FOSTERING INNOVATION IN HEALTHCARE

How to link human needs, business opportunities, and emerging technologies

October 15, 2013
INNOVATION DEFINED

innovation
\i-nə-və-shən\\nCreation resulting from study and experimentation
SESSION GOAL

Let’s spend the next hour talking about HOW to foster a culture of innovation at healthcare.

First…just **one** background slide….
WHO IS IDEO?

BACKGROUND

IDEO is 650 people providing impact through design.

We employ a human-centered, technology-informed approach to help organizations in the business, government, education, healthcare, and social sectors innovate and grow.
EMPLOY DESIGN THINKING TO BUILD INNOVATION CAPABILITIES
WHAT IS DESIGN THINKING?

Design thinking is a human-centered approach to innovation that draws from the designer’s toolkit to integrate the needs of people, the possibilities of technology, and the requirements for business success.

Four main components of design thinking:

**Team:** Populate interdisciplinary teams with T-shaped people

**Discover:** Observe to become inspired

**Ideate:** Use your inspiration to visualize possibilities

**Prototype:** Drive continued innovation through prototyping
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**Prototype**: Drive continued innovation through prototyping

**Myth**: Innovation is an *innate talent*
**Fact**: Innovation is a *learnable skill*
ONE:
ASSEMBLE AN INTERDISCIPLINARY TEAM WITH T-SHAPED PEOPLE
A HUMAN-CENTERED DESIGN APPROACH

We recommend using human factors, business / policy scenarios, and emerging technology as:
• sources of inspiration
• ingredients for design
• criteria for implementation

The results are integrated solutions that drive growth.
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Myth: Innovation requires absence of constraints
Fact: Innovation thrives on limits and boundaries
DYNAMIC ROLE OF TECHNOLOGISTS

In early explorations, broad aggregations of technology are considered and judgment is deferred. As concepts mature, “engineering thinking” is employed, with a focus on feasibility, risk mitigation and reliability.
Technologists on early-stage innovation teams are inspired by broad aggregations of technologies to address business- and user-driven questions.

Technologists help innovation teams become conversant with technology to help explore new opportunities.
Iterative prototyping drove development from initial sketches to field test in six months. Lunar Electric Rover is now positioned as an example of a faster, more nimble development process at NASA.
TWO:
OBSERVE TO
BECOME INSPIRED
A HUMAN-CENTERED DESIGN APPROACH

The most powerful enabler of innovation is the inspiration born by an authentic and visceral appreciation of your customers and stakeholders.
A HUMAN-CENTERED DESIGN APPROACH

To build viable offers for your rapidly evolving global market, healthcare innovators must *develop empathy* for a customer base.
SEVEN DISTINCTIONS

LEARNING FROM TRADITIONAL MARKET RESEARCH

- Improves existing things
- Focuses on explicit needs
- Based on segments
- Uses controlled settings
- Involves scripted interviews
- Looks for large target groups
- Employs objective analysis

LEARNING FROM OBSERVATION AND EMPATHY

- Inspires new ideas
- Uncovers latent needs
- Focuses on individuals & behaviors
- Visits natural contexts
- Uses dynamic conversations
- Learns from extremes
- Exploits empathic interpretation
EXAMPLE: UNIVERSAL EAR

Conversion Sound tapped IDEO to reinvent the fitting protocol for hearing aids. Research in India allowed us to test automated processes for fitting protocol that can run on a PDA or smartphone.

How can you use qualitative research to inspire new opportunities?
EXAMPLE: WOUNDED WARRIOR

Needs-based research in homes provided insights into how injured U.S. service men and women must adapt to a new home.

How can you use insights from interviews to identify new opportunities?
QUICK RECAP

THE ARC OF INNOVATION

We are here
THREE:
USE YOUR INSPIRATION TO VISUALIZE POSSIBILITIES
Synthesis is the art of making meaning and finding direction from disparate and contradictory inputs.

• Teams aggregate, edit and condense what they have learned to establish a new perspective and to identify opportunities for inspiration

• The synthesis process takes teams from inspiration to ideas, and from stories to solutions
SYNTHESIS PROCESS

SYNTHESIS STEP ONE: TELL STORIES FROM THE FIELD

Absorb stories, get immersed in research findings, get the data and thoughts into a tangible form.
SYNTHESIS PROCESS

SYNTHESIS STEP TWO: LOOK FOR PATTERNS

Your goal is to make order from chaos. Don’t panic, and don’t rush. Identify key themes, and assemble a preliminary hierarchy and priority based on customer experience.
**SYNTHESIS PROCESS**

**SYNTHESIS STEP THREE: EXTRACT THE KEY INSIGHTS**

*This is really really hard.* Lock the team in a room and give them space. Define the message by editing and building on insights.

![Diagram of synthesis process](image)
SYNTHESIS PROCESS

SYNTHESIS STEP FOUR: CRAFT THE MESSAGE

Find the strongest way to tell your message. Get out of your office. Share and iterate.
Brainstorming is:
A process for groups to generate a lot of ideas quickly, fluidly, and effectively

Brainstorming needs:
set up, diverse group, facilitator, follow rules, evaluation
The Challenge:
Teach Kaiser-Permanente staff to design a new workplace, with an initial focus on increasing efficiency of shift changeover

Issues:
inconsistent processes, inefficient communication, resistance to I.T. tools
CASE STUDY: KAISER PERMANENTE

OBSERVATIONS AND SYNTHESIS OF OPPORTUNITIES
“I love having the info at my finger tips.”
“First time I’ve ever made it out here at the end of my shift.”
“I’m an hour AHEAD, and I’ve only been here 45 minutes.”
QUICK RECAP

CONVERGENT/DIVERGENT CYCLES OF INNOVATION
**Trends and Stories**
A collection of important trends, human desires, and important changes happening in society that will affect the car. These come from the research program.

**Findings**
Emergent patterns that are selected from across the themes and stories. They are broad areas of things that are happening in the world that will be meaningful to address with innovation.

**Opportunity Areas**
A description of a genre of ideas that are rich and full of potential for innovation and business success. These areas are generative and can produce many hundreds of ideas.

**Brainstormed Ideas**
The fledgling starts of concepts that come out of opportunity areas. Often, these are quickly generated in large, diverse groups of people. They can then be sorted and judged to select the most promising.

**Concepts**
More complete ideas which paint a picture of a potential new service, product or experience or a change to an existing offering. They are more rigorously developed and checked, and often visualized to think through the implications to the customer and business.
FOUR: EVALUATE POSSIBILITIES THROUGH PROTOTYPING
“Prototyping is risk mitigation for imagination breakthroughs... Don’t think about this as brainstorming; think about it as a way to measure risk, understand failure rates, and learn what customers think, so we can run through more ideas without increasing risk.”

-Jeffrey Immelt, GE CEO
“Fail often to succeed sooner.”

-David Kelley, IDEO Chairman
WHY SHOW PROTOTYPES?

Prototypes help us to visualize the future
Looks like, behaves like, works like…..

Prototypes, simulations and models elicit rich responses
Customers, management, and partners respond to tangible objects and experiences much better than to expository writing.
WHAT MAKES A GOOD PROTOTYPE?

RIGHT

• Target the question
• Focus on one issue and remove other factors
• Break down concerns; combine them later

RAPID

• Iterate; make many quickly
• Push for many different classes of solutions

ROUGH

• Just good enough; not perfect
• Only as detailed as it needs to be
• Reduces emotional attachment; medium affects the thinking
EXAMPLE: GYRUS ‘DIEGO’ SURGICAL TOOL

"Diego tripled our revenues in the powered instrument product segment, and elevated our profile in our served markets. What we learned from IDEO about product design has influenced the way we approach all new major development projects."
—Perry Mykleby, senior director of marketing, Gyrus NT Division
Thank you

Dave Blakely  dave@ideo.com
EXTRA SLIDES
DRIVING CULTURAL CHANGE WITH DESIGN THINKING
BACKGROUND: CISCO BANGALORE AND SHANGHAI

Four Essential Needs

01 NEED TO EXPAND COLLABORATION BEYOND PROBLEM SOLVING

02 NEED TO ADDRESS EASTERN SENSIBILITIES WITH RESPECT TO INDIVIDUAL & GROUP DYNAMICS

03 NEED TO BOTH BE AND FEEL EQUAL TO SAN JOSE

04 NEED TO BALANCE EASTERN IDENTITY AND WESTERN ASPIRATIONS
CASE STUDY: CISCO SHANGHAI AND CISCO BANGALORE ENGINEERING CENTERS
FIELD RESEARCH: OBSERVATIONS AND INTERVIEWS

PEOPLE DISPLAYED STRONG AND UNIQUE CULTURAL SENSIBILITIES WITH REGARD TO THE ROLE OF THE INDIVIDUAL AND GROUP DYNAMICS.

In Bangalore, there is a seeming paradox of competitive individualism at work yet a strong sense of intimacy between colleagues.

In Bangalore, people are used to rules that are poorly administered, so getting things done is based on your network and relationships.

In Shanghai there is a strong sense of collectivism. People believe in the rules and the ways, and expect to be acknowledged for doing well in their position within the group.
CASE STUDY: CISCO SHANGHAI AND CISCO BANGALORE ENGINEERING CENTERS

SYNTHESIS OF OPPORTUNITIES FOR NEW ENGINEERING CENTERS

- **Foster Innovation:** Connecting People to the Work
- **Enable Growth:** Connecting People to Cisco
- **Build Community:** Connecting People to People
- **Sustain Balance:** Connecting People to their Lives
Neighborhoods are given tools to add character to the Avenue that connects them to the Hub.

- Photos
- Display Screens
- Pin-up Areas
- Competition Invites
- White Boards