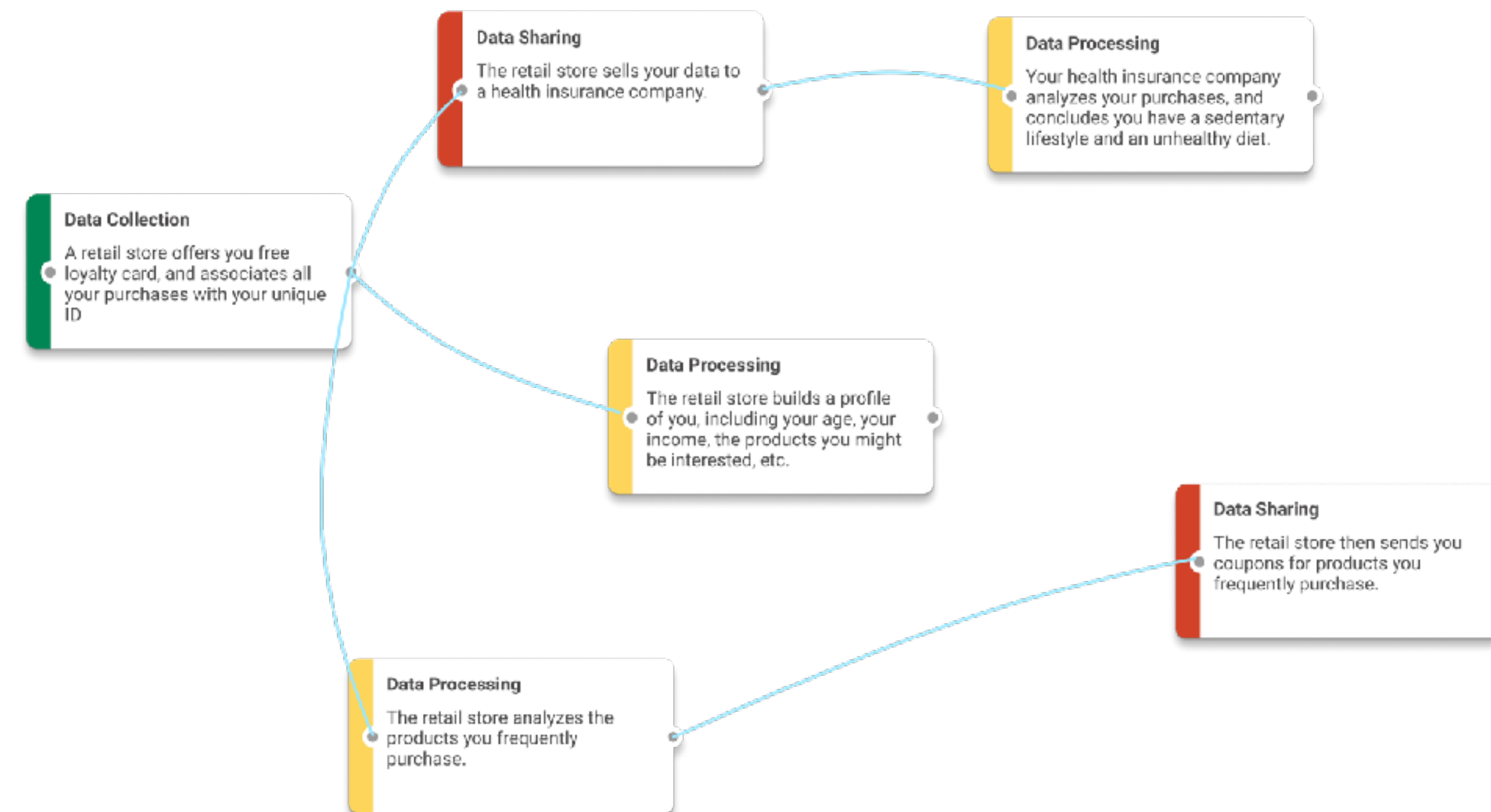


# Lean Privacy Review

Collecting Users' Privacy Concerns of Data Practices at a Low Cost

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<http://www.leanprivacyreview.com/>

# CHI 2018 @ Montreal, OKCupid Keynote Speech





# OkCupid Lied To Users About Their Compatibility

The image is a screenshot of the OkCupid website interface. On the left is a dark blue sidebar with navigation links: 'Browse Matches', 'Messages', 'Visitors', 'Quickmatch' (with a '1' badge), and 'Events'. Below these are sections for 'You might like' and 'Recently visited'. The main content area shows a profile for a user named 'Alice'. At the top of the profile, there is a photo of Alice, a green 'Online' status badge, and a '100% Match' percentage which is enclosed in a red rectangular box. To the right of the match percentage are '0% Enemy' and a 'Rate her profile' section with five stars (three are filled). Below the photo and match information, the name 'Alice' is displayed with a 'OkCupid' tag, followed by '30 • F • New York, NY (3 Miles)'. There are tabs for 'About' and 'Photos'. Under the 'About' tab, there is a section titled 'My self-summary' with a paragraph of text: 'I get the hiccups almost every day. I grew up in England but I'm American. My mother's side of the family is Icelandic and I would love to live there some day. I was raised as a Tibetan Buddhist. I have one bad eye, one ear lower than the other, and one foot smaller than the other. I love bad jokes. Yes I really did go to space camp (I was 16, so technically it was Advanced Space Academy)'. Below this is a section titled 'What I'm doing with my life'. On the right side of the profile, there is a 'Send a Message' button and a 'Browse invisibly' button with a ghost icon. At the bottom right, there is a partial view of another user's profile with the text 'Select Age to View M in New York'.

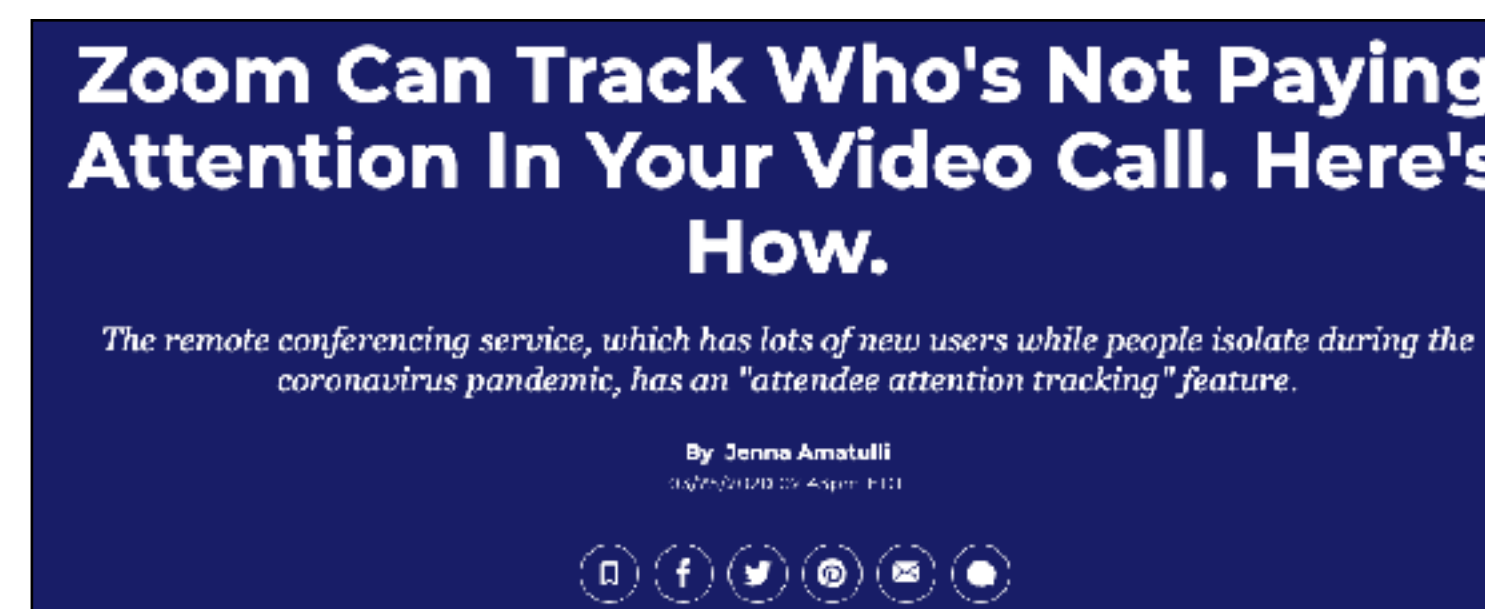
# Practitioners face a variety of similar dilemmas



**How Web Sites Vary Prices Based on Your Information (and What You Can Do About It)**  
By Thorin Klosowski

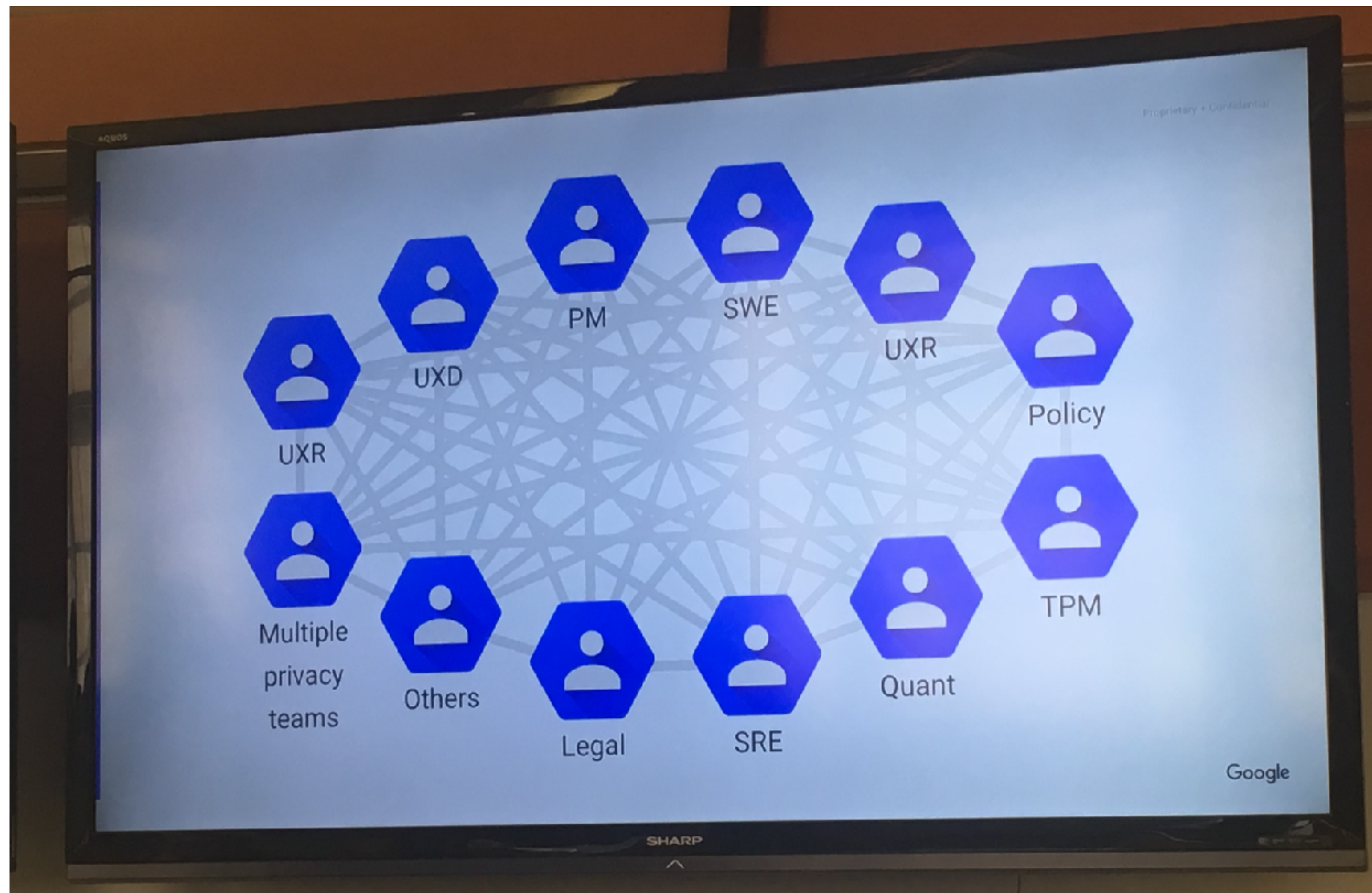
**IBM didn't inform people when it used their Flickr photos for facial recognition training**  
*Food for the algorithms*

AIRFARE DEALS Jan 20, 2015  
**Do Booking Sites Raise Prices Based on Your Search Habits?**

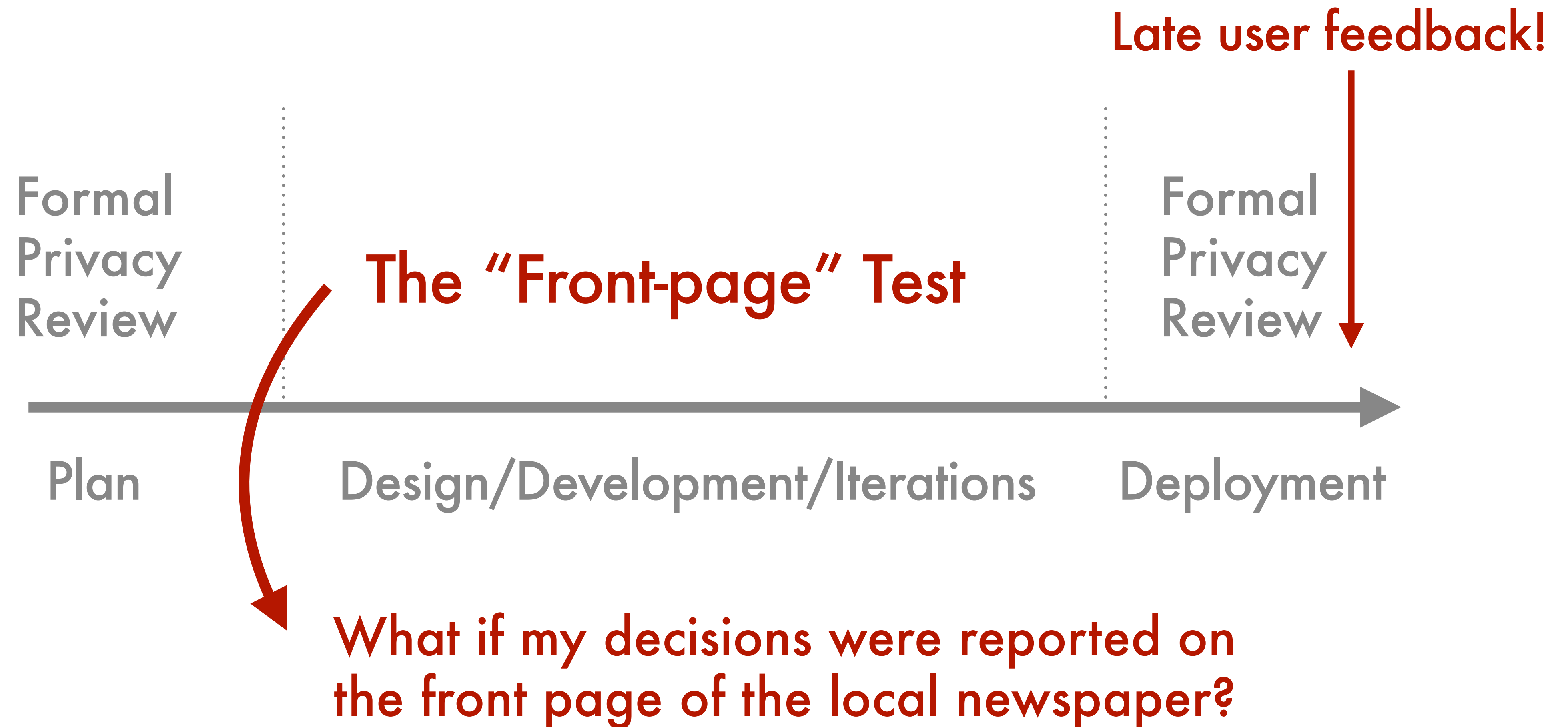




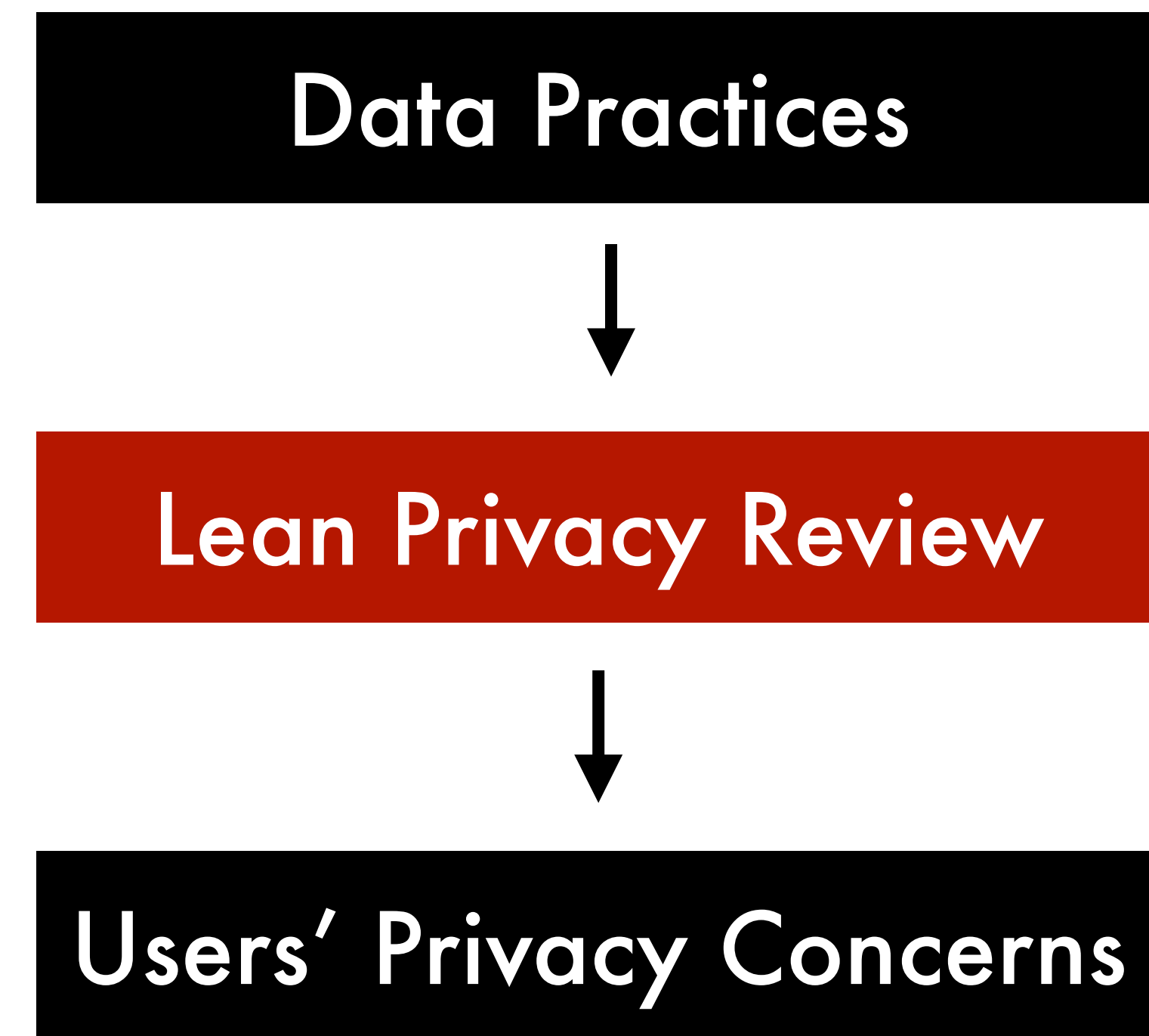
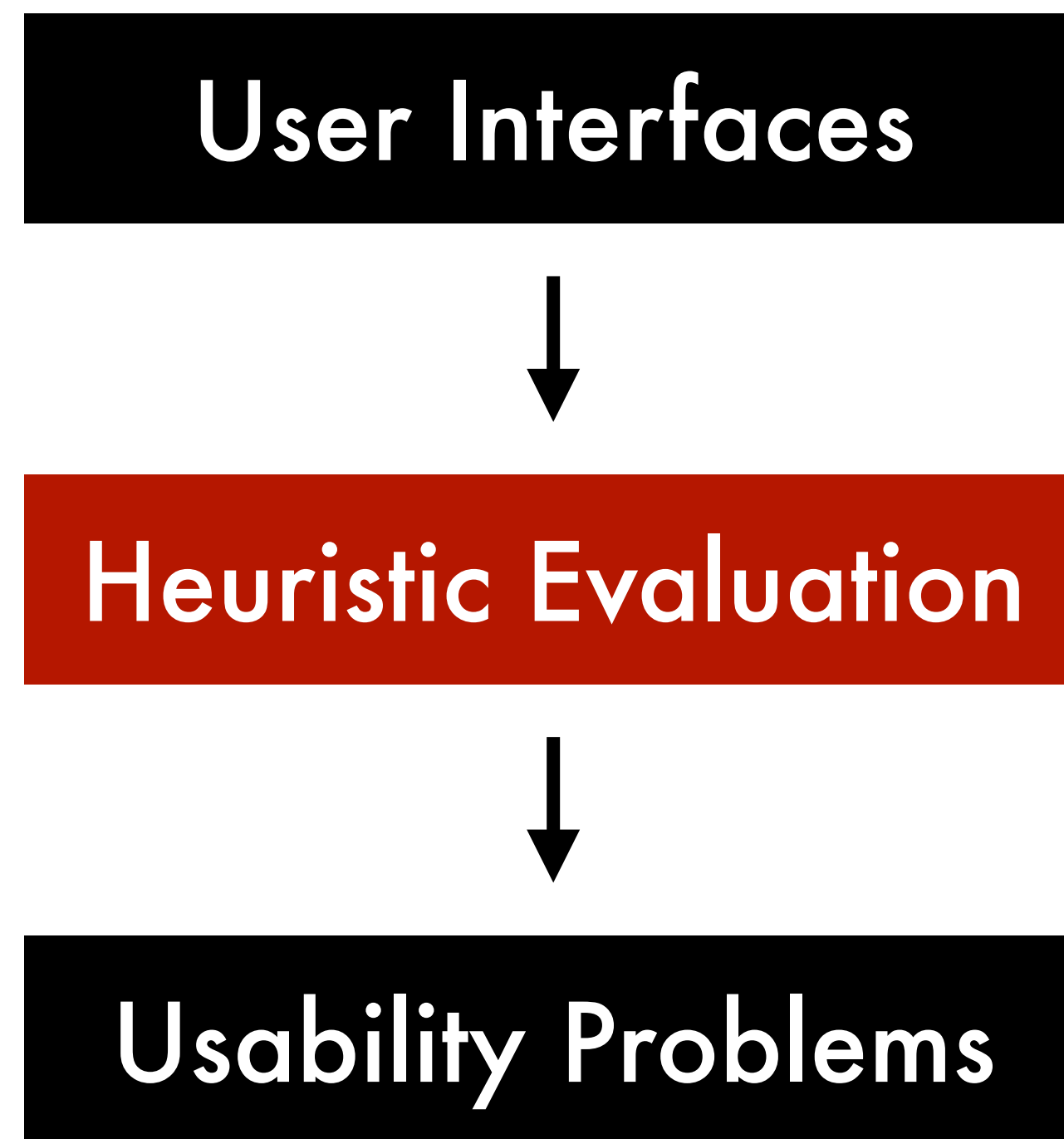
# Formal Privacy Review @ Google



# The “Front-page” Test

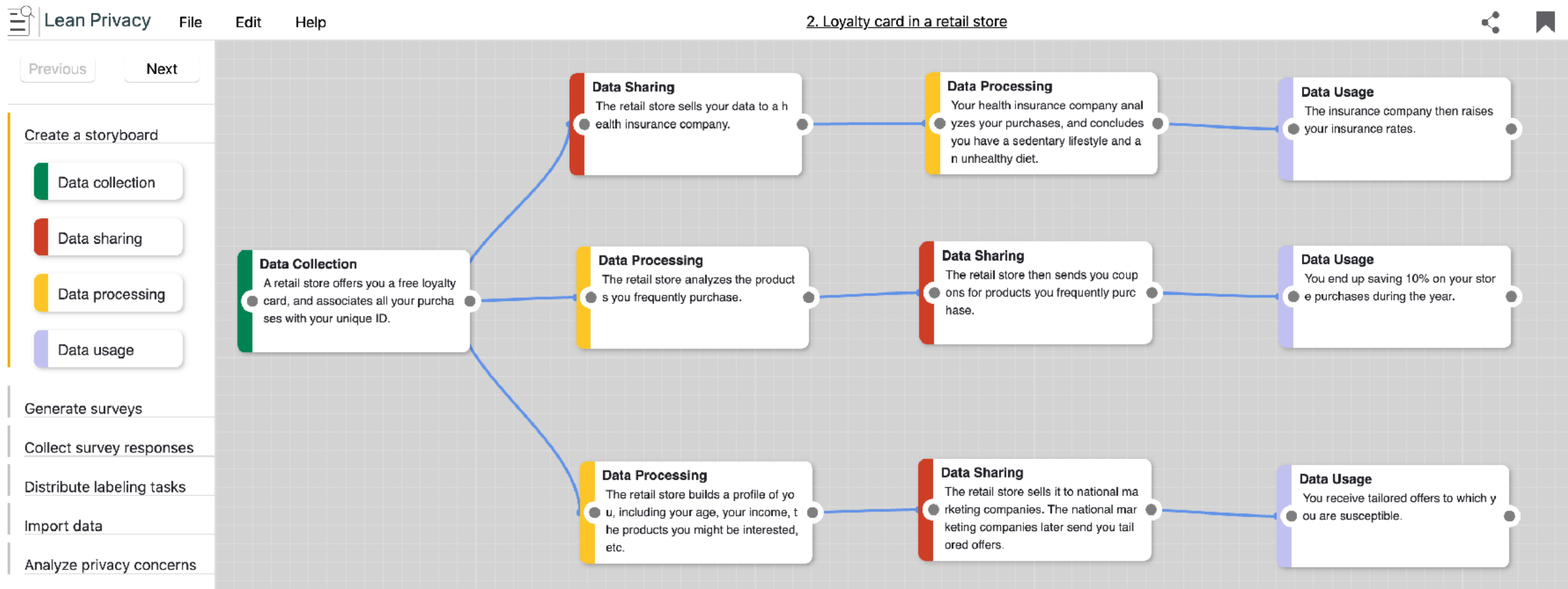


# Heuristic evaluation for privacy





# LeanPrivacyReview: a *low-cost* method to *collect direct feedback from users* through the proxy of crowd workers *in the early stages of design*

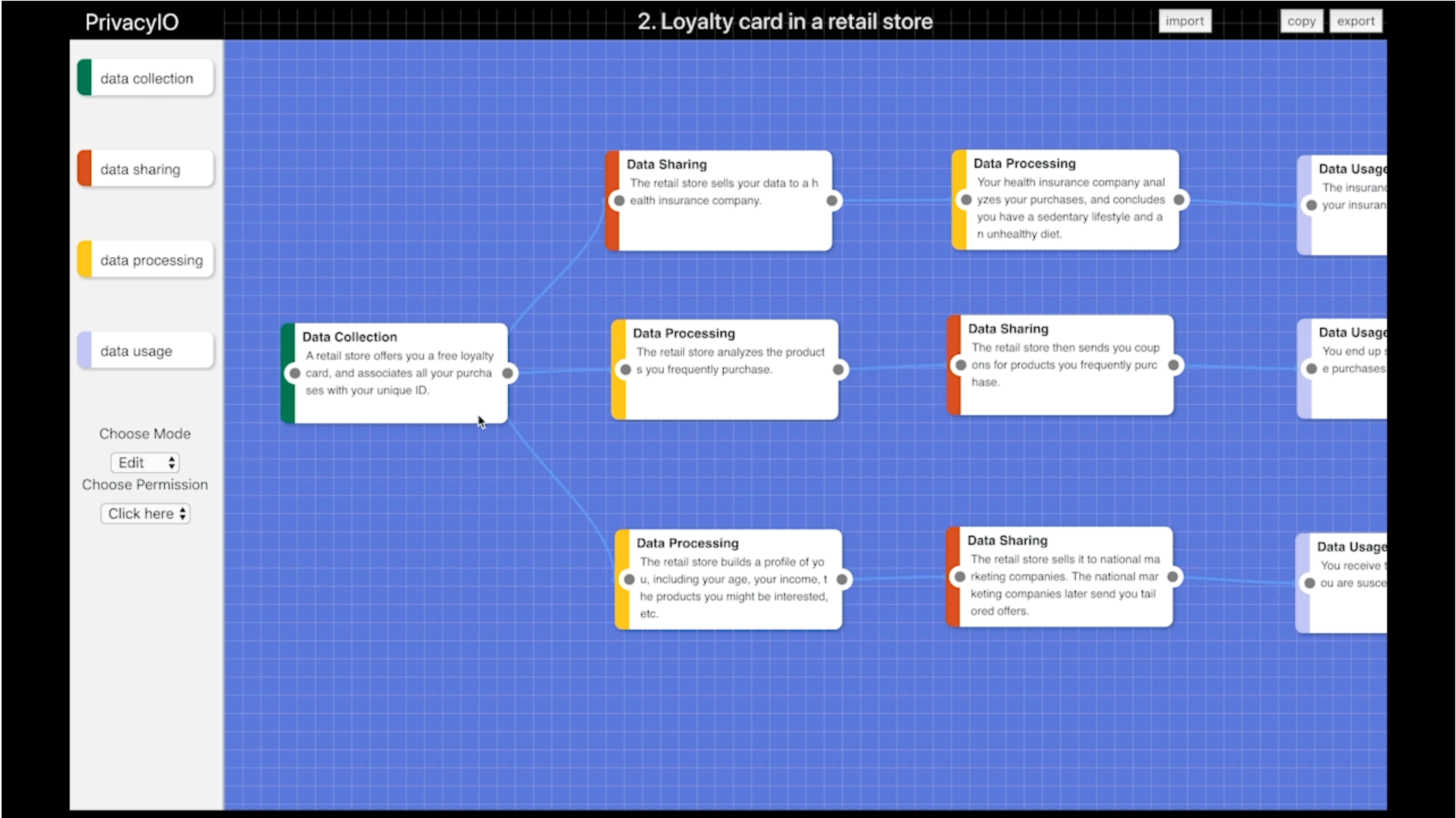




# Running example - input



# Running example - inspection





# Running example - annotation

amazonmturk  
Worker

Return

Labeling Privacy concern in a short ... (HIT Details) ☐ Auto-accept next HIT Requester [REDACTED] HITs 5 Reward \$0.20 Time Elapsed 2:18 of 60 Min

View instructions

Please check all the privacy concerns mentioned in the **red text**.

Survey questions:

*Data collection:*

*Your favorite retail store offers you a free loyalty card. You can get a discounted price on some purchases when you present the card. To obtain the card, you are required to fill out a form with your name, address, and phone number, which may then be associated with a list of your purchases.*

*How would you feel if the company collected your data as described above?*

Survey response:

*Neither comfortable or uncomfortable*

*I still don't like the idea of them associating my info to my purchases. Especially things like my address or phone number. Maybe an email would be ok...but I don't want spam calls or junk mail. Discounts would be nice...but I don't know how beneficial they would really be.*

Report this HIT ▾ | Why Report ▾

Return

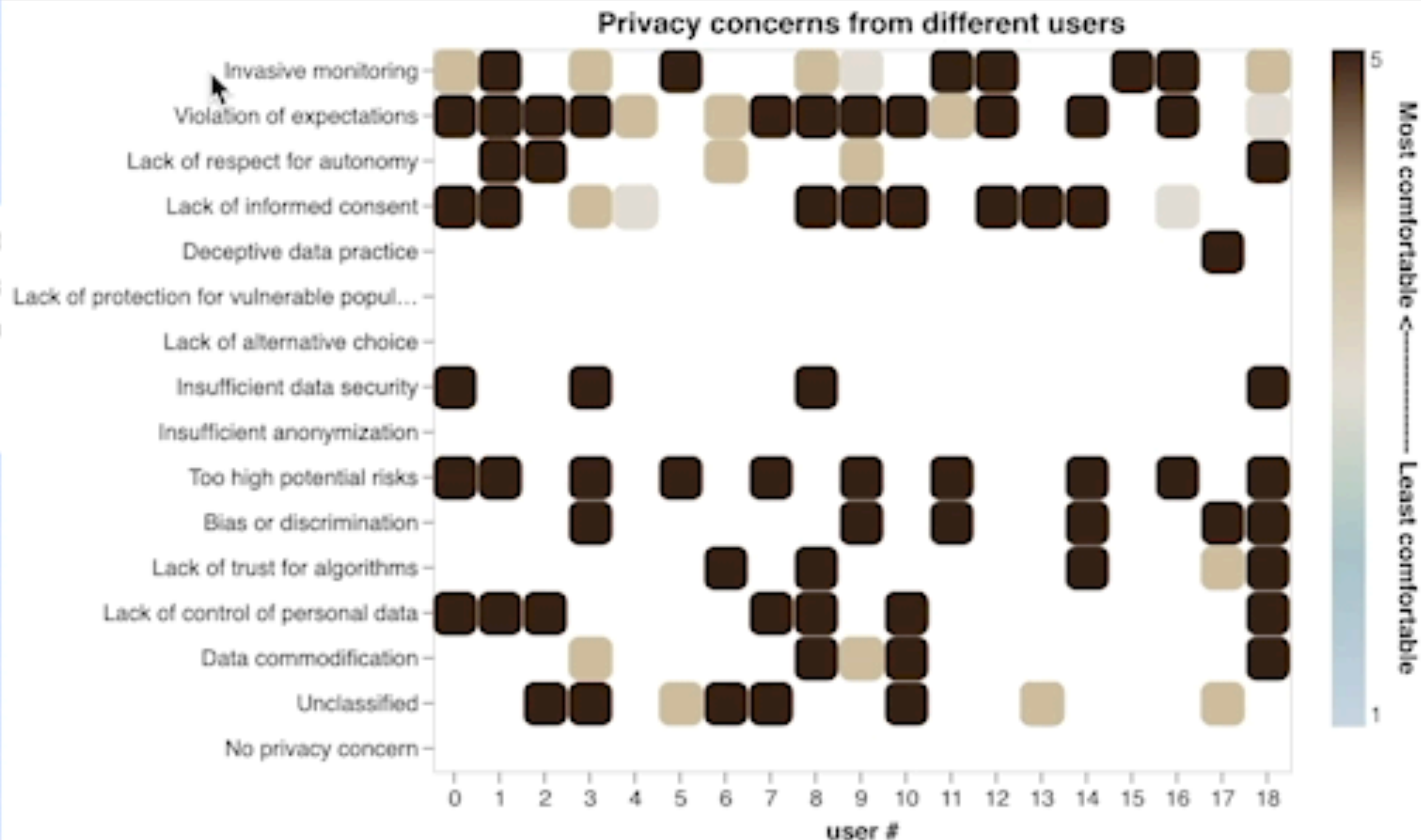
# Running example - output

A retail store offers you a free loyalty card, and associates all your purchases with your unique ID.

Select...

## Data Collection

A retail store offers you a free loyalty card, and associates all your purchases with your unique ID.



## Data Sharing

The retail store sells it to national marketing companies. The national marketing companies later send you targeted offers.



## Benefits overview

***Fast & cheap***, easy-to-access, identify blind spots

Input → Crowd workers → Output:

≈ ***\$80, 5.5 hours*** wait time

≈ ***20 minutes*** to author



Benefits overview

Fast & cheap, *easy-to-access*, identify blind spots

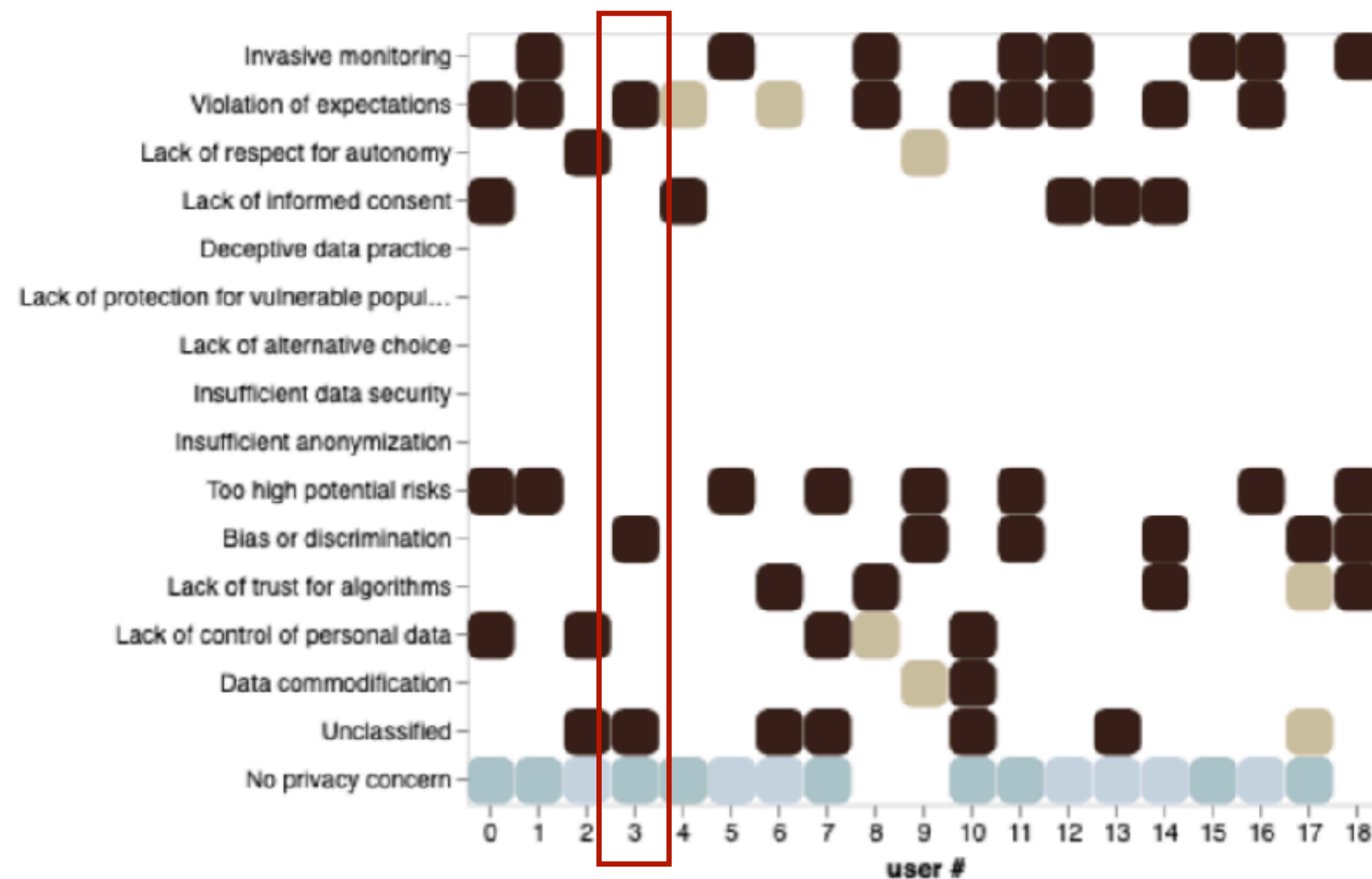
Small teams may have  
no resources for formal  
privacy reviews.





## Benefits overview

Fast & cheap, easy-to-access, *identify blind spots*



Saturate with  $\approx 14$  Crowd workers.

Find *139% additional* privacy concerns that practitioners were not aware of.

Each crowd worker finds a small set of different concerns.

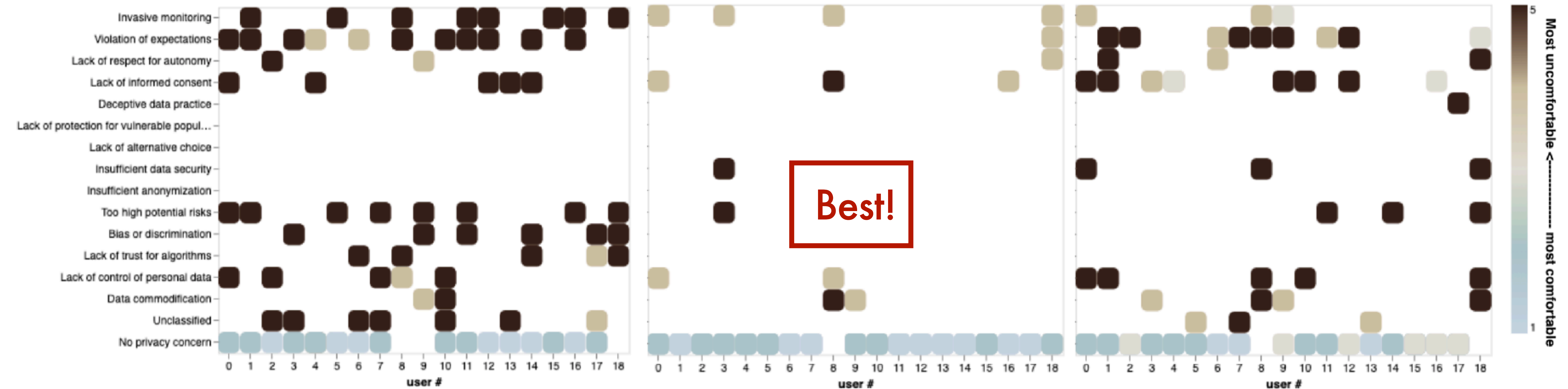
Usage scenario:

# Iterate and explore designs based on fast privacy feedback

Design #1

Design #2

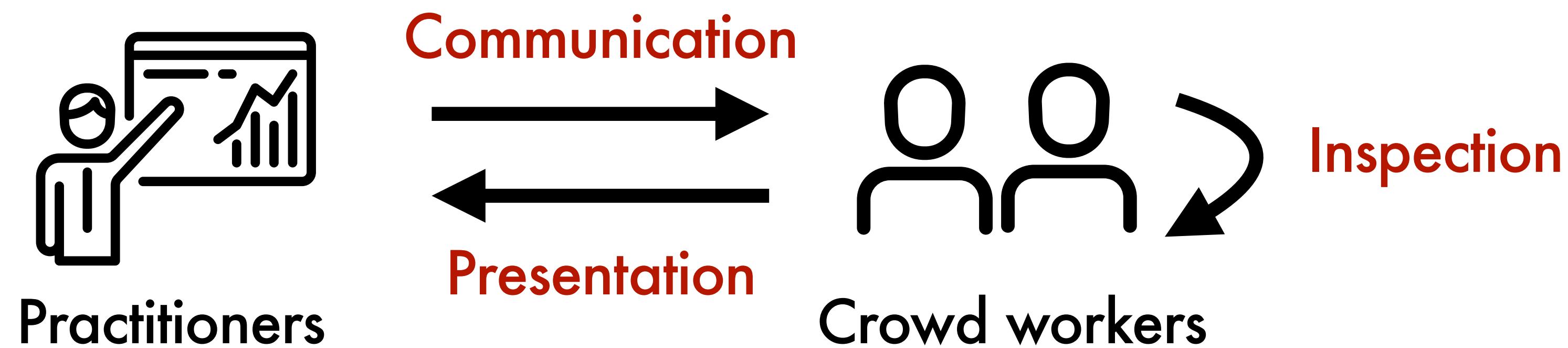
Design #3





# Contributions

(1) A low-cost user-centered privacy inspection method



(2) A privacy storytelling technique



(3) 12 real-world data ethics examples,  
e.g., OKCupid, LoL Chatlog.