


IHI Innovation Relay

International Forum on Quality and Safety in Healthcare



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Objectives

- Articulate the uses and approaches to innovation and how they can be applied to solve problems in health care organizations
- Learn Innovation strategies: scanning, idea generation, prototyping and theory building
- Participate in a rapid design process to identify a problem and begin building prototypes that can be tested in their home organizations and across others





Our Mission

To improve health and health care worldwide.

Our Vision

Everyone has the best care and health possible.

Who We Are

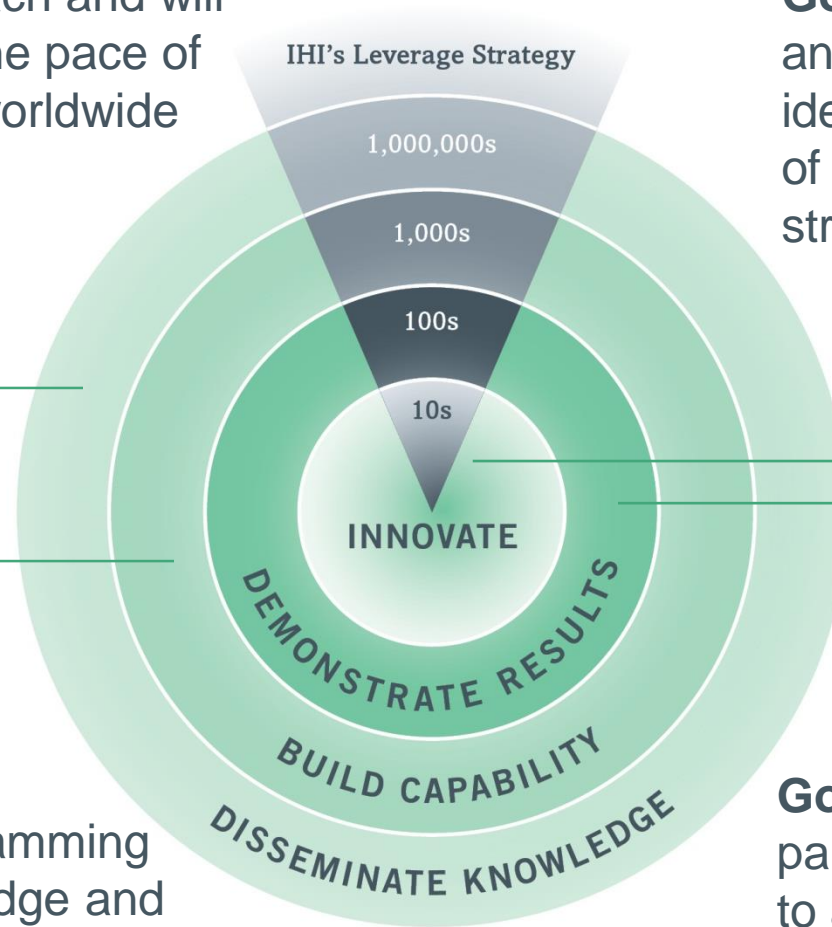
IHI is a **leading innovator in health and health care improvement worldwide**, joining forces with the IHI community to spark bold, inventive ways to improve the health of individuals and populations.



The Way We Work

Goal: Build reach and will to accelerate the pace of improvement worldwide

Goal: Harvest, create, and test bold, innovative ideas and new models of care that support our strategic initiatives

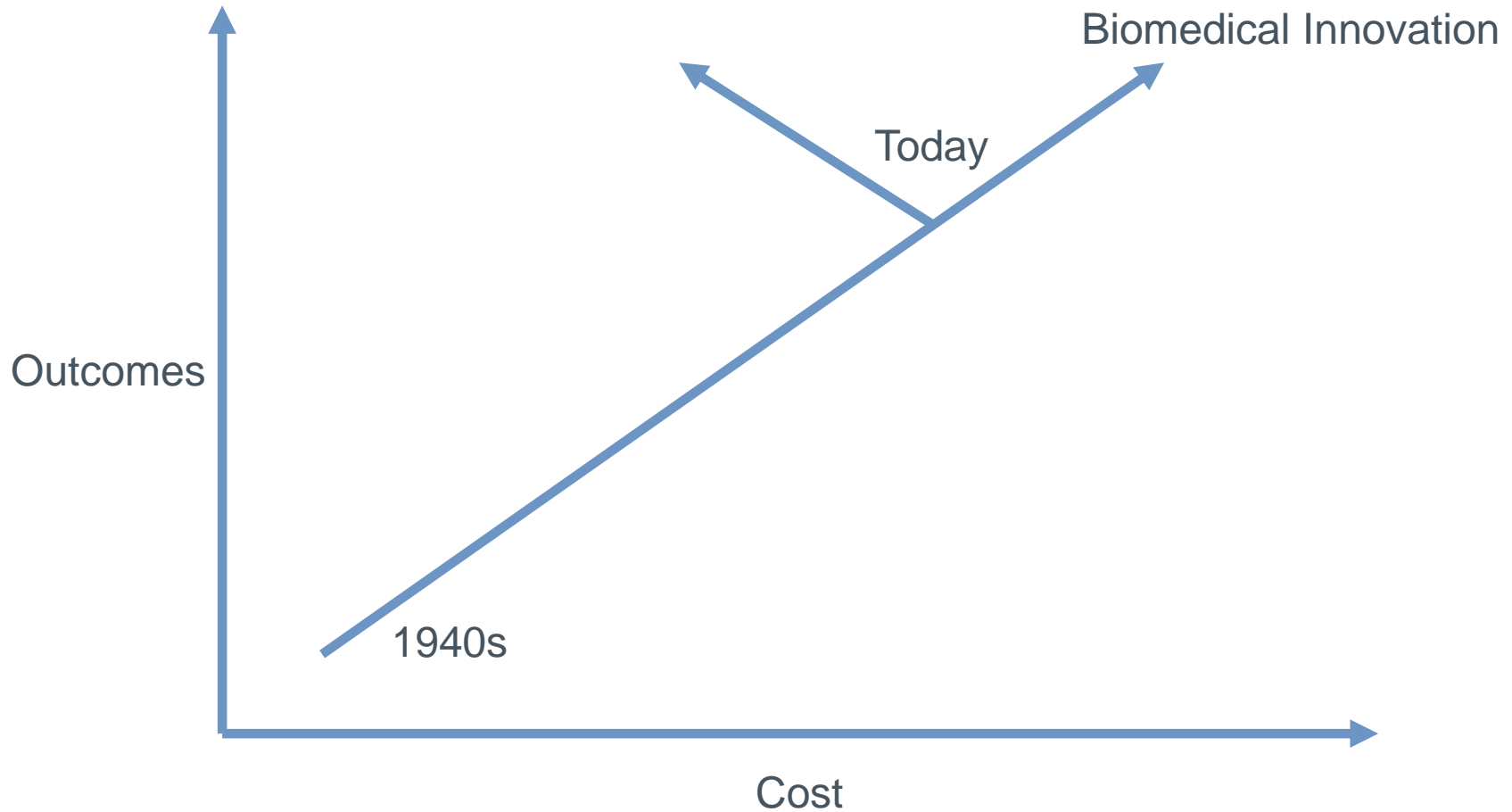


Goal: Offer programming to transfer knowledge and build improvement capability

Goal: Leverage strategic partnerships and key initiatives to achieve ambitious improvement goals



Healthcare Delivery Innovation



Chris Trimble, Tuck Business School





INNOVATION IS NOT AN EVENT



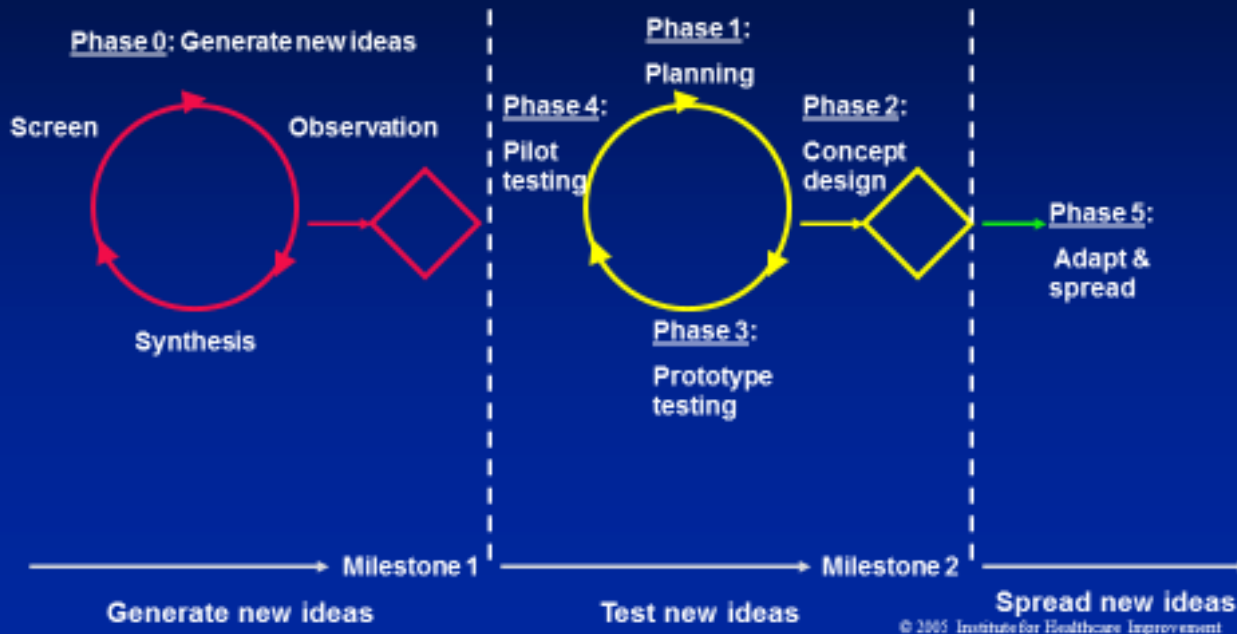
INNOVATION IS NOT A PRODUCT

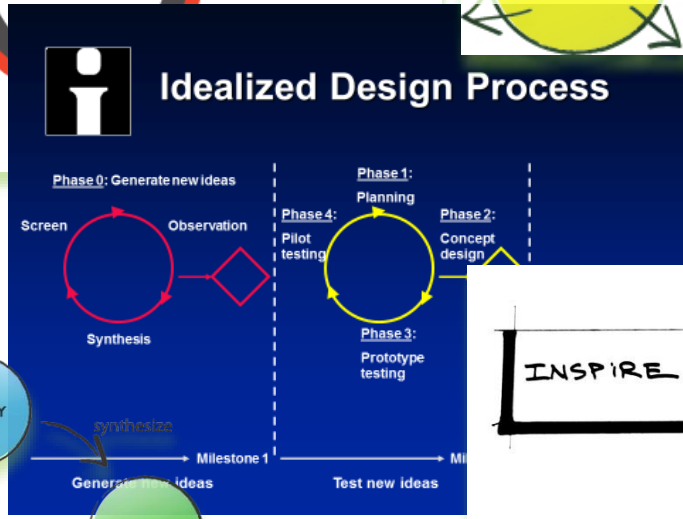
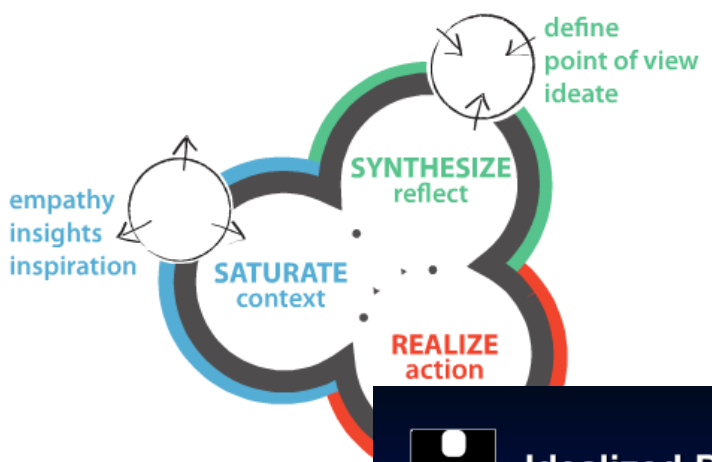


INNOVATION IS A PROCESS...

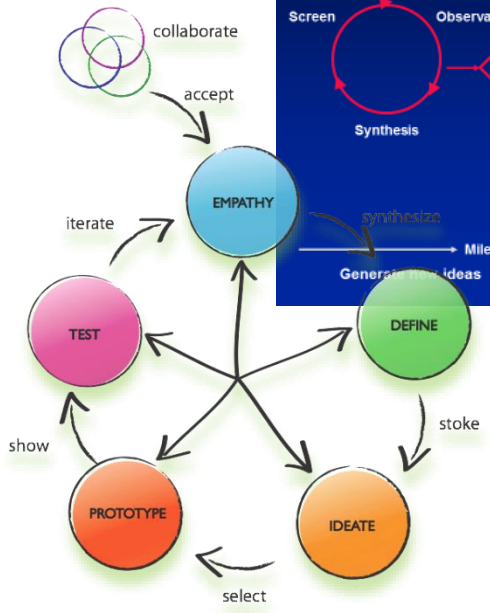
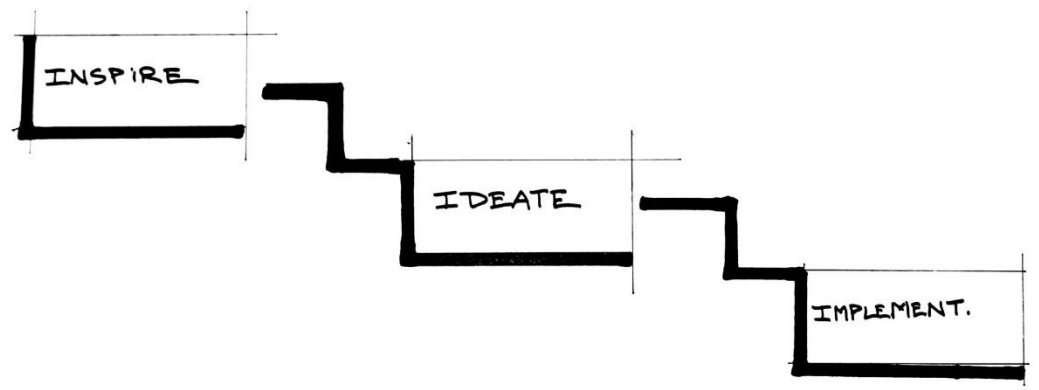


Idealized Design Process





...WITH VARIOUS VISUALIZATIONS.



Innovation & Improvement

Continuous Improvement

The act of raising to a more desirable quality or condition—*to make better*

Mental model = elimination; making something (i.e. performance problems) go away

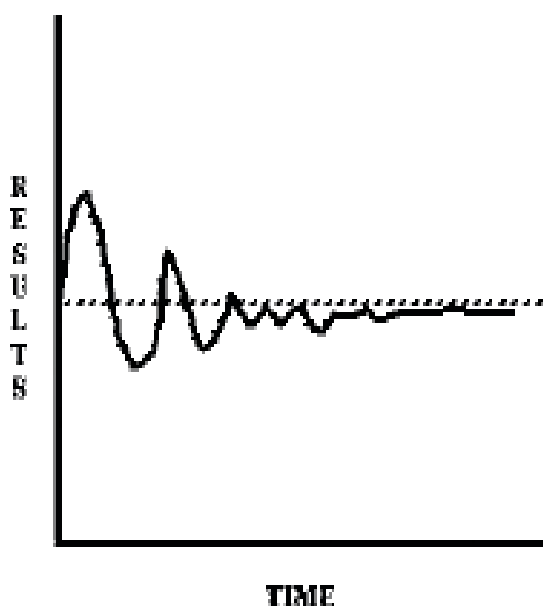
Innovation

Introducing genuinely new methods, ideas, or products—*to make new*

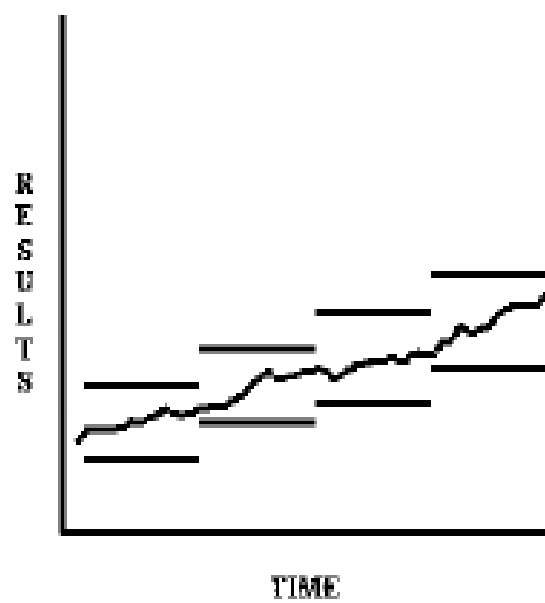
Mental model = creation; making something new



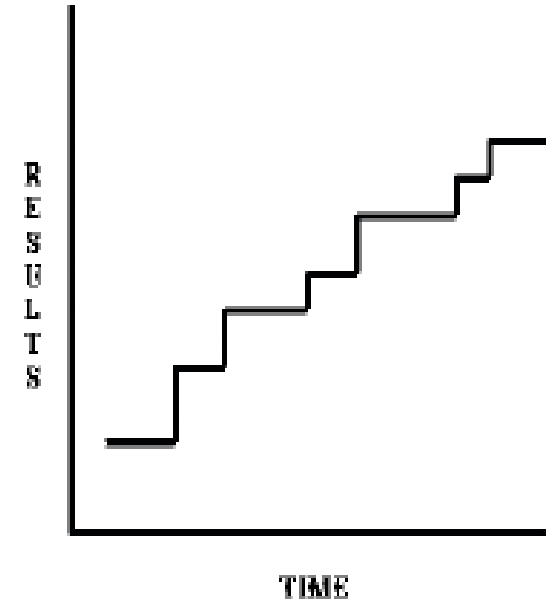
A visualization



Quality Control



Quality Improvement



Innovation



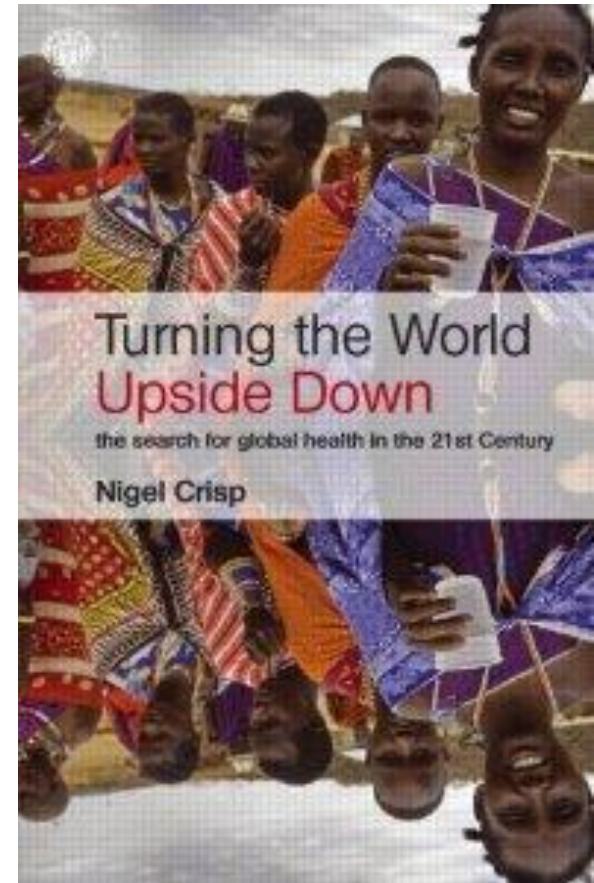
Where Does Innovation Come From?

- Innovations come from within research and industry (e.g. diagnostics, therapeutics, technology)
- “Bi-directional” innovations (e.g., community care givers, pt extenders, NPs) – Nigel Crisp
- Disruptive innovations (e.g., mobile communications technology) – Clayton Christensen
- Innovations come from the “lead-users” (staff & patients) – Von Hippel



“Bi-Directional” Innovation...Learning from Low Income Settings

- Plumpy’nut for malnutrition
- Sunflower seed oil for premature infants
- Cataract Surgery at Aravind Eye Care Hospital
- 30 min or your money back’ – Fortis patient experience



Disruptive Innovations

Disruption theory

Private sector example



Usually introduced or successfully taken to market by an “outside” organization. Existing competitors rarely introduce disruptive innovations. When they do, they rarely succeed with it in the newly created market.

Netflix introduced DVD by mail when DVDs were still relatively new. Netflix was an entirely new player in the home video market.



Typically targets an underserved or entirely new market. The innovation initially targets a set of users who do not need the complexity of existing products.

Southwest Airlines' cheap flights first targeted Texas business travelers who previously had to drive between Dallas, Houston, and San Antonio, and, later, leisure travelers who did not regularly travel via airplane.



Initially inferior to existing products. The innovation typically begins by offering worse performance than current or existing products. It is, however, considered “good enough,” and may be “simpler” than the status quo.

The first digital cameras had slow shutter speed, poor resolution, and fewer capabilities than traditional film cameras. Today, digital cameras are the primary types used in the market, with capabilities surpassing those of many film cameras.



Less expensive than traditional or current products. Existing products generally become overly complex as new “features” are added, and therefore become more expensive. When introduced, the disruptive innovation is significantly cheaper than similar products.

Compared to professional dental whitening, which costs on average US\$400, whitening strips offer similar results with a less cumbersome process and a cheaper price tag of US\$44 for two weeks.

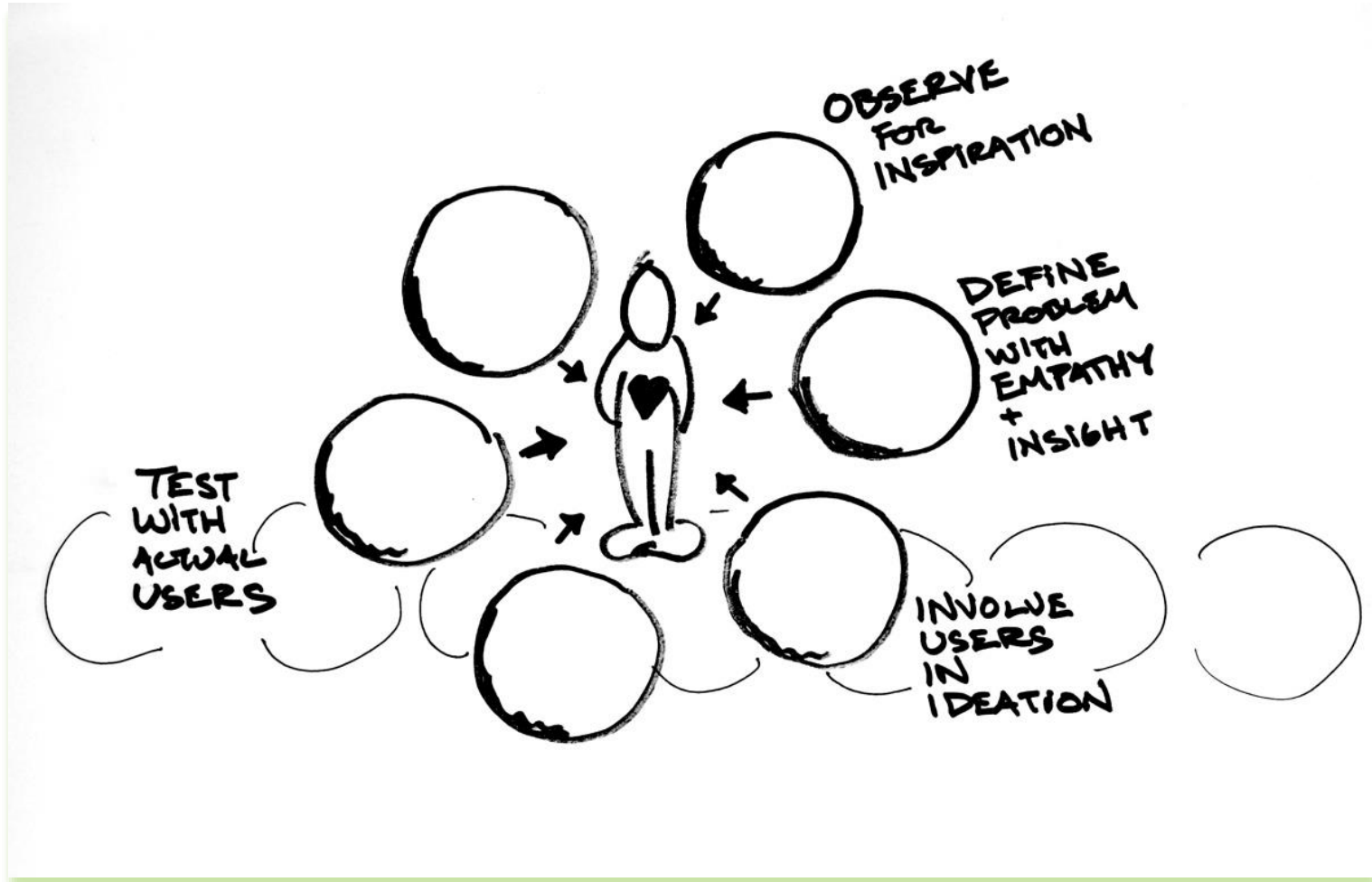


Typically advanced by an enabling technology. Disruptive innovations are powered by a technology that independently experiences rapid improvements in performance; think of computing, mobile communications technology, nanotechnology, and biotechnology. This factor helps drive the disruptive innovation toward increasingly complex markets.

The Internet allowed Netflix to introduce a new business model by first offering Web-based DVD rentals and, later, instant video streaming.

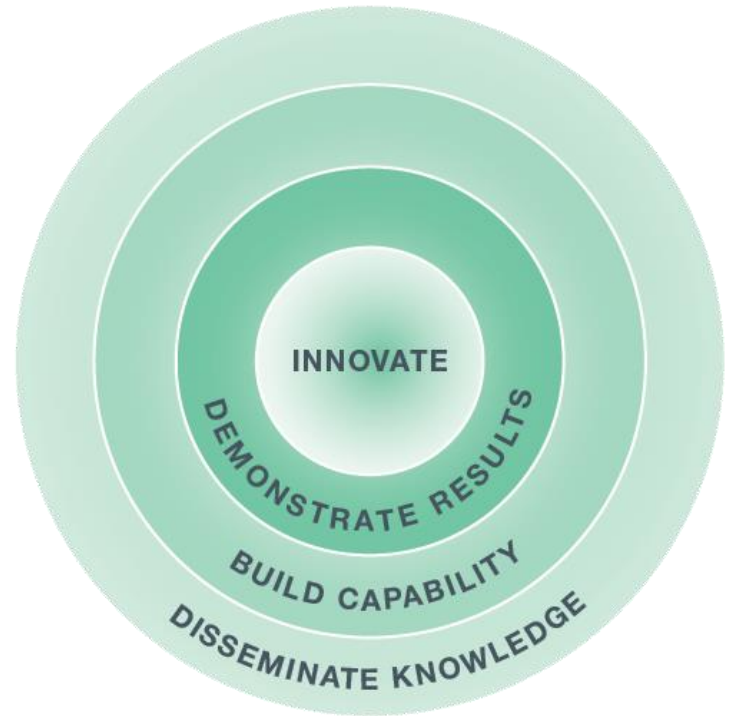


Lead-user design

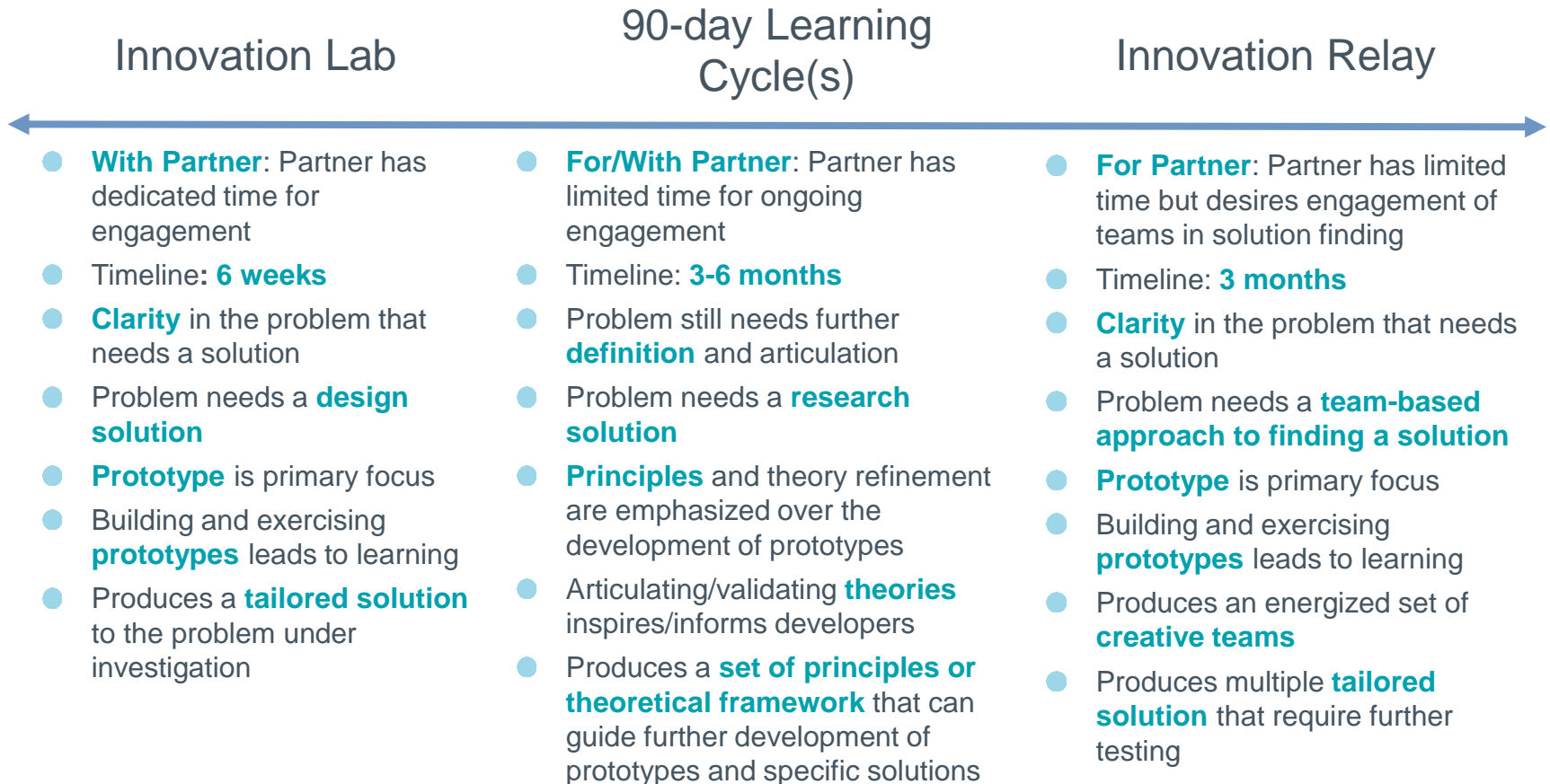


Why IHI Focuses on Innovation?

- Other industries have something to teach healthcare
- Systems are designed to achieve the results that they are achieving
- More ambitious aims: old ideas aren't good enough



Innovation Methods Spectrum



Six Themes for IHI Innovation Projects

Standardization	Coordination	Improved Decision Making	Find Analogous Situations	Simplification	Removal of accepted system faults
Bundles	Transitions for health systems	What matters to You	Improving handoffs	Remote monitoring of patients	Triple Aim definition
High reliability systems	Safe transitions for elderly patients	Palliative Care	Risk resilience	Optimizing stroke care	Primary Care 3.0
Production system design	Integration of behavioral health and primary care	Antibiotic stewardship	Business Case	Real-Time Demand Capacity for Flow	Execution Framework



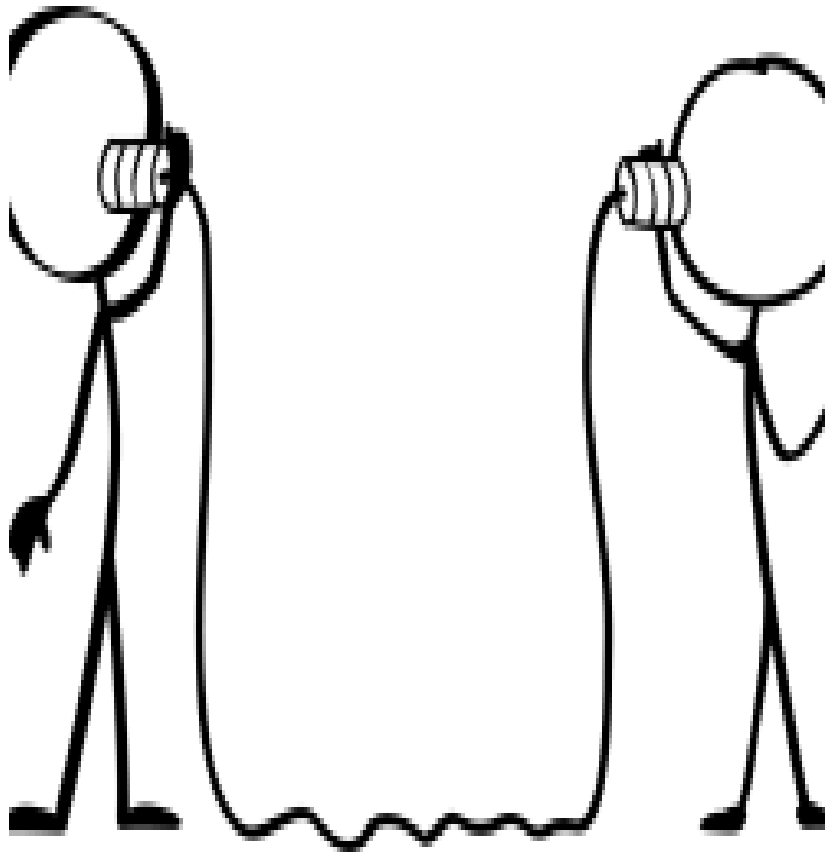


HASSO PLATTNER

Institute of Design at Stanford



Redesign the Communication Experience



Goals for next hour:

- Experience innovation and design thinking for yourself.
- Your challenge: **Redesign the communication experience between patients and providers**
- Leave this session with a new approach to speaking to your own doctor
- Have some fun & meet new friends



Design begins with empathy

- Pull out whatever device you use to communicate with your friends & family.
- Starting point: Examine each other's phones, tablet, etc and learn how your partner uses their devices to connect with their loved ones.

5 min for Interviewer #1, then switch
5 min for Interviewer #2



Dig Deeper

- Now dig deeper: How do you prefer to get good news? What about difficult news? When do you stop written communication and switch to verbal?
- Ask “why” often...try to really dig for stories, emotion, understanding
- Note any surprising insights or unexpected discoveries
- 5 min for Interviewer #1, then switch
- 5 min for Interviewer #2

5 min for Interviewer #1, then switch
5 min for Interviewer #2



Capture findings

- Synthesize your learning into a few ‘needs’ of your partner, and a few ‘insights’ that you find interesting.
- ‘Needs’ should be verbs
- ‘Insights’ are discoveries or observations that you might leverage when creating solutions.



Problem Statement

- Select the insight and write it down.
- Start here: "Lindsay, her doctor world, ___"
- "Lindsay To do this seamless Lindsay loves to t
- This is the innovative design so make it juicy and actionable!



3 minutes



Ideate – Draw

- Write the problem statement at the top of the page.
- Create solutions to the new challenge you've identified.
- GO FOR VOLUME! & GO FOR PICTURES!
- This is time for idea generation, not evaluation—you can evaluate your ideas later.
- DRAW at least 3 pictures of possible solutions

5 minutes to DRAW



Share solutions

- Now it's time to share your sketches with your partner!
- Note likes/dislikes and builds on the idea, and listen for new insights in your partner's responses.
- This is another opportunity to learn more about your partner's feelings and worldview.
- Fight the urge to explain and defend your ideas—see what they make of them!

5 min for Interviewer #1, then switch
5 min for Interviewer #2



Your new solution

- Now, consider what you have learned both about your partner, *and* about the solutions you generated.
- From this new understanding sketch a new idea – could be a variation on an idea from before or a completely new idea.
- Try to provide as much detail & color around your idea as possible.
- How might this solution fit in the context of your partner's life?
- When and how might they handle or encounter your solution?

5 minutes

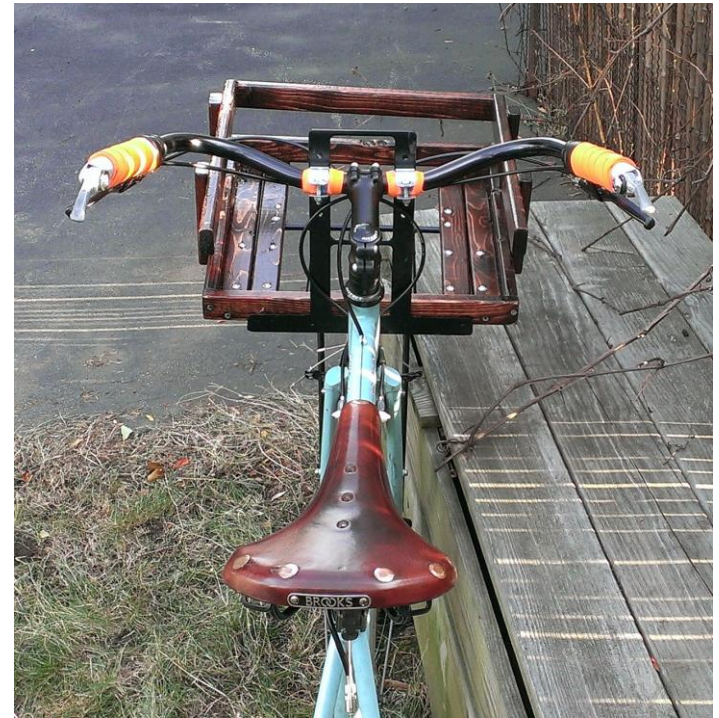


Your Turn



Next steps...

- Similar exercise with providers
- Would be to build a physical prototype or simulation of the communication experience



- ...then test, test, test...

Why test?

- To increase the degree of belief that your idea will result in improvements in your setting
- To learn how to adapt the innovative idea to real world
- To evaluate the costs and “side-effects” of the innovation
- To minimize resistance when ready to spread



The power of this process

- Human centered design
- Getting past your first idea quickly
- Getting to a testable prototype in hours not weeks
- A bias towards action and understanding
- Show don't tell
- Iteration and refinement



Applications to healthcare

- How to change a ‘service’ or an ‘experience based aspect’ of our healthcare system...
 - Waiting room experience
 - Diabetes management
 - ER workflow
 - Non-visit experiences (communication in between visits)
 - Community-based care experiences
 - Rounding experience (for patients and providers)
 - OR team process & workflow pre-incision



What is behind the process

- When undertaking a major initiative:
 - This is an exercise, not the end product
 - This is an engagement/jumping point used periodically throughout a full design session
 - This is a way to demonstrate that everyone can have a role in innovation (although they may not find it comfortable)
 - This type of work is preceded by an short but intense period of research and observation



Concluding thoughts

- What are some experiences, services, or products that need redesign in your work?
 - Think small
 - How will you evaluate?
- Practice making connections in your everyday life...Where do I visit everyday that might have lessons for my work in healthcare?
- Use a process, any process, that builds on empathy, human-centered design, prototyping and iterative learning



Questions?

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