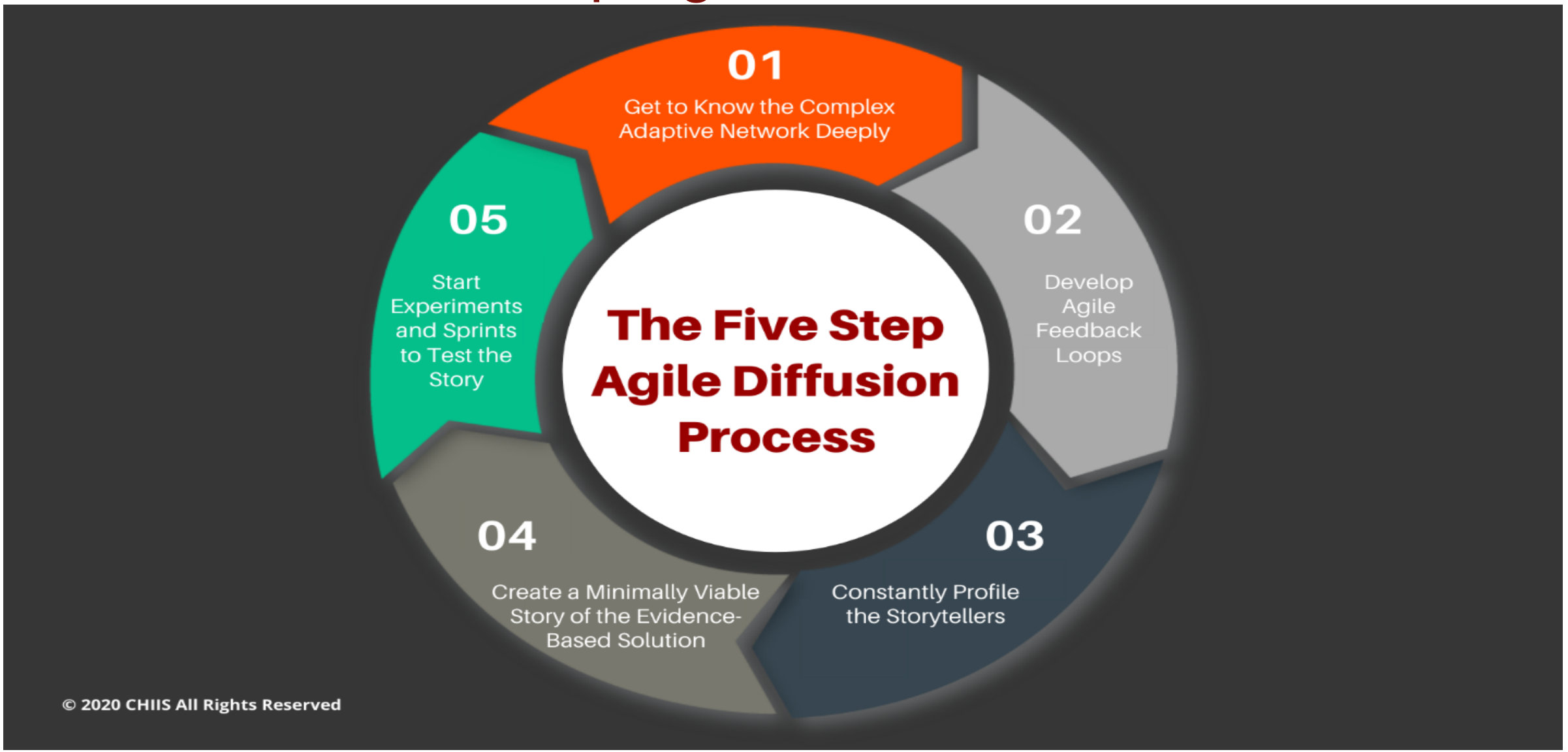
8. Package for Launch

Create hand-off package: business plan + MVP

Agile Implementation (AI)



The Five Step Agile Diffusion Process



Nine Principles of Introducing a Change in CAS

1. View your system through the lens of complexity
2. The “good enough” vision with minimum specifications
3. Balance between clock ware and swarm ware:
    - Data and intuition
    - Planning and acting
    - Safety and risk

Nine Principles of Introducing a Change in CAS

4. Foster the “right” degree of information flow, diversity and difference (the edge of chaos)
5. Uncover and work with paradox and tension
6. Go for frequent experimentations, let direction arise

You don’t have to be "sure" before you proceed with anything

Nine Principles of Introducing a Change in CAS

7. Listen to and be aware of the “shadow system”:
   - Informal relationships
   - Gossip
   - Rumors
   - Hallway conversations
8. Allow emerging behaviors to grow out of your complex systems
9. Build a community of members who collaborate and compete

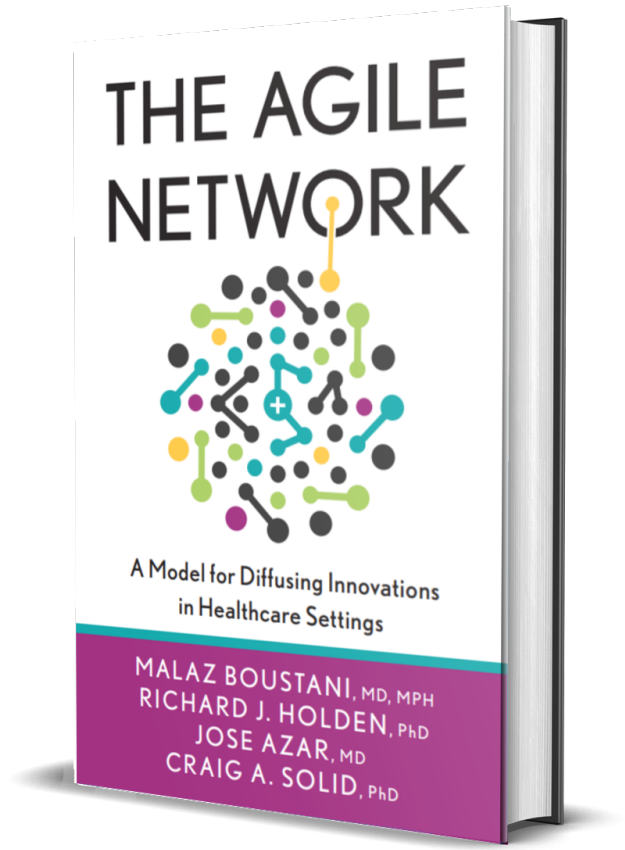
INNOVATION FORUM

Group-based engagement and problem solving platforms

- Short presentation
- Clarifying questions
- Solution Generation
- Summarize Feedback
- Open Discussion

INNOVATION FORUM RULES

1. The presenter is no longer allowed to speak
2. This is a time for solution generation, not theoretical discussion
3. Everyone will get a turn to provide a solution
4. Please do NOT interrupt another person
5. We are looking for POSITIVE solutions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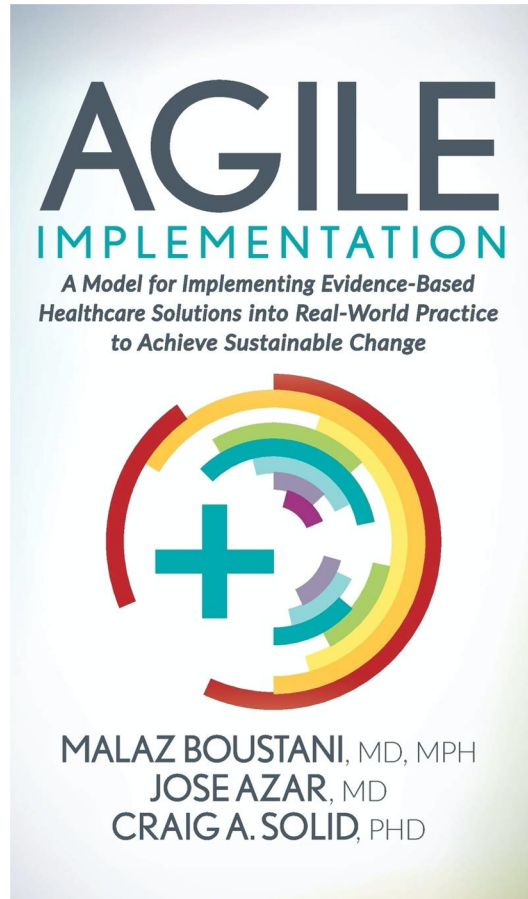
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