



# You Asked For It: Making Sense of User Feedback

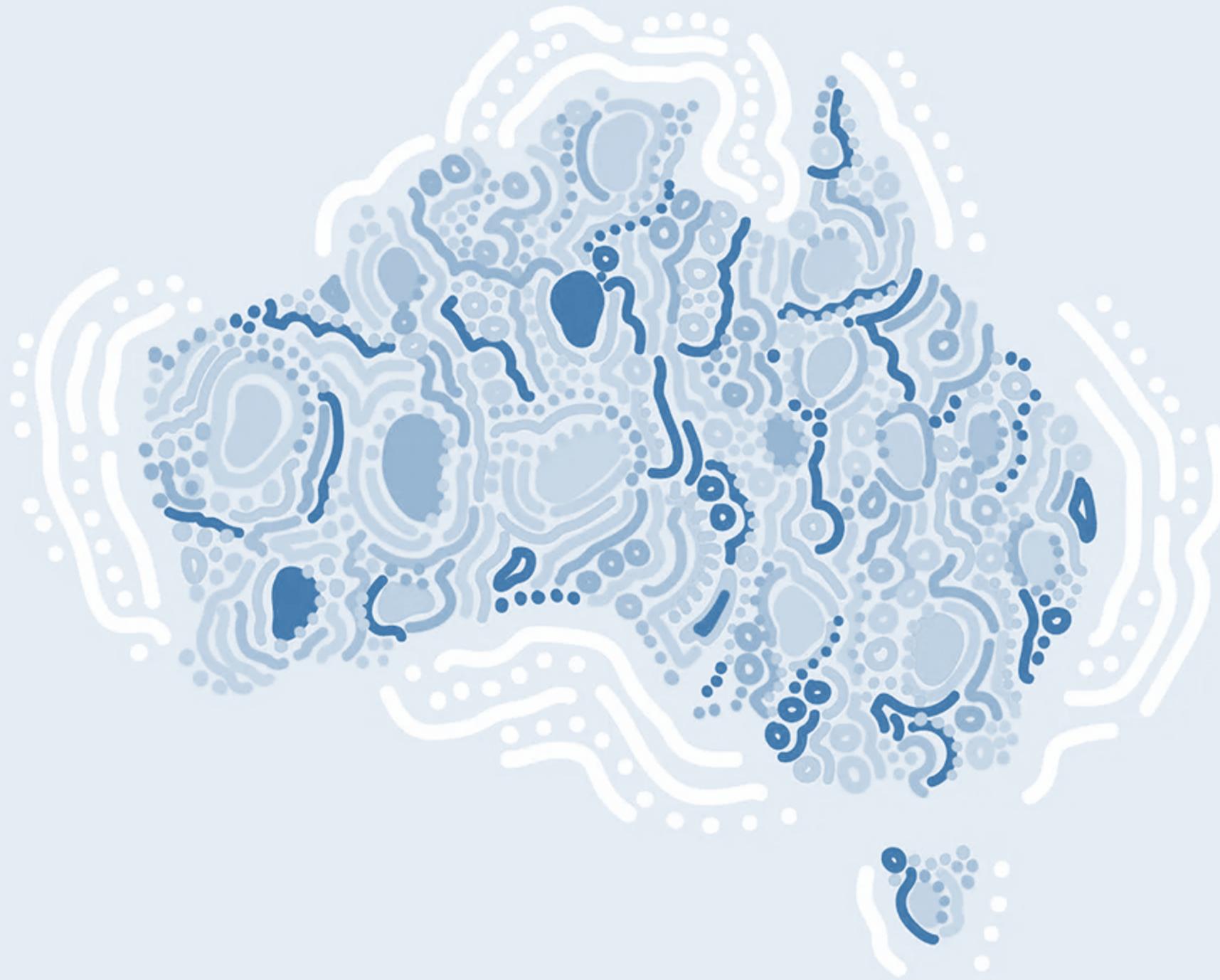
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**It Will Never Work in Theory**

April 2023 Lightning Talks



# ‘User Stories’ - an Agile Myth

A made-up story about what we  
*think* the users want

Based on assumptions

Led by convenience

No real users

No real stories

**As a user**  
**I want to** provide my own feedback  
**So that** customers don’t have to  
pretend to know what I need



# Real User Stories are Priceless

Important source of identifying

-  Bugs
-  Usability Issues
-  New feature ideas

Customers pay for the development of the product, but users decide the fate of the product.



# Real User Stories are Priceless

Important source of understanding

 User needs → generalizability

 User wants → personalisation

# Real User Stories are Priceless

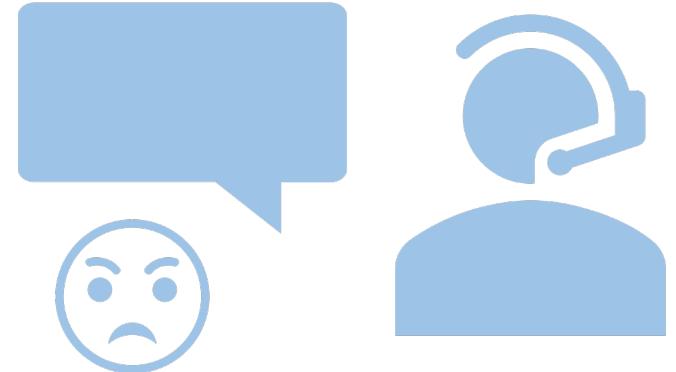
Important source of generating business value

Actioning user feedback → trust, loyalty, reputation → sales

How do we get the *real* user stories?

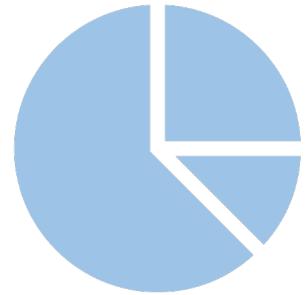
# Proactive Stories

- User Ratings
- User Reviews on App Stores
- User Feedback through Websites
- User Complaints through Call Centers



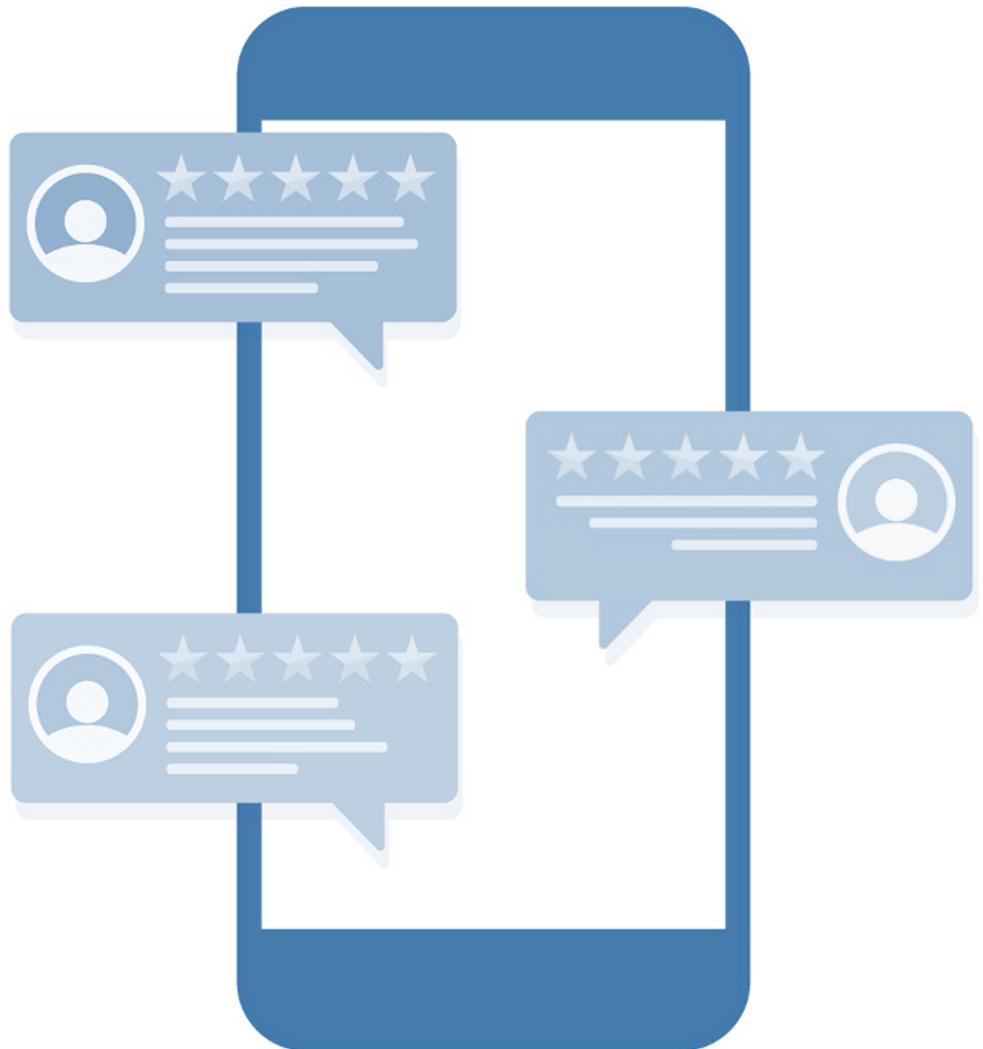
# Automatic Stories

- User Activity Logs
- User likes, dislikes, engagement
- User Demographics



# Prompted Stories

- In-app User Ratings
- In-app User Reviews

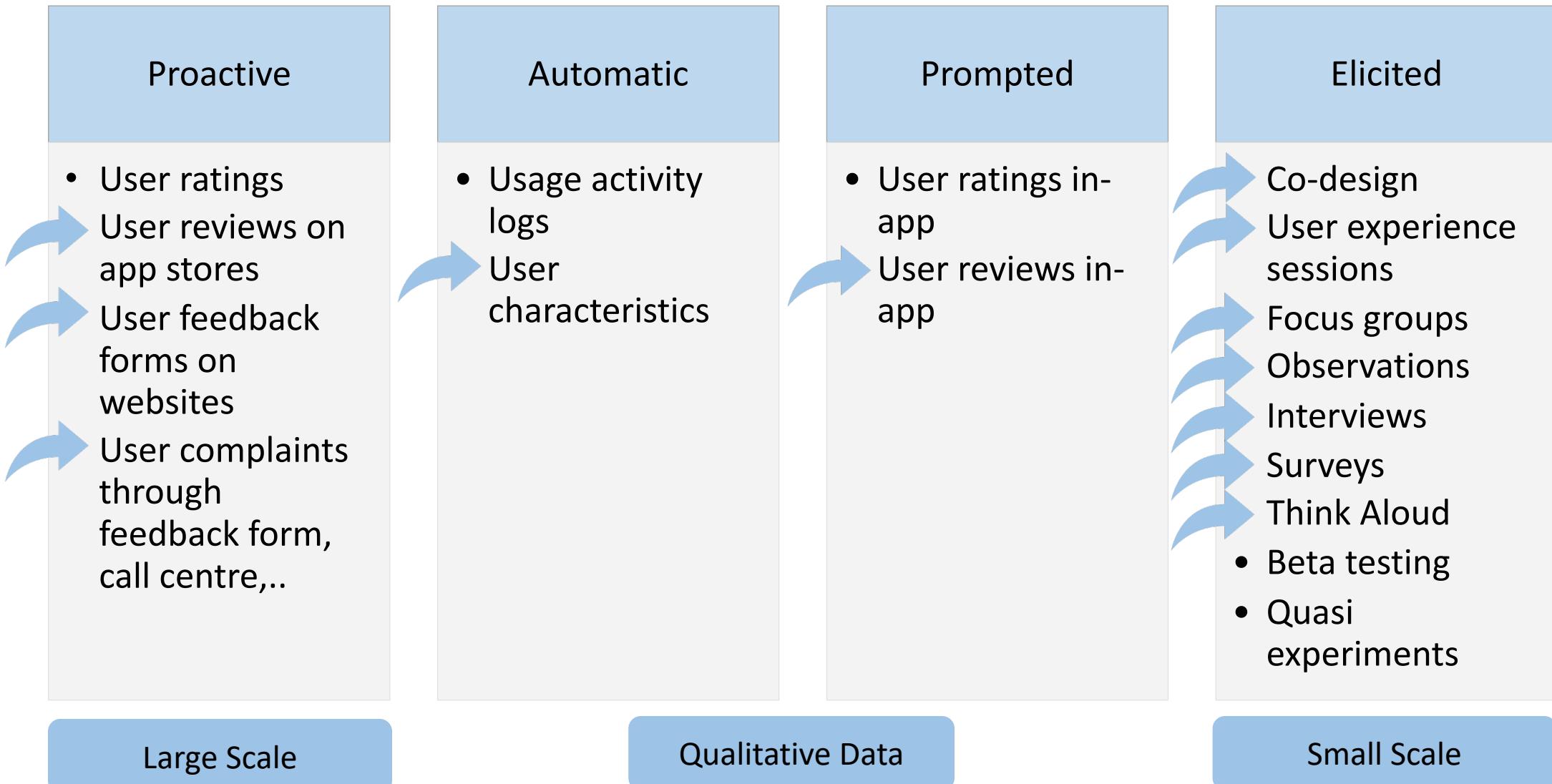


# Elicited Stories

- Co-design
- User experience sessions
- Focus groups
- Observations
- Interviews
- Surveys
- Think Aloud
- Beta testing
- Quasi experiments



# What are we really dealing with?



# We don't want to deal with real user feedback – Why?

There's lots of it!

It's unstructured, messy

It's hard work



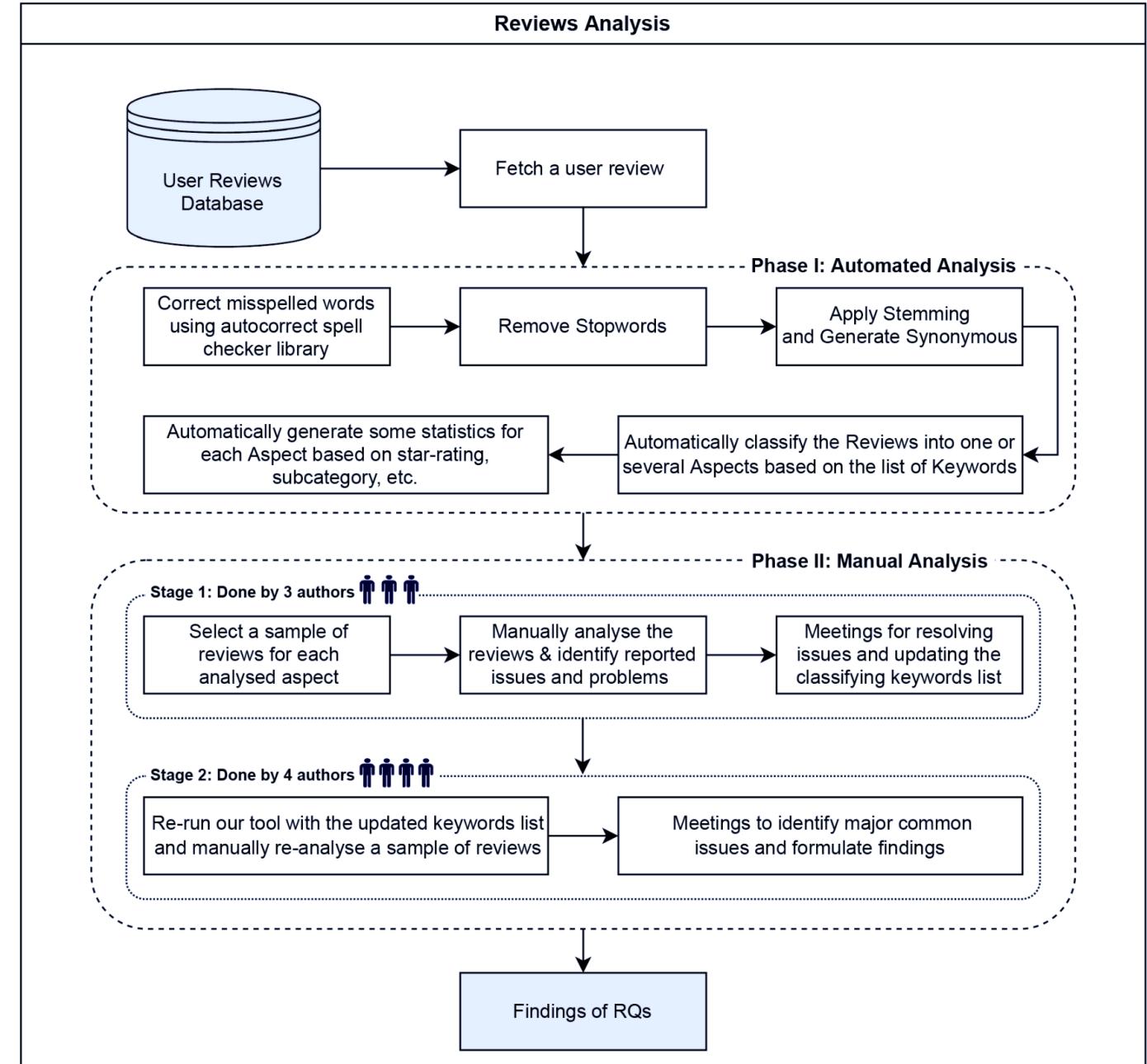
# Current Approach

## 1 Automated Analysis

- Filter noise
- Apply synonyms
- Classification based on keywords

## 2 Manual Analysis

Qualitative data analysis of sample reviews



# Current Limitations

- Helps answer what's and how's but not the why's
- If we only focus on the *bugs*, we will miss the *butterflies*
- Competitors can find the *butterflies* even if we don't



# Socio-Technical Grounded Theory (STGT) – as a Powerful Qualitative Data Analysis Method

R. Hoda, "Socio-Technical Grounded Theory for Software Engineering," in *IEEE Transactions on Software Engineering*, vol. 48, no. 10, pp. 3808-3832, 1 Oct. 2022, doi: 10.1109/TSE.2021.3106280.

# Open Coding in STGT – think Hashtags!

#unintentionalUpgrade

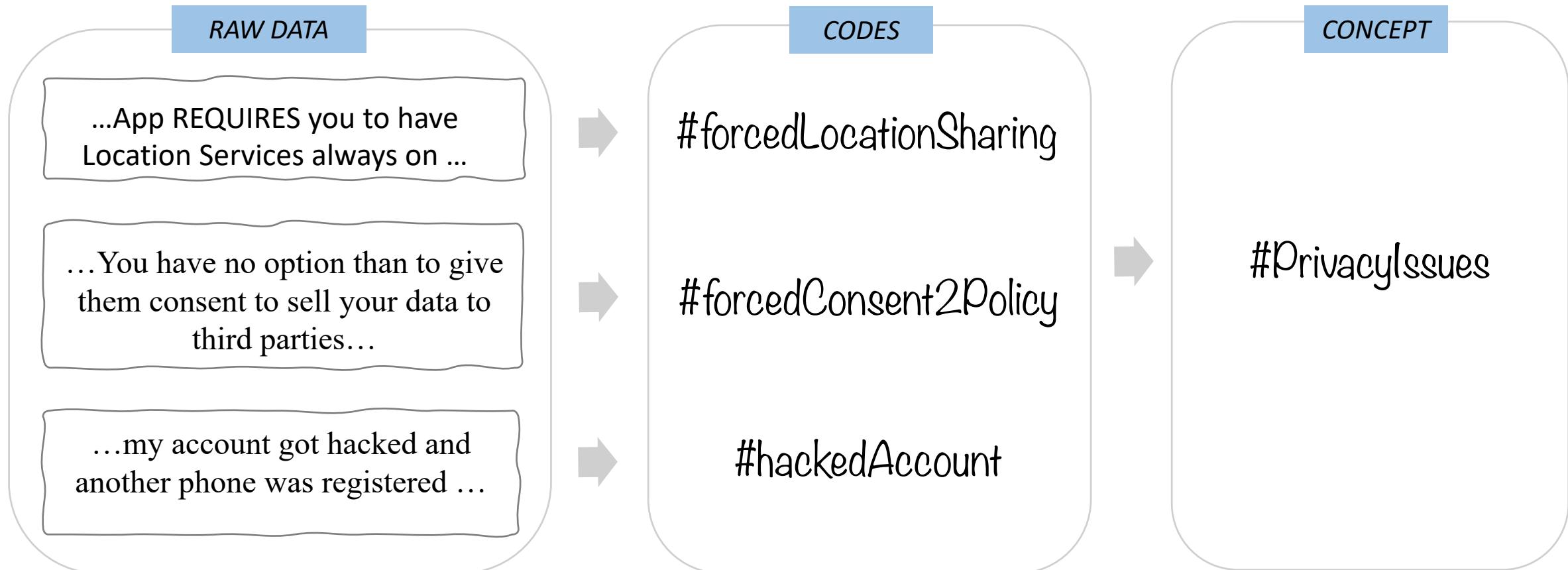
#scam

#multipleContactChannels  
#noCustomerService

“Very frustrated, pro version is scam I've had this app for about a month or so. I unintentionally upgraded to the pro version (\$99.00) because I had my fingerprint set with the App Store. I called the company phone number listed on my visa statement, only to hear a recorded voice. You're then told to go to iTunes.com/bill regarding charges, then the call dies. After going to the site, you run into another dead end. AllTrails has zero customer service. I've yet to talk to a person from company.”

#poorReview ← ★☆☆☆☆

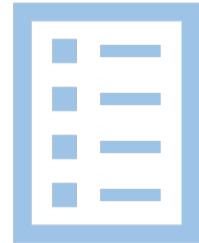
# STGT - Constant Comparison & Abstraction



# STGT for Qualitative Data Analysis

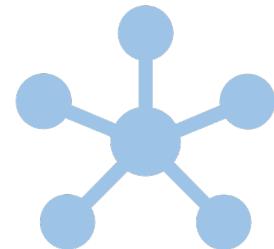
Enables systematic analysis of qualitative data

- Individual classifications
- Dataset-wide patterns
- Rich insights, guidelines, recommendations  
(e.g. on improving Privacy)

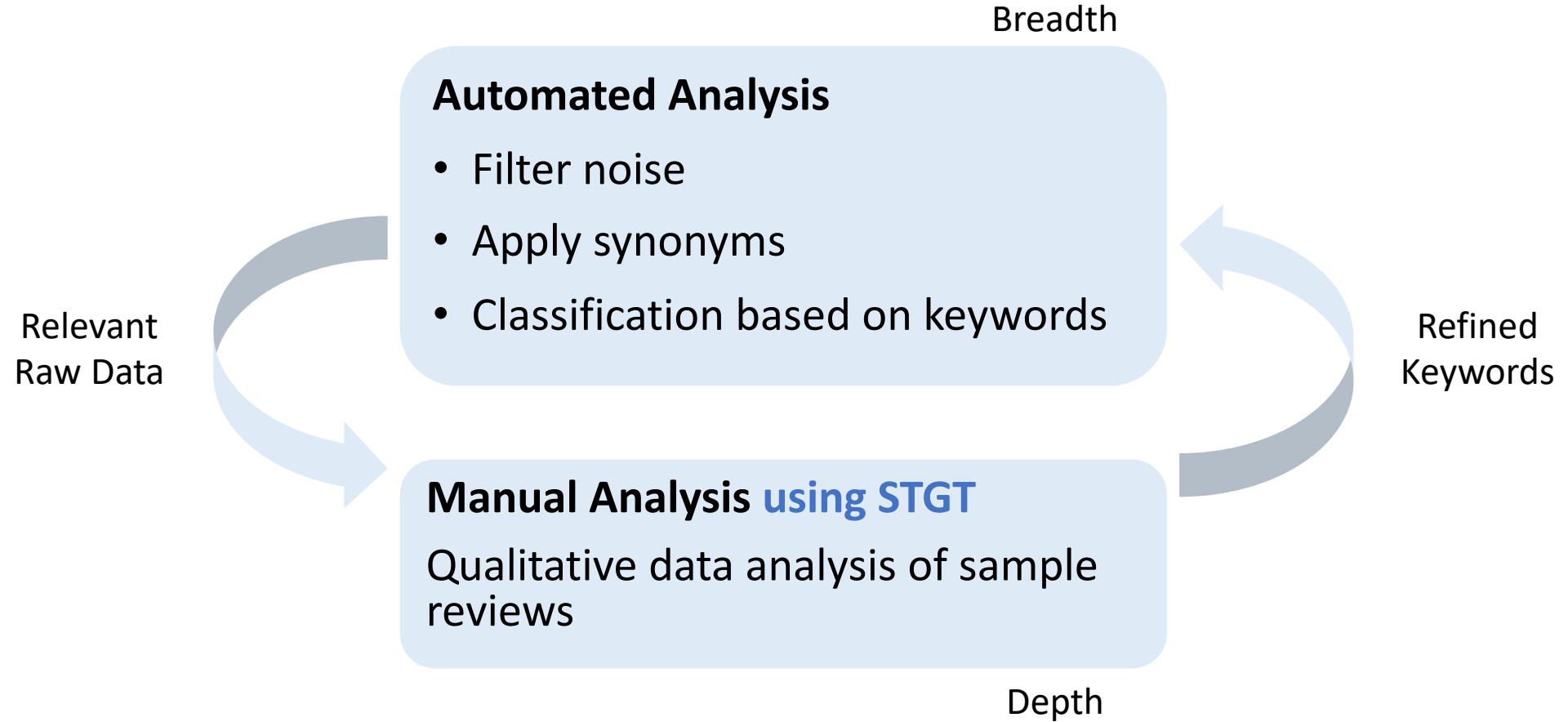


More rigorous application can lead to...

- Taxonomies
- Theoretical models, theories, ...

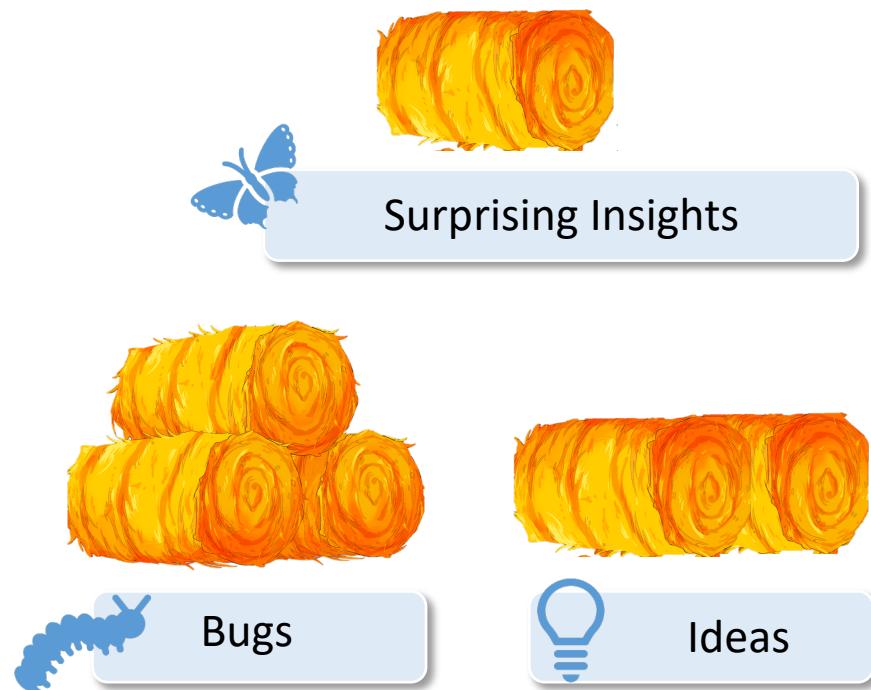


# New Approach – Making sense of Real User Stories using STGT



# Benefits for Software Teams

- Smaller, classified piles of user feedback to work with
- Richer analysis to draw out interesting findings
- Catch the *bugs*
- No missing the *butterflies*



## Benefits for Users

Increased confidence in updating apps

Better ratings

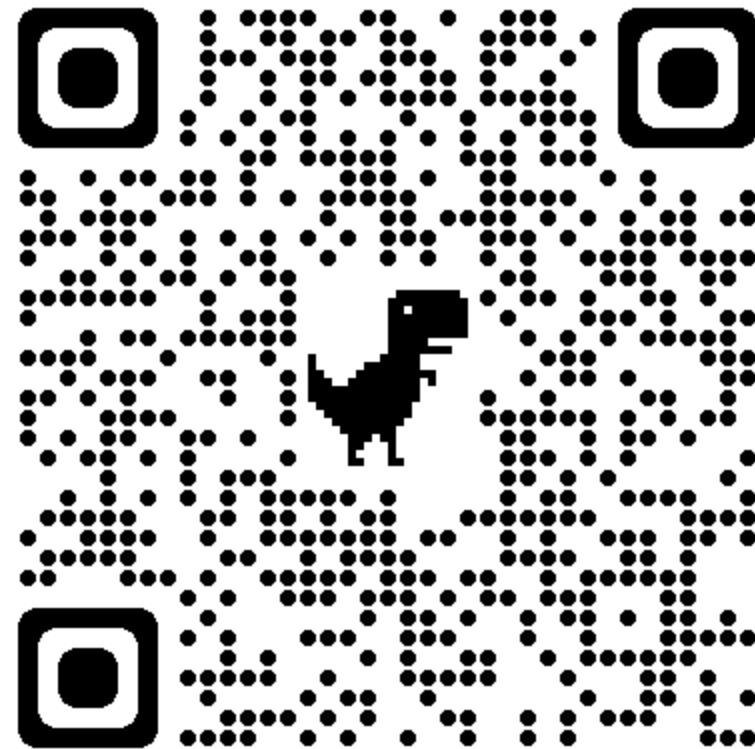
## Benefits for Companies

Actioning user feedback → trust, loyalty, reputation → sales

# #STGT - Find Out More

- STGT Guidelines
- Technical Briefing
- Upcoming Talk #ICSE2023
- Upcoming Book

Thanks to Dr Omar Haggag & Michael Hoye



[www.rashina.com/stgt](http://www.rashina.com/stgt)