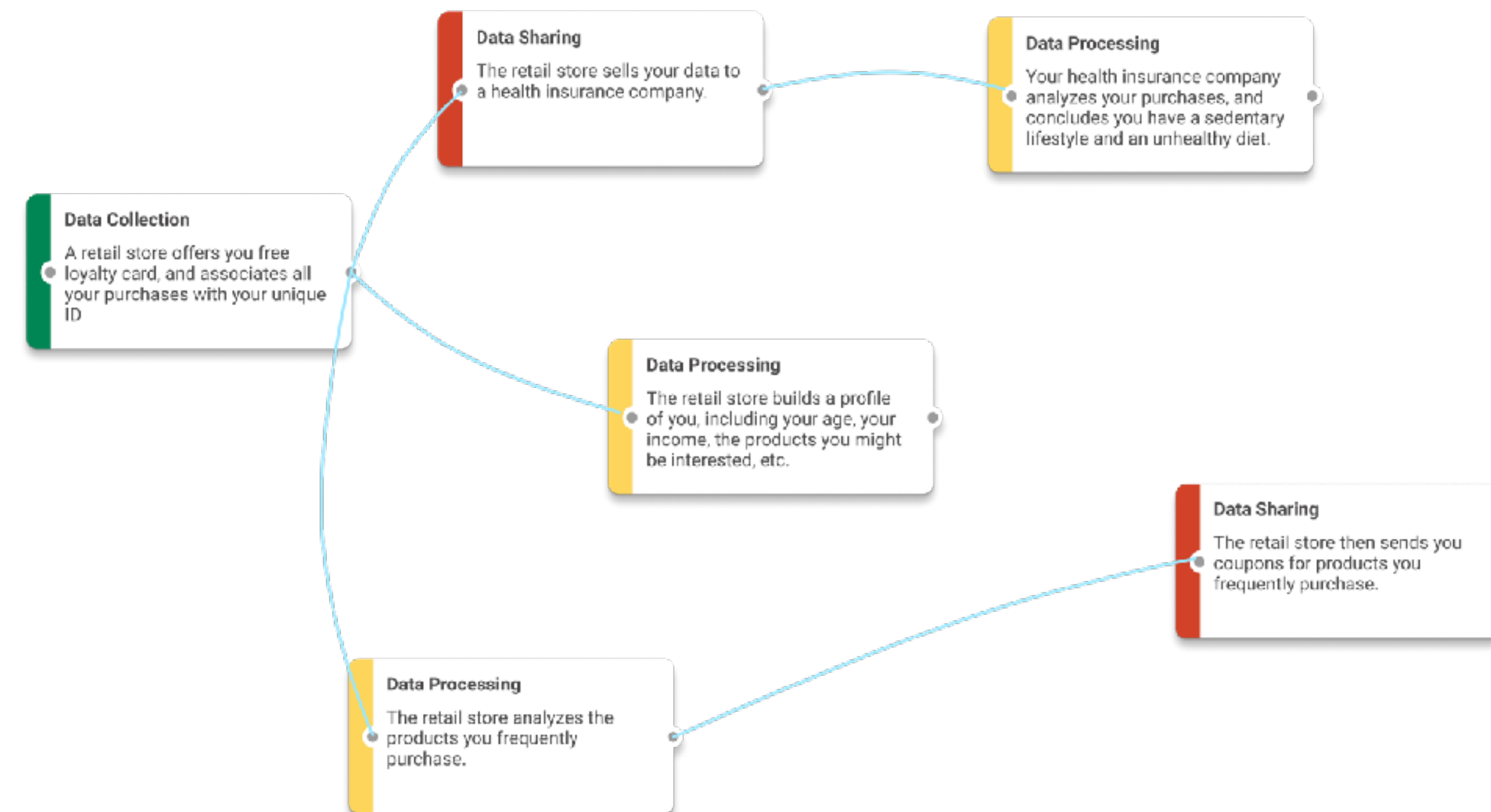# Lean Privacy Review

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

Haojian Jin
Hong Shen
Mayank Jain
Swarun Kumar
Jason I. Hong

http://www.leanprivacyreview.com/

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CHI 2018 @ Montreal, OKCupid Keynote Speech

OkCupid Lied To Users About Their Compatibility

Practitioners face a variety of similar dilemmas

Forbes

How Target Figured Out A Teen Girl Was Pregnant Before Her Father Did

Kashmir Hill Former Staff
Tech
Welcome to The Not-So Private Parts where technology & privacy collide

This article is more than 10 years old.

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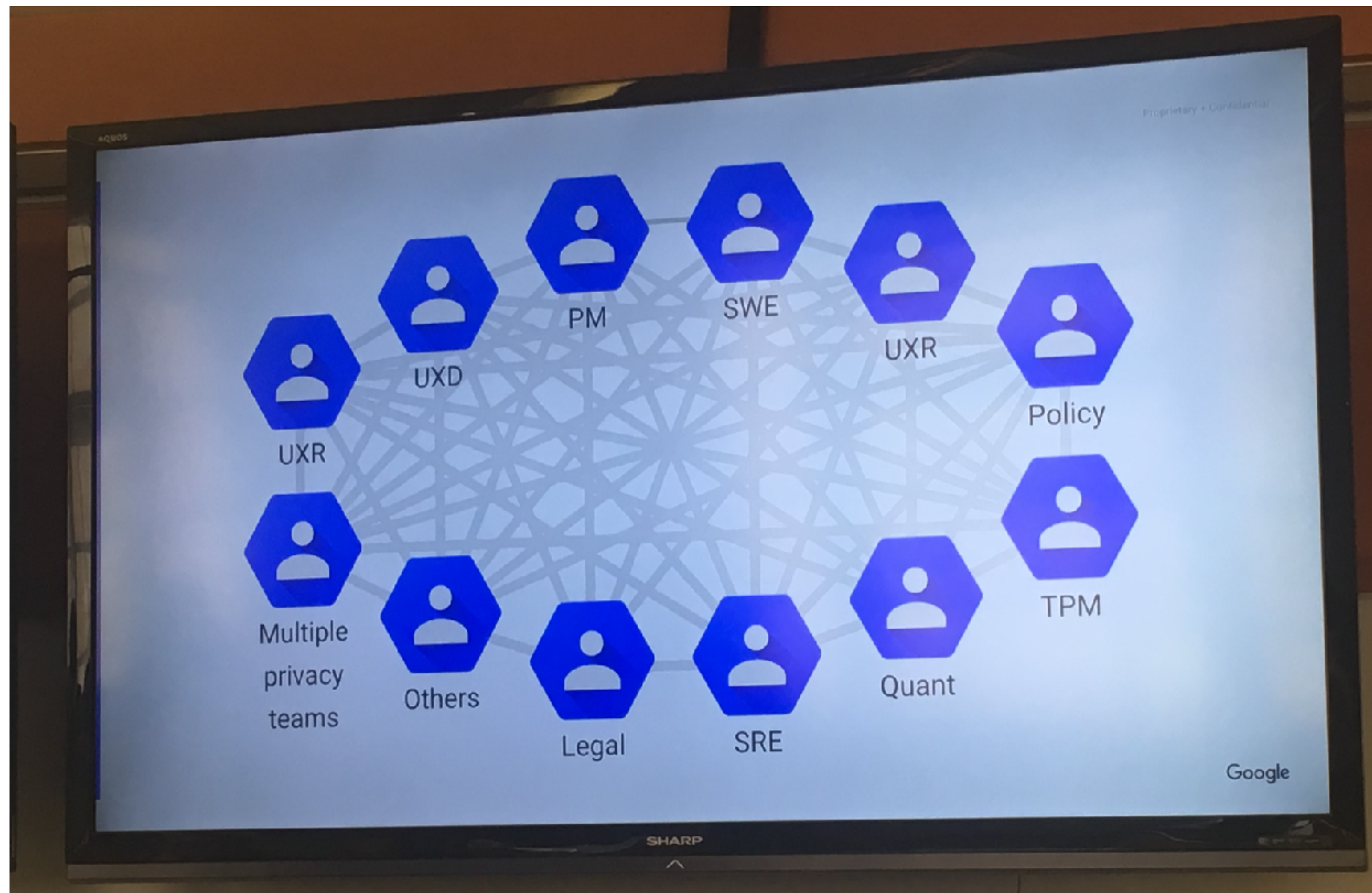
By Thorin Klosowski

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?

MOTHERBOARD
TECH BY VICE

Working From Home? Zoom Tells Your Boss If You're Not Paying Attention

gamesindustry.biz

Riot uses LoL chatlogs to weed out toxic employees

Being a troll in-game translates IRL, finds developer

Dan Pearson
Friday 10th June 2016

Zoom Can Track Who's Not Paying Attention In Your Video Call. Here's How.

The remote conferencing service, which has lots of new users while people isolate during the coronavirus pandemic, has an "attendee attention tracking" feature.

By Jenna Amatulli

Formal Privacy Review @ Google

The "Front-page" Test

Late user feedback!

Formal Privacy Review

The "Front-page" Test

Formal Privacy Review

Plan

Design/Development/Iterations

Deployment

What if my decisions were reported on the front page of the local newspaper?
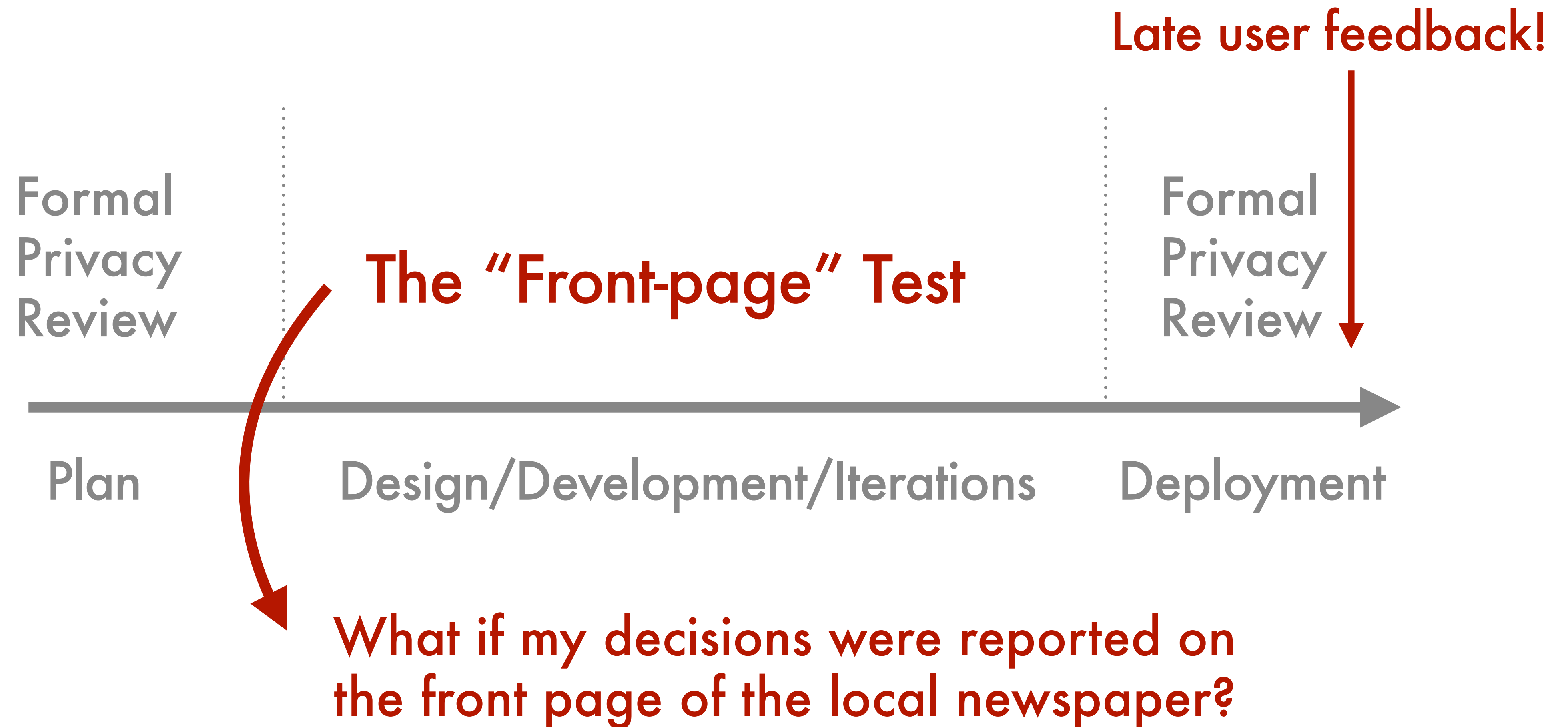
Heuristic evaluation for privacy

```
┌─────────────────────┐              ┌─────────────────────┐
│   User Interfaces   │              │   Data Practices    │
└─────────────────────┘              └─────────────────────┘
           │                                     │
           ▼                                     ▼
┌─────────────────────┐              ┌─────────────────────┐
│ Heuristic Evaluation│              │ Lean Privacy Review │
└─────────────────────┘              └─────────────────────┘
           │                                     │
           ▼                                     ▼
┌─────────────────────┐              ┌─────────────────────┐
│ Usability Problems  │              │Users' Privacy Concerns│
└─────────────────────┘              └─────────────────────┘
```
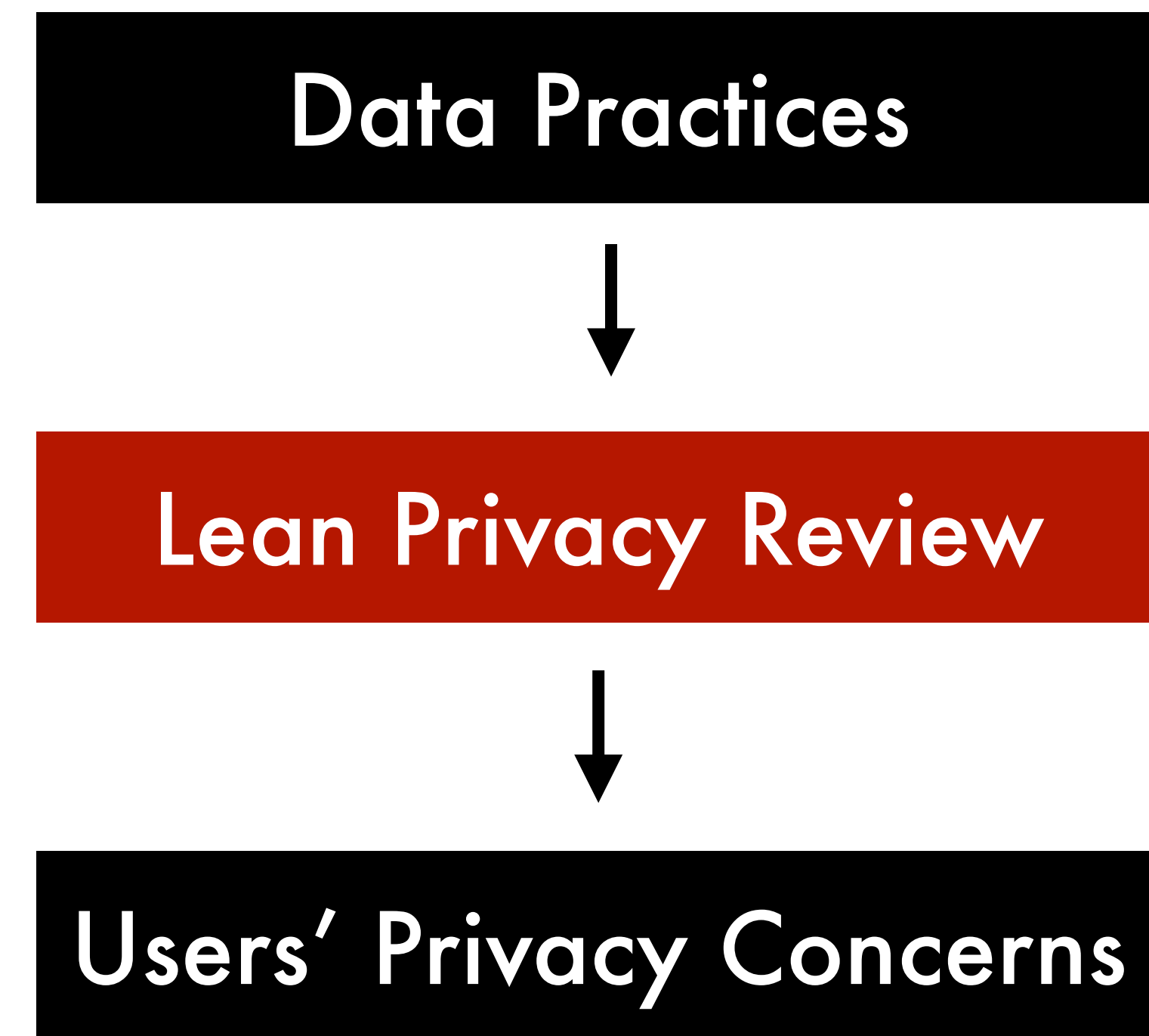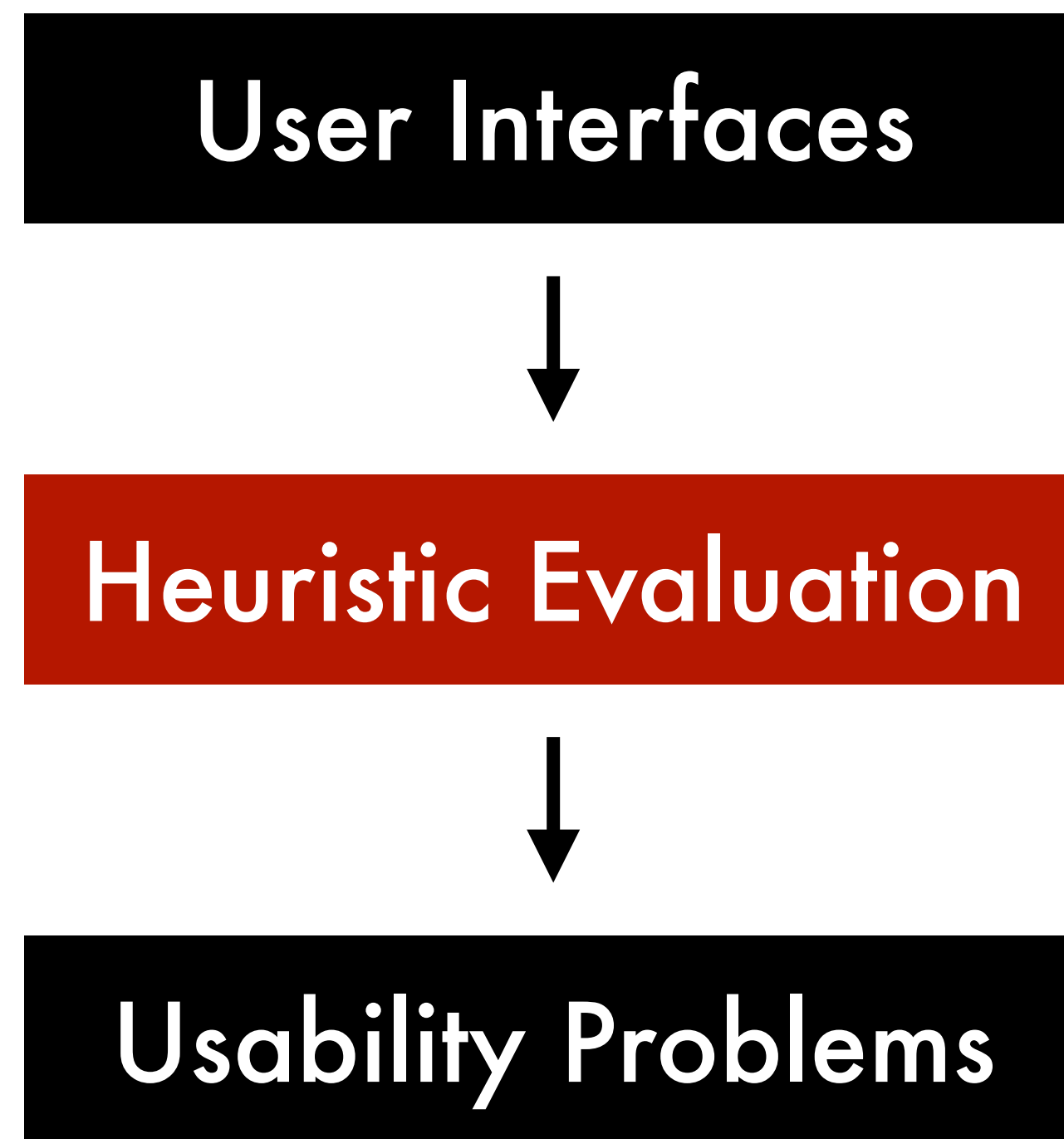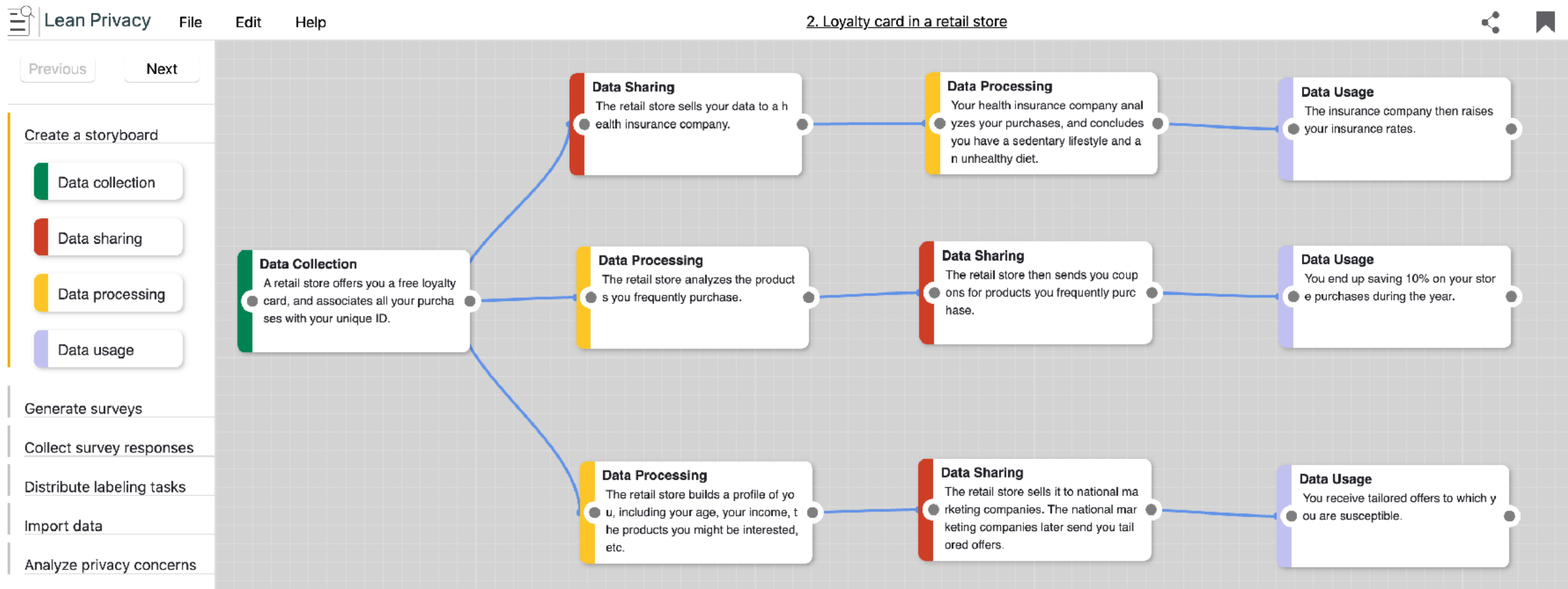
LeanPrivacyReview: a *low-cost* method to *collect direct feedback from users* through the proxy of crowd workers *in the early stages of design*
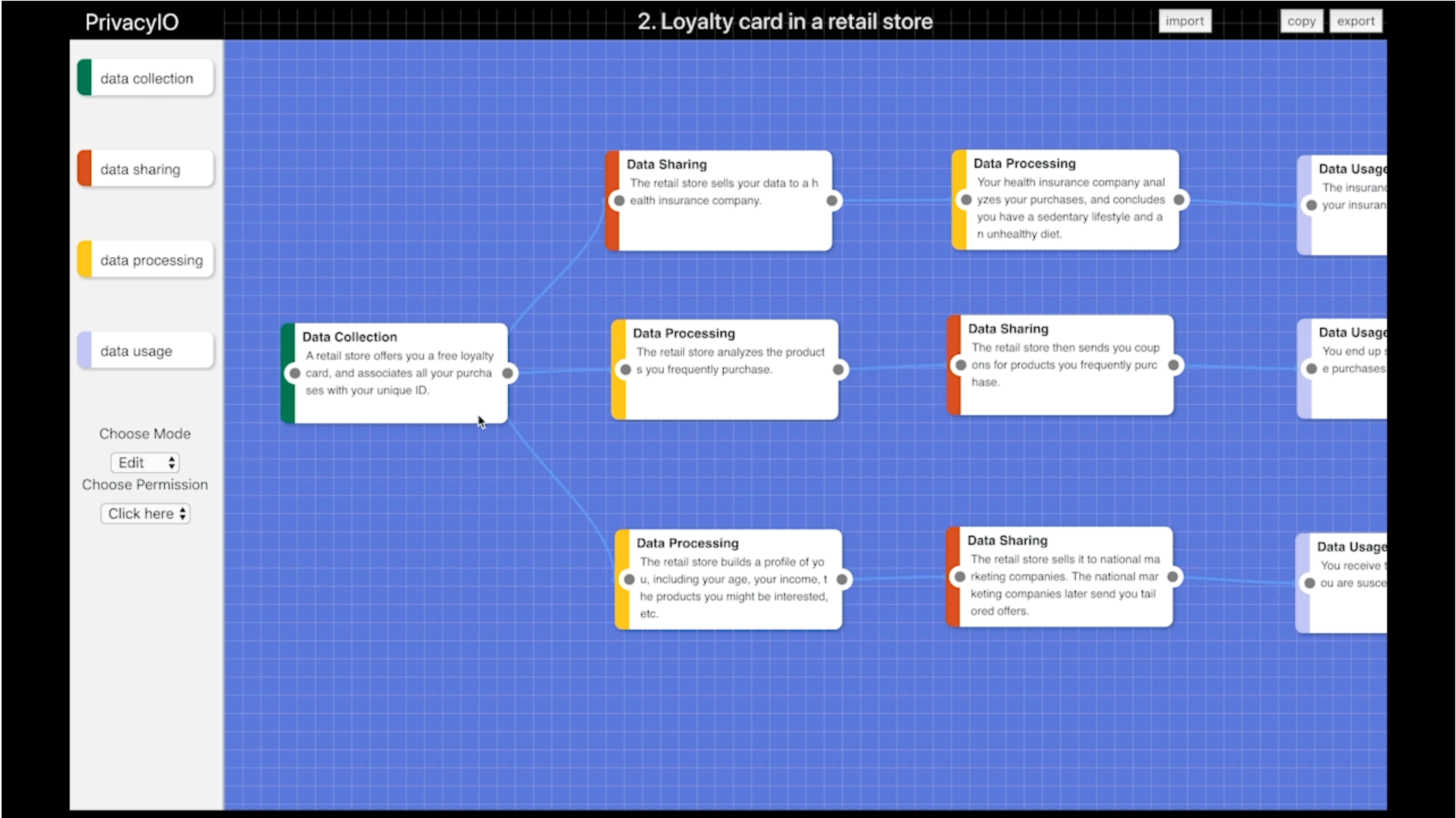
http://www.leanprivacyreview.com/

Running example - input

Running example - inspection

Running example - annotation

Running example - output

Privacy concerns from different users
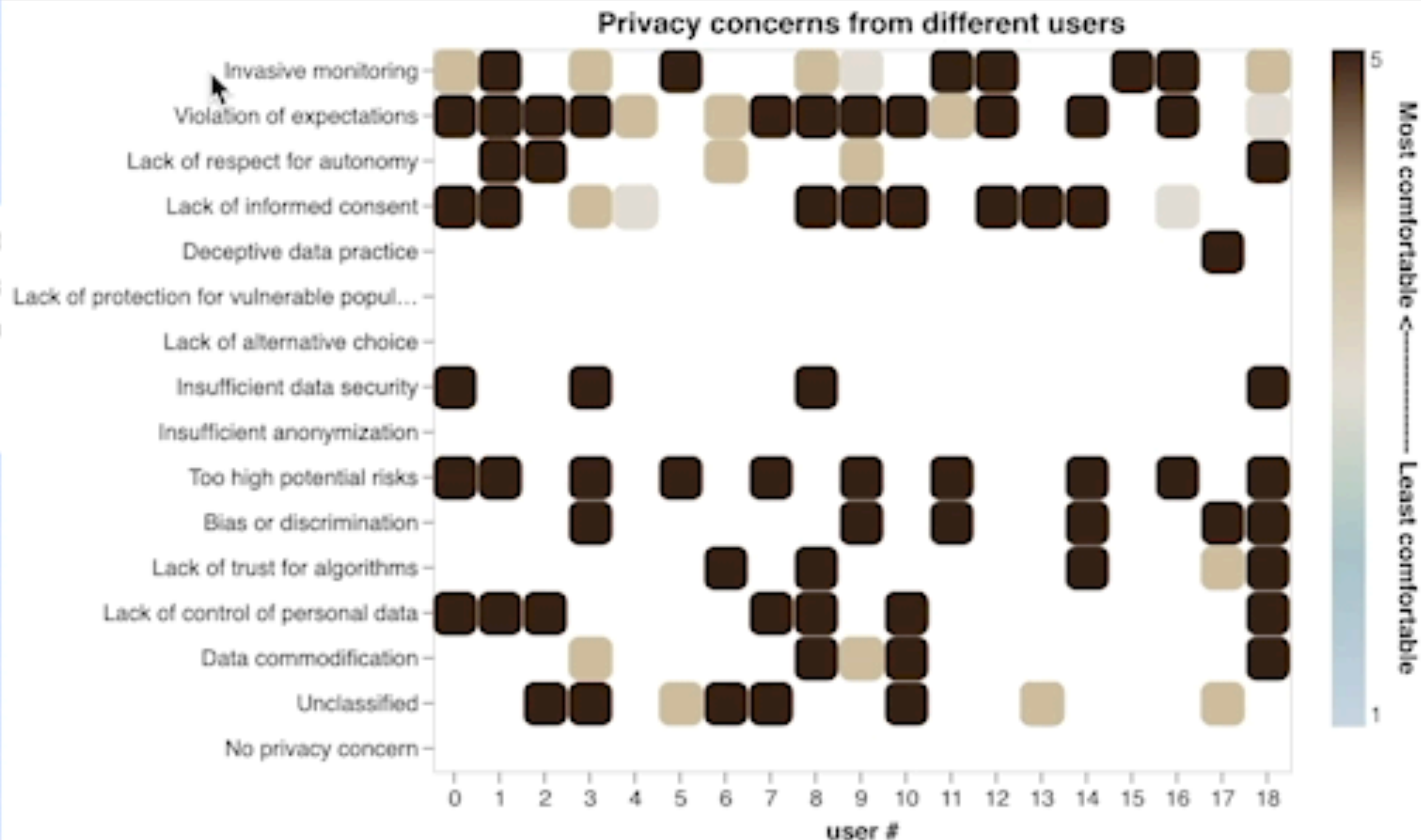
Fast & cheap, easy-to-access, identify blind spots

Input → Crowd workers → Output:

≈ *$80*, *5.5 hours* wait time

≈ *20 minutes* to author

Fast & cheap, *easy-to-access*, identify blind spots
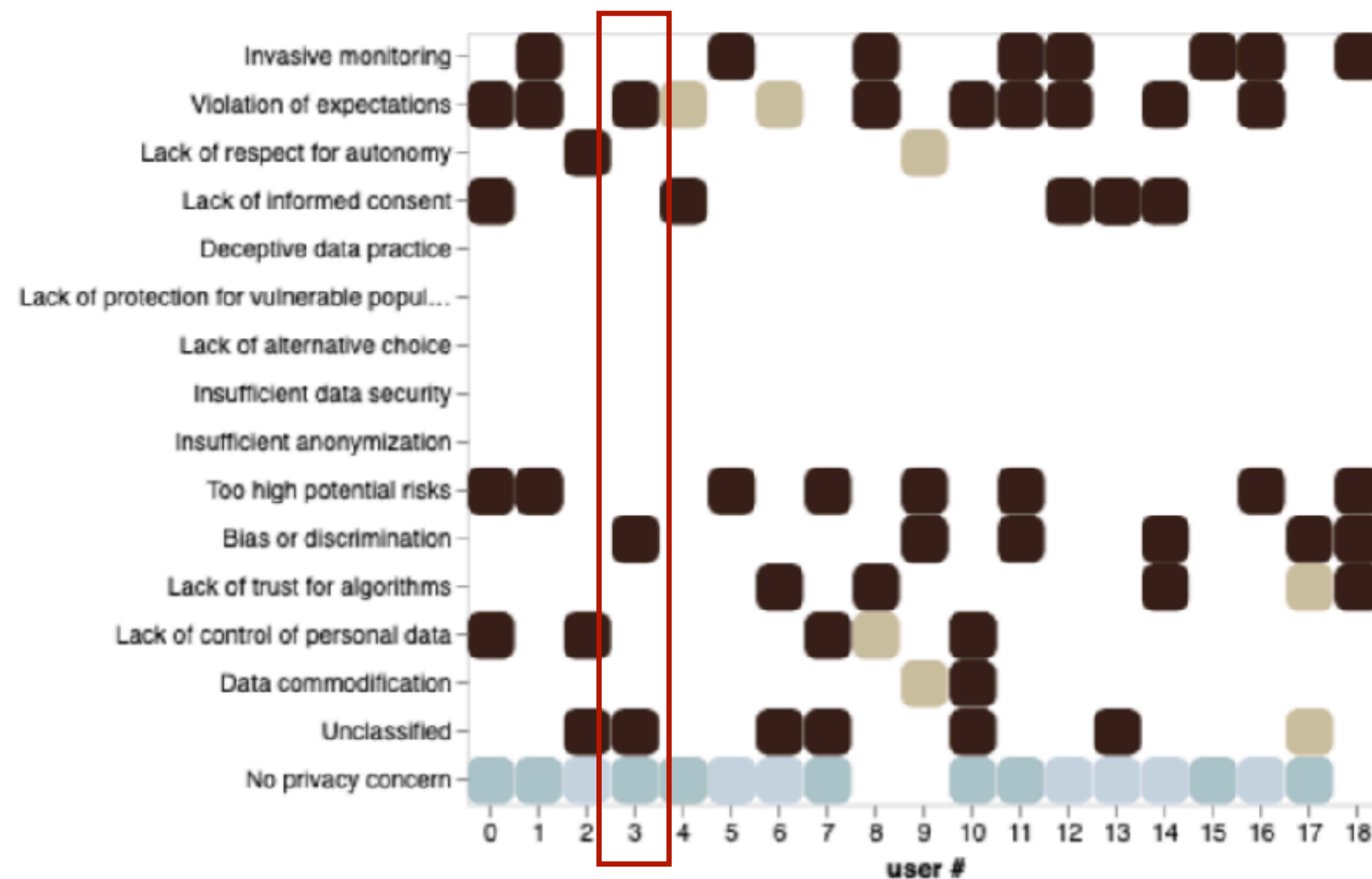
Small teams may have

no resources for formal

privacy reviews.

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

Saturate with ≈14 Crowd workers.

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

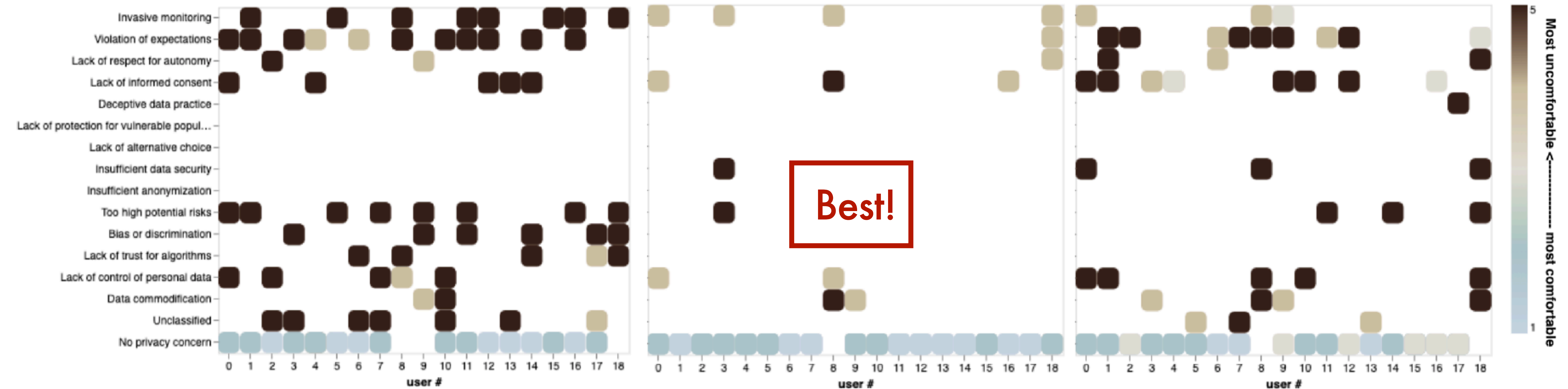Each crowd worker finds a small set of different concerns.

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Iterate and explore designs based on fast privacy feedback

Design #1

Design #2

Design #3
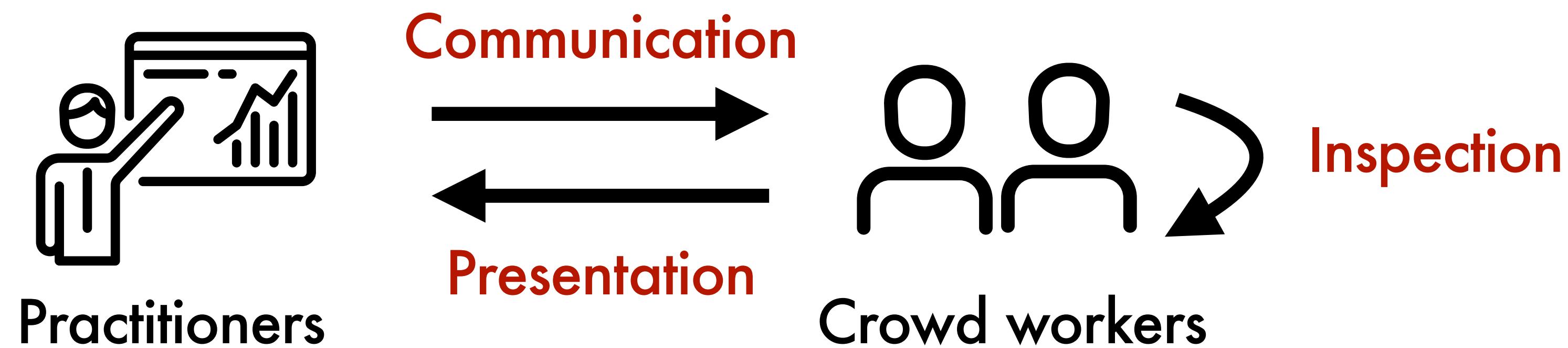
Best!

Contributions

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

Communication

Presentation

Inspection

Practitioners

Crowd workers

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

(2) A privacy storytelling technique

Data collection

Data processing → Data usage

Data sharing → Data processing → Data usage