Fostering Innovation in Data Collection with Design Thinking

A Case Study from the CPI Program

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Agenda

- Goals of the project

- Process we followed
  - Method
  - Analysis

- Recommendations we identified

Goals

- Explore new ideas for improving CPI data collection
  - Small tweaks to revolutionary ideas
  - Encouraged new, creative, innovative, outside-the-box ideas
  - Without considering feasibility (for now)
- Hear from all groups involved in data collection
- Analyze and summarize ideas to present a path forward

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Background

- Consumer Price Index (CPI)
  - Measure of inflation
- CPI Surveys
  - Housing
  - Commodities and Services

The Process

Method

- Design Thinking

- Interviews with Stakeholders

- Analysis
    - Qualitative analysis of interviews
   - Aggregating findings into recommendations

Design Thinking

- A structured process for problem solving

- Developed to address "Wicked" problems
  - ▶ Complex problems with multiple stakeholder groups
  - ▶ Can be used for technology, process, policy, etc.

- Purpose is to
  - ▶ Facilitate innovative solutions
  - ▶ Reduce risk through diversity

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Design Thinking Model

What is?   What if?   What wows?   What works?
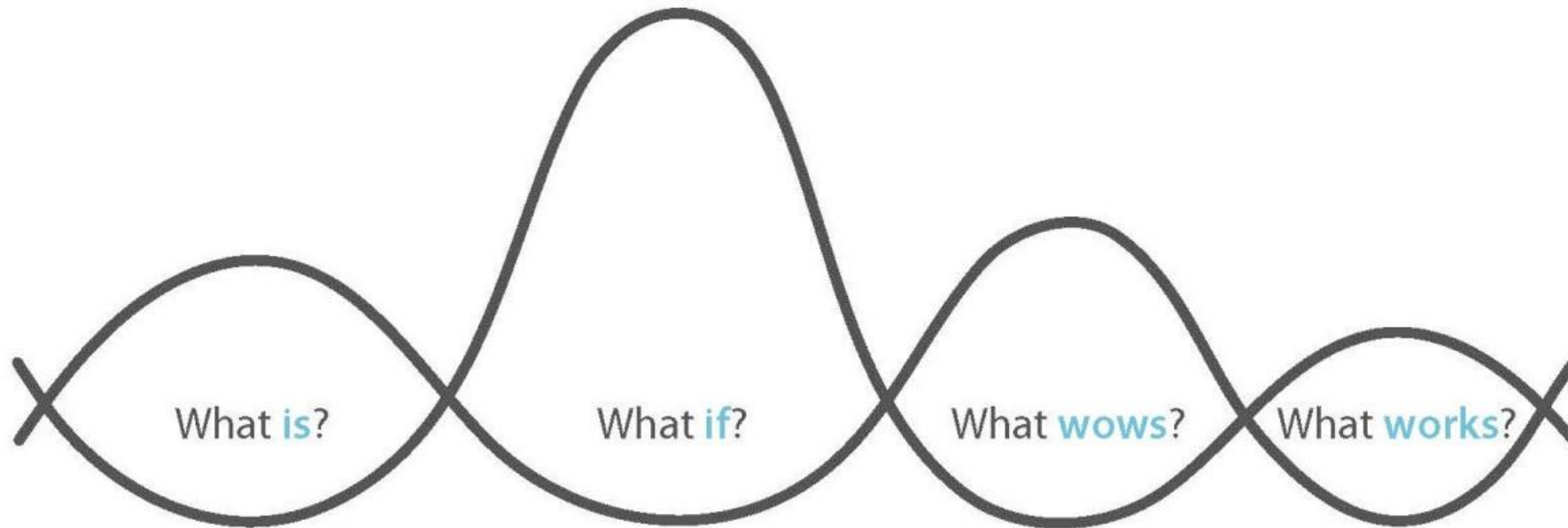
Jeanne Liedtka
University of Virginia

Liedtka, J. (2014). Innovative ways companies are using design thinking. *Strategy and Leadership*, *42*(2), 40-45.

By the Numbers

- 8 team members
  - ▶ 70 interviews across 9 user groups
  - ▶ >1,600 findings
  - ▶ 61 recommendations
  - ▶ 5 next steps
- It doesn't have to be this big! (but it can be)

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Stakeholder Groups

- 70 people across multiple groups
  - Office of Field Operations (Full-time and Part-time)
    - Regional office staff
    - National office staff
  - Data review
  - Testing
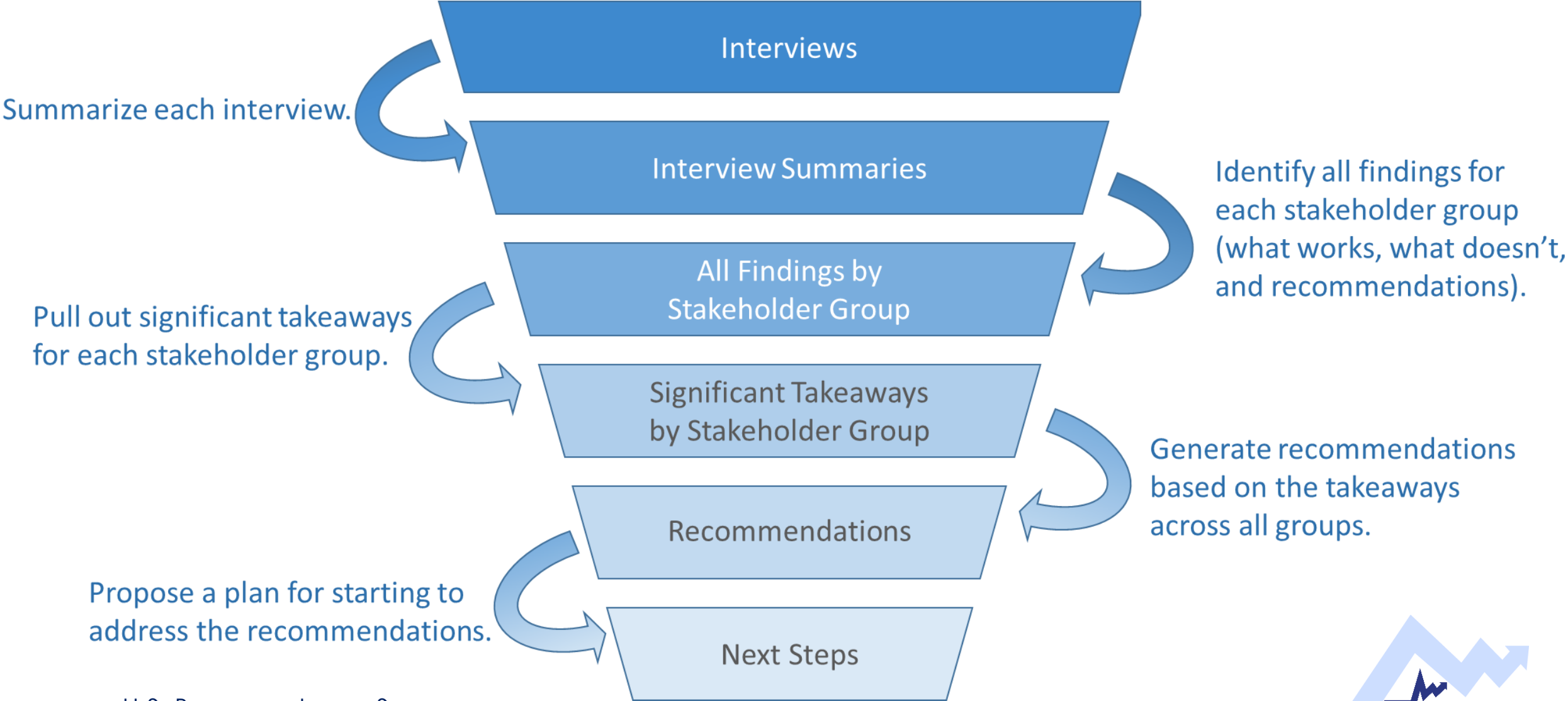 - Statistical Methods Group
  - IT Staff

Interviews

- 1 interviewer and 1 notetaker, plus participant

- Lasted 30-60 minutes

- Main topics
  - What works
  - What doesn't
  - Recommendations
  - New technology

- Tailored as appropriate for each stakeholder group
  - To cover topics like training, review, development, testing

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Analysis

- Used standard qualitative analysis methods

- Start by identifying all findings for all stakeholder groups
  - What works
  - What doesn't
  - Recommendations

- Goal was to narrow down to a final list of recommendations
  - From across all stakeholder groups

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Analysis Process

Interviews

Summarize each interview.

Interview Summaries

Identify all findings for each stakeholder group (what works, what doesn't, and recommendations).

All Findings by Stakeholder Group

Pull out significant takeaways for each stakeholder group.

Significant Takeaways by Stakeholder Group

Generate recommendations based on the takeaways across all groups.

Recommendations

Propose a plan for starting to address the recommendations.

Next Steps

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Prioritizing Recommendations

- Start with the list of recommendations across all stakeholder groups
  - Combine, divide, and clarify recommendations as needed
  - Rate each recommendation
    - Benefit (Medium, High)
    - Timeframe (Now, Short Term, Long Term)
  - Vote on priority

The Recommendations

The Good News

- We learned that a lot is going really well
  - ▶ Collection process in general
  - ▶ Collection Instrument: Both hardware and software
  - ▶ Training

Recommendation Categories

- Non-Technical
- Technical

Non-Technical Recommendations

- Address respondent burden Issues

- Review checklists and other item-specific procedures

- Review and improve procedures for web collection

- Review the options for communicating between our staff in Washington and those in the field.

- Offer new training to the field staff

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Technical Recommendations

■ Update the collection instrument

■ Review current procedures and consider new procedures and technologies

Number 1 Recommendation

■ *Fully integrate all of the applications related to data collection*

▶ Consistent across all stakeholder groups

▶ Suggestions covered all data collection systems

▶ Only recommendation voted on by all team members

▶ Can be done in pieces

Recommendations Already In Process

- Provide a second monitor for field staff

- Improve searching in Data Collection Manual

- Web collection procedures/training

Next Steps

- Review the "Now" recommendations
- Share the report with teams doing related work
  - Lots of detail that may be helpful, too
- Review training topics mentioned
- Identify opportunities to reduce respondent burden
  - Fewer quotes or less frequent pricing
- Consider options for integrating systems

In Conclusion

- Our approach generated lots of great ideas

- A few items are already being addressed
  - Confirming that they were useful changes

- We identified a set of logical next steps and identified teams in a position to move these ideas forward

- There are a number of possibilities to build upon the tools, procedures, and processes that are currently working well

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