

## **CDC Coffee Break: Human-Centered Design Meets Evaluation**



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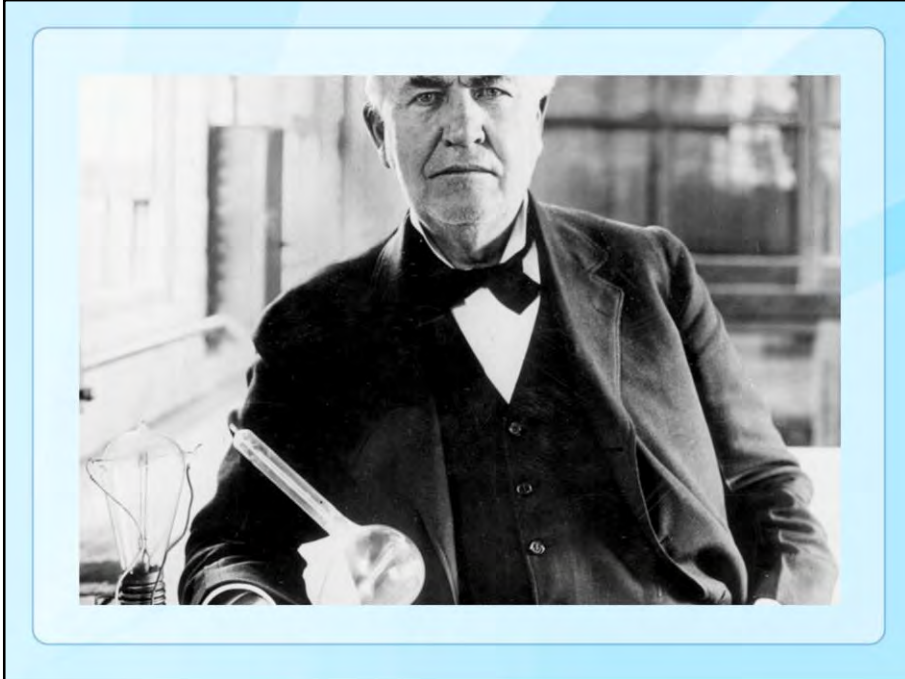


*Disclaimer: The information presented here is for training purposes and reflects the views of the presenter. It doesn't necessarily represent the official position of the Centers for Disease Control and Prevention.*

## Topics for Discussion

- Future of Innovation
- What is Human-Centered Design?
- Example Methods
  - Rose, Thorn, Bud
  - Affinity Clustering
- Resources

On today's call, we'll start off with a quick overview on the future of innovation and what human-centered design is. Then we will quickly jump into two example methods for practicing human-centered design. Then, we will end with some useful resources.



Innovation has historically been viewed as a specialty.



Something mastered and practiced by only a handful of scientists and bold entrepreneurs.



And in special locations specifically set aside for innovation to happen like Edison's Menlo Park Lab.

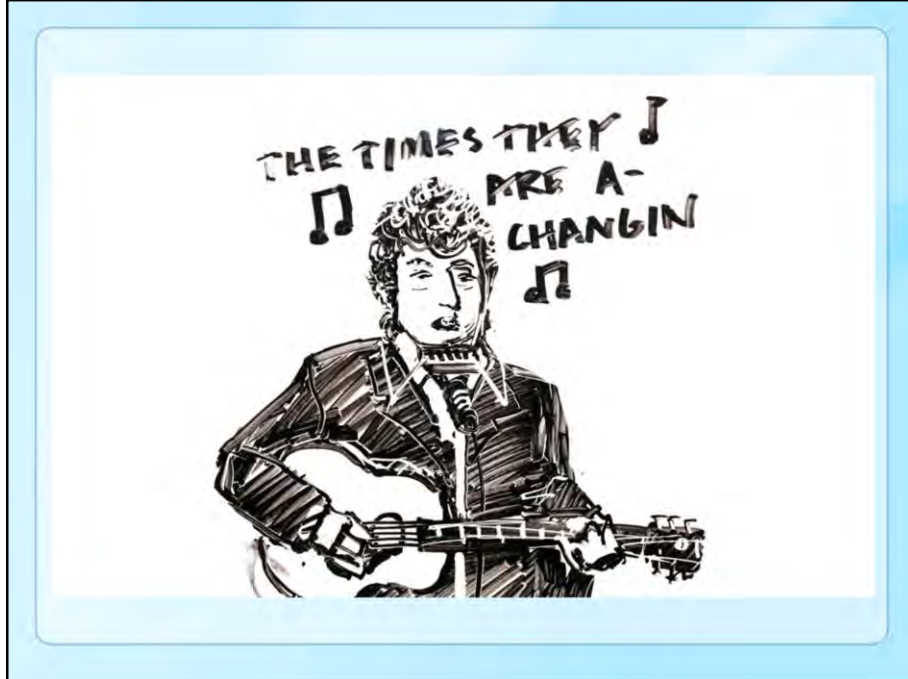


Or in Silicon Valley.



Innovation has always been important but it clearly wasn't the job of everyone.





But the time they are a-changing!



As you can see here with drone from Amazon and truck from UPS.



Or even with companies like Blockbuster that no longer exist.

Today, innovation is a *growing* global social and economic imperative.



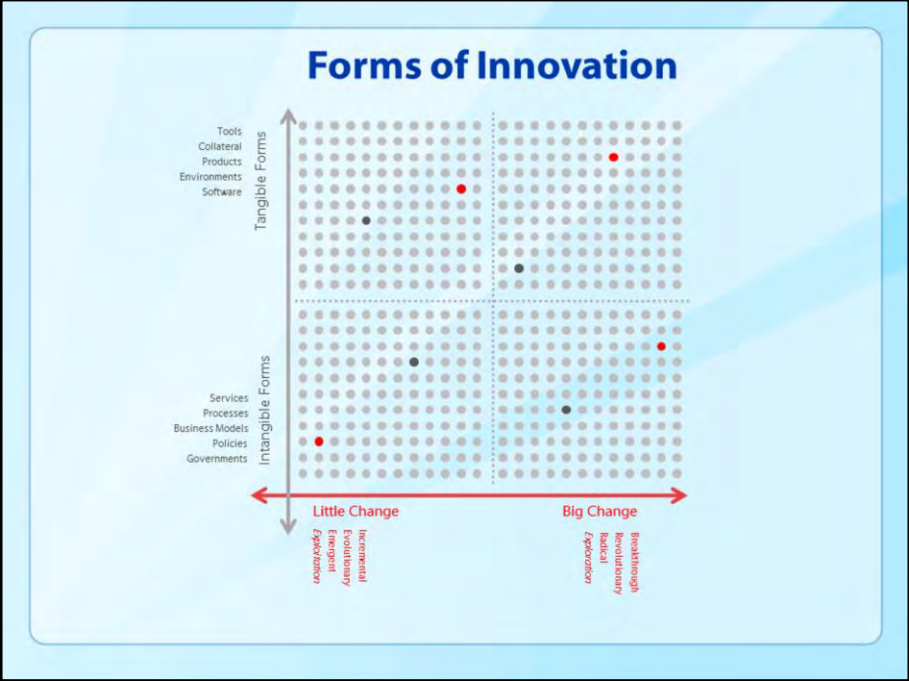
Today innovation is a growing global social and economic imperative

## **Calling for more people to be more innovative, more often.**

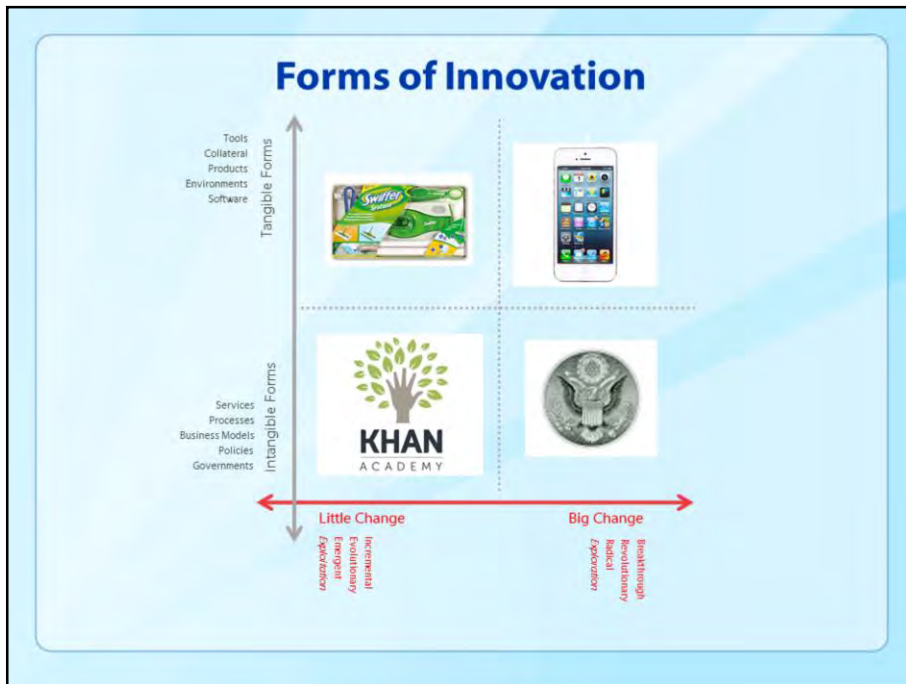
- Business leaders rank innovation (creativity) as the 3<sup>rd</sup> most necessary skill in their organization. \*
- 81% of fortune 500 companies have appointed an individual responsible for driving innovation. \*\*
- China's government is pouring billions of dollars into research and development. Their current five-year plan calls for indigenous innovation. \*\*\*

\* IBM CEO Study \*\* Forbes \*\*\* The Economist

Calling for more people to be more innovative, more often.



Innovation also comes in many different forms as you can see in this diagram. It can be in an intangible or tangible form or require little change or big change.

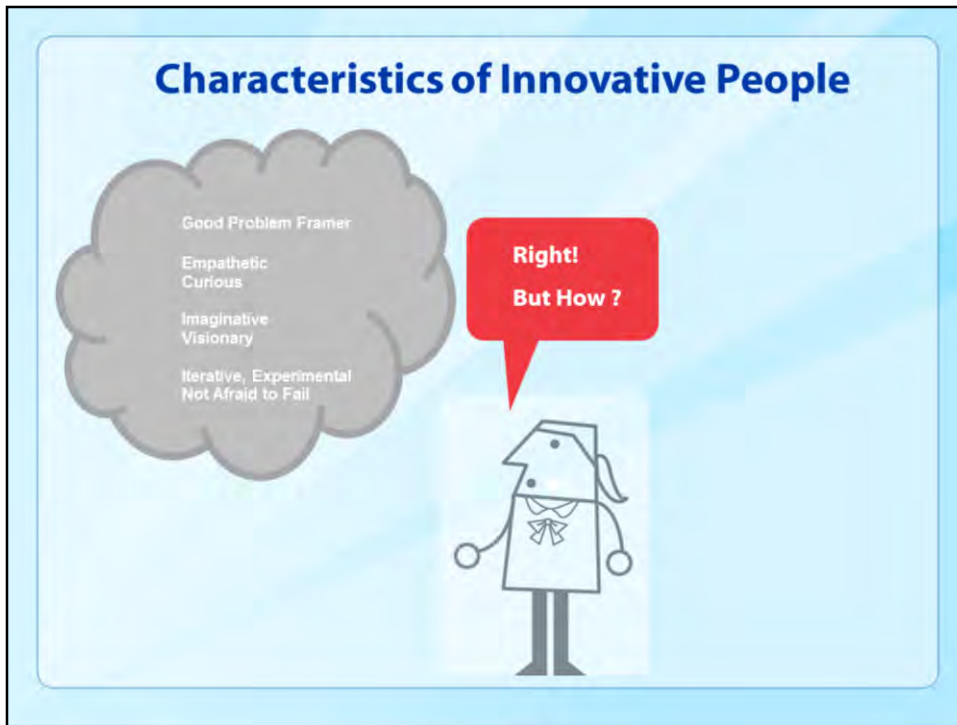


Here are some examples of some types of innovation. It could require little change and be in a tangible form like Swiffer or it could be in an intangible form and require big change like the Federal Government.



We are now definitely in the creative age where we constantly hear the buzzword “innovation.” And, we are often required to be innovative more often with our programs and services due to the limited resources that are available. But, what makes someone innovative? Here are some characteristics of innovative people that have been highlighted. Someone that is innovative is often curious and not afraid to experiment and fail.





But, how can we be innovative?



You can use Human-Centered Design!

## **Human-Centered Design**

The discipline of developing solutions in the service of people

Human-centered design is the discipline of developing solutions in the service of people. Now lets break this down.

## Human-Centered Design

The **discipline** of developing solutions in the service of people

Lets think about what we mean by “discipline.”



Here is a quote to help you – “Design is not a one-shot vaccine; it’s an ‘innovation fitness program’ that puts an organization on top of its game. It is not an ‘event’ it is a way of thinking, communicating and doing every day.”

## Human-Centered Design

The discipline of **developing solutions** in the service of people

Now lets think about what we mean when we say “developing solutions.”



*“Everyone designs who devises courses of action aimed at changing existing situations into preferred ones.”*

**HERB SIMON**  
Former Professor, Carnegie Mellon University  
Computer Scientist, Physiologist, Economist, Author, Nobel Laureate

Here is quote referring to developing solutions – “Everyone designs who devises courses of action aimed at changing existing situations into preferred one.”

## Human-Centered Design

The discipline of developing solutions in the **service of people**

Now lets focus on the “service of people.”





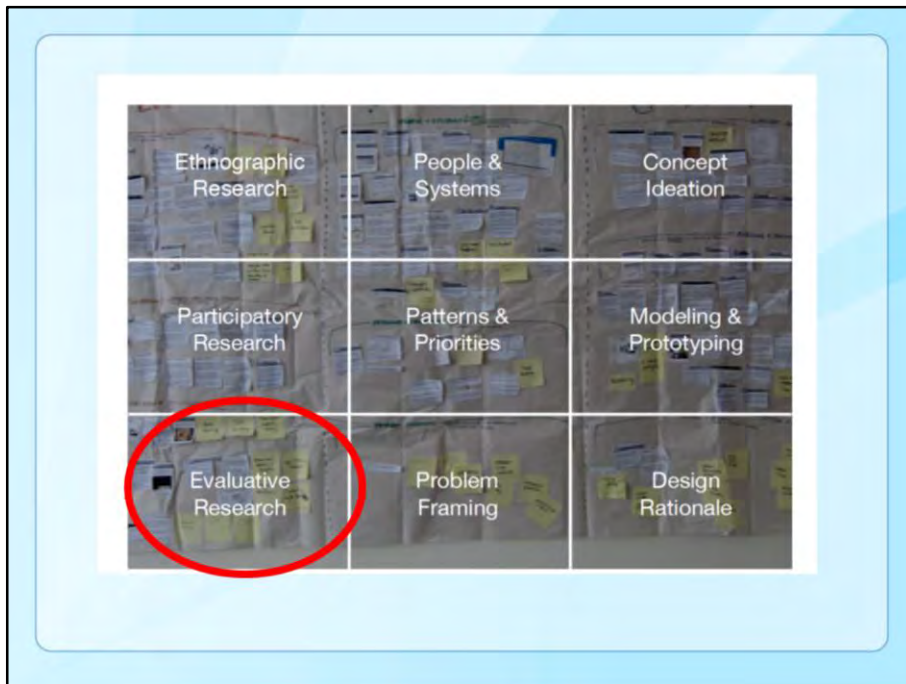
Here is an image of personal protective equipment that was designed for ebola healthcare workers to be faster and more efficient in removing equipment.



Here is an image all different types of health care providers sitting around a table discussing ways to better treat their patients.



While there are thousands of tools and methods to help you use human-centered design and be more innovative, the framework that I have learned is through the Luma Institute. The Luma Institute has a portfolio of 36 of the most effective tools for innovation that are organized into three categories: Looking, Understanding and Making.



These methods can be used for many different types of activities, including as a really great tool for conducting evaluative research and making it more “user-centered”, one of the key concept human-centered design. We tested this out during a strategic planning session for the Million Hearts Initiative, and are excited to walk you through two of the methods we used.

## Rose, Thorn, Bud

- A technique for identifying things as strengths, challenges, or opportunities



The first method I want to introduce to you is the Rose, Thorn, Bud activity. This is a great technique that can be used to identify strengths, challenges, and opportunities associated with the program you are evaluating.

## Rose, Thorn, Bud

### QUICK GUIDE

- Identify a topic for consideration.
- Assemble a diverse group of stakeholders.
- Give each participant a pen and 3 sticky note pads.
- Explain the topic and the color key.
- *Rose* = **Pink** (indicates things that are positive).
- *Thorn* = **Blue** (indicates things that are negative).
- *Bud* = **Green** (indicates things that have potential).
- Instruct each person to generate many data points.
- Include one issue, insight, or idea per sticky note.

### HELPFUL HINTS

- Tell participants to write multiple items per color.
- Resist the temptation to describe solutions here.
- Limit the time frame and the amount of discussion.

Here is a quick guide for rose, thorn, bud. First you will need to identify a topic for consideration. For our strategic planning session, we focused on reaching the goals of the Million Hearts initiative. We assembled mixed group of people and teams that are involved with Million Hearts and gave each person pink, blue, and green sticky note pads. Each person had to identify roses or strengths, thorns or problems, and buds or opportunities regarding the state of the Million Hearts initiative in getting to its goals.

We asked folks to identify at least five roses, buds, and thorns each. We also told folks not to spend time describing solutions but try to get as many items as possible.

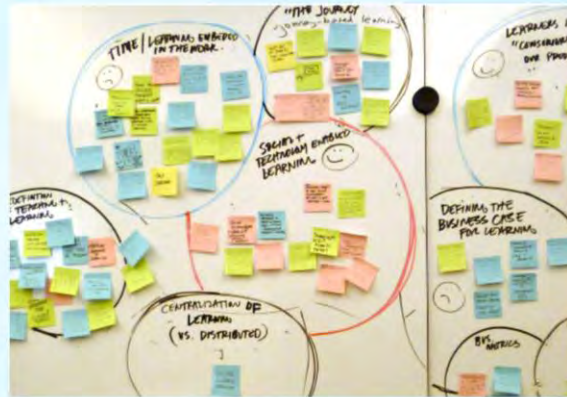
## **Benefits**

- Helps you codify research data
- Invites input from all team members
- Facilitates productive discussion
- Helps you identify issues and insights

Here are some benefits of rose, thorn, bud. It can help you easily codify qualitative data. It can also allow those that are introverts to equally participate.

## Affinity Clustering

- A graphic technique for sorting items according to similarity



The next method I want to introduce you to is: Affinity Clustering. A method that you can use right after Rose, Thorn, Bud that will help with sorting and comparing items.



## Affinity Clustering

### QUICK GUIDE

- Identify a topic for consideration.
- Gather a data set (research findings, ideas, etc.).
- Record each item on a separate card or sticky note.
- Form a team of collaborators and pick a facilitator.
- Have one person describe, then place, an item.
- Invite others to place similar items in proximity.
- Repeat the patterns until all items are included.
- Discuss and rearrange items as grouping emerge.
- Label the clusters that finally take shape

### HELPFUL HINTS

- Don't label the clusters too early. They may shift.
- Look for opportunities to create subgroupings.
- Consider using color to code different types of data.

Here is a quick guide for doing affinity clustering. For our strategic planning session, we broke the large group into two groups. Within each small group, we had one person describe one of their roses, thorns, and/or buds and then they put the item on the wall. We then invited others with similar items to them put their stickies close by. After doing this few items, patterns and themes started to emerge. After most of the stickies were put up on the wall, clusters were formed. We then made sure all participants agreed and rearranged items if necessary, and then we labelled each cluster with an overarching theme.

When doing this activity, it is important not the label clusters to early and also look for opportunities to create subgroupings.

## **Benefits**

- Helps you identify issues and insights.
- Reveals thematic patterns.
- Facilitates productive discussion.
- Builds a shared understanding.

Here are some benefits of affinity clustering. It can help with revealing themes and can also serve as a great tool with facilitating discussions.



Here some pictures of our group doing Affinity Clustering with Rose, Thorn, Buds during at the Million Hearts strategic planning session. These activities were extremely helpful to the team. It allowed us to understand what is going well, what needs to be improved, and also items that could easily be addressed to help reach the goal of Million Hearts.

## Importance/Difficulty Matrix

- A quad chart for plotting items by relative importance and difficulty



Another method that we used to help establish priorities was the Importance/Difficulty Matrix. This is a great tool for being able rank ideas based on importance or impact and difficulty or cost to execute.

## Importance/Difficulty Matrix

### QUICK GUIDE

- Identify a project that requires prioritization.
- Make a poster showing a large quad chart.
- Label horizontal axis Importance (or Impact).
- Label vertical axis Difficulty (or Cost to Execute).
- Form a team, and gather data for discussion.
- Plot items horizontally by relative importance.
- Plot items vertically by relative difficulty.
- Consider the quadrants where items get placed.
- Look for related groupings, and set priorities.

### HELPFUL HINTS

- Given each item its own place on the relative scale.
- Listen carefully to every point of deliberation.
- Don't view this as a scientific Cost/Benefit study.

Here is a quick guide on doing Importance/Difficulty Matrix. For our strategic planning session, this tool was used later in the day after spending some time generating ideas for tackling “thorns” and “buds” that were identified earlier. We had individuals come up to the poster and plot three of their ideas for getting to the goals of Million Hearts.

## **Benefits**

- Helps you prioritize items quickly
- Facilitates deliberation
- Resolves differing opinions
- Helps you team develop a plan of action

Here are some benefits of this method. For our session, it allowed to see that we need to engage our partners more frequently by having a Million Hearts Monthly Private Partner call – which we now have!

## Resources

- <https://hbr.org/2014/01/a-taxonomy-of-innovation>
- <http://www.servicedesigntools.org/>
- <http://www.usability.gov/>
- <http://dschool.stanford.edu/use-our-methods/the-bootcamp-bootleg/>

So, what next? Here are some helpful resources to get you started with these methods.

## **Acknowledgments**

- Allison Goldstein
- LUMA Institute

Finally, I would like to thank Allison Goldstein and staff from the LUMA institute in helping to put this presentation together.



## Reminders!

All sessions are archived and  
the slides and script can be accessed at:

**<http://www.cdc.gov/dhdsp/pubs/podcasts.htm>**

If you have any questions, comments, or topic  
ideas send an email to:

**[AREBheartinfo@cdc.gov](mailto:AREBheartinfo@cdc.gov)**

All sessions are archived and the slides and script can be accessed at our Division website. Today's slides will be available in 2-3 weeks.

If you have any ideas for future topics or questions, please contact us at the listed email address on this slide.

## Next Coffee Break

**When: August 11<sup>th</sup>, 2015 at 2:30 ET**

**Topic: Developmental Evaluation and Health System Interventions: A State Example**

**Presenter: Joanna Elmi**



Division for Heart Disease and Stroke Prevention  
National Center for Chronic Disease Prevention and Health Promotion




Our next Coffee Break is scheduled for Tuesday, August 11th and is entitled “Developmental Evaluation and Health System Interventions: A State Example.”

**For more information please contact Centers for Disease Control and Prevention**

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Telephone, 1-800-CDC-INFO (232-4636)/TTY: 1-888-232-6348  
E-mail: [cdcinfo@cdc.gov](mailto:cdcinfo@cdc.gov) Web: [www.cdc.gov](http://www.cdc.gov)

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

National Center for Chronic Disease Prevention and Health Promotion  
Division for Heart Disease and Stroke Prevention



Thank you again for joining us and have a terrific day everyone. This concludes today's call.