

# Opening up the Black Box:

New tools and methods for studying digital platforms and social data

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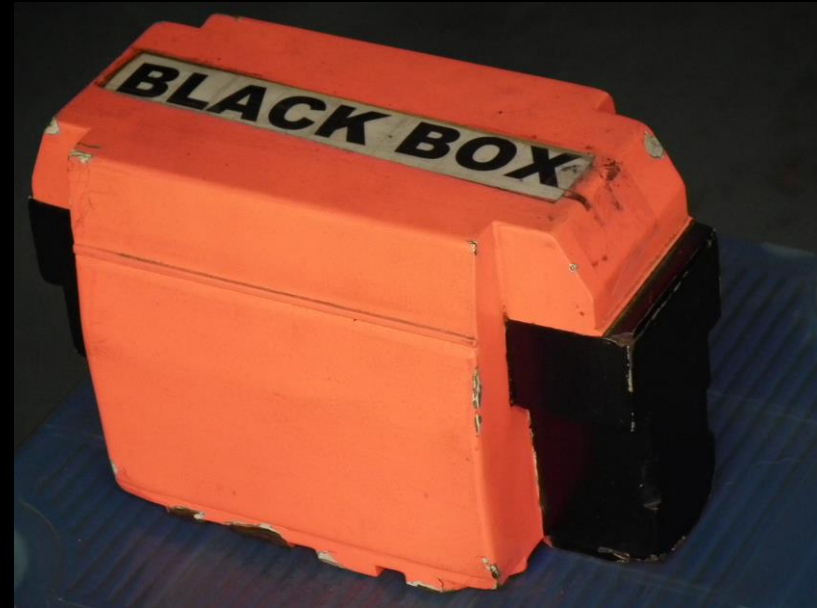
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Research Fellow, ADM+S, RMIT

eResearch Conference 2023



We need new approaches and research infrastructure to go beyond what commercial platforms provide and ensure Australian researchers can study social data and the way platforms structure what people see.



Flight data recorder displayed at HAL Museum Rameshng, CC BY-SA 3.0 via Wikimedia Commons



# Australian Social Data Observatory

## Concept Overview



### Data Sourcing



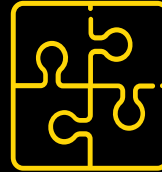
Data donation tools for digital platforms, search, websites, apps and mobile

### Social Data Laboratory



Machine learning, NLP, Apps, Visualisations

### Data Linking & Integration

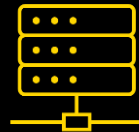


Data labelling, Harmonization, Vocabularies, Interoperability

### Governance & Outreach



Ethics, Training, Outreach, Collaboration



### Compute and Storage Access and Authorization



# ASDO Technical Architecture

## Governance



Project  
Management



Ethics



Benchmarking  
& Evaluation



Skills and  
Training



Outreach

## Data Sourcing



Real-time Data  
Browser extensions



Data Donation  
Packages (DDP)



Generative AI &  
Synthetic data



Crowdsourcing  
Platform



APIs

## Social Data Laboratory



Machine  
Learning



Crowdsourcing  
Platform



Text & Image  
Analytics



Test range or  
environments



ADO  
Ecosystem

## Social Data Linking



Data Labelling



Harmonisation



Vocabularies



Data Linking

## Underpinning infrastructure



Compute



Repositories



Cloud Storage



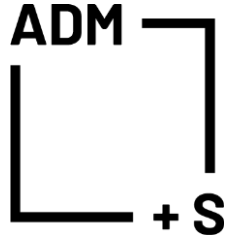
Access



# Research applications include:

- Public health issues e.g. alcohol, gambling, dieting
- Misinformation and fake news
- Dark ads and manipulative consumer practices
- Influencers, apps and trends
- Cyber security and manipulation
- Search engine results
- Government service delivery
- Education apps and platforms
- Social inclusion and social marketing
- Political parties and elections
- Recommender systems

# ASDO partners



ARC Centre of Excellence for Automated  
Decision-Making + Society (ADM+S)



ARC Centre of Excellence for the  
Digital Child








# The Australian Ad Observatory

## Thank you to our citizen scientist community

Since October 2021, we have

	1909	participants who have donated a total of
	328107	unique ads via
	737418	observations

**Your participation will help us find out how social media advertising is targeting you and if targeted advertising is discriminatory.**

The outcomes of the research, will benefit our understanding of platform-based advertising and enable independent research into the role that this algorithmically targeted advertising plays in society.



## Three approaches



Data gathering from  
transparency libraries



Custom browser  
plugin



Mobile screen  
recording app

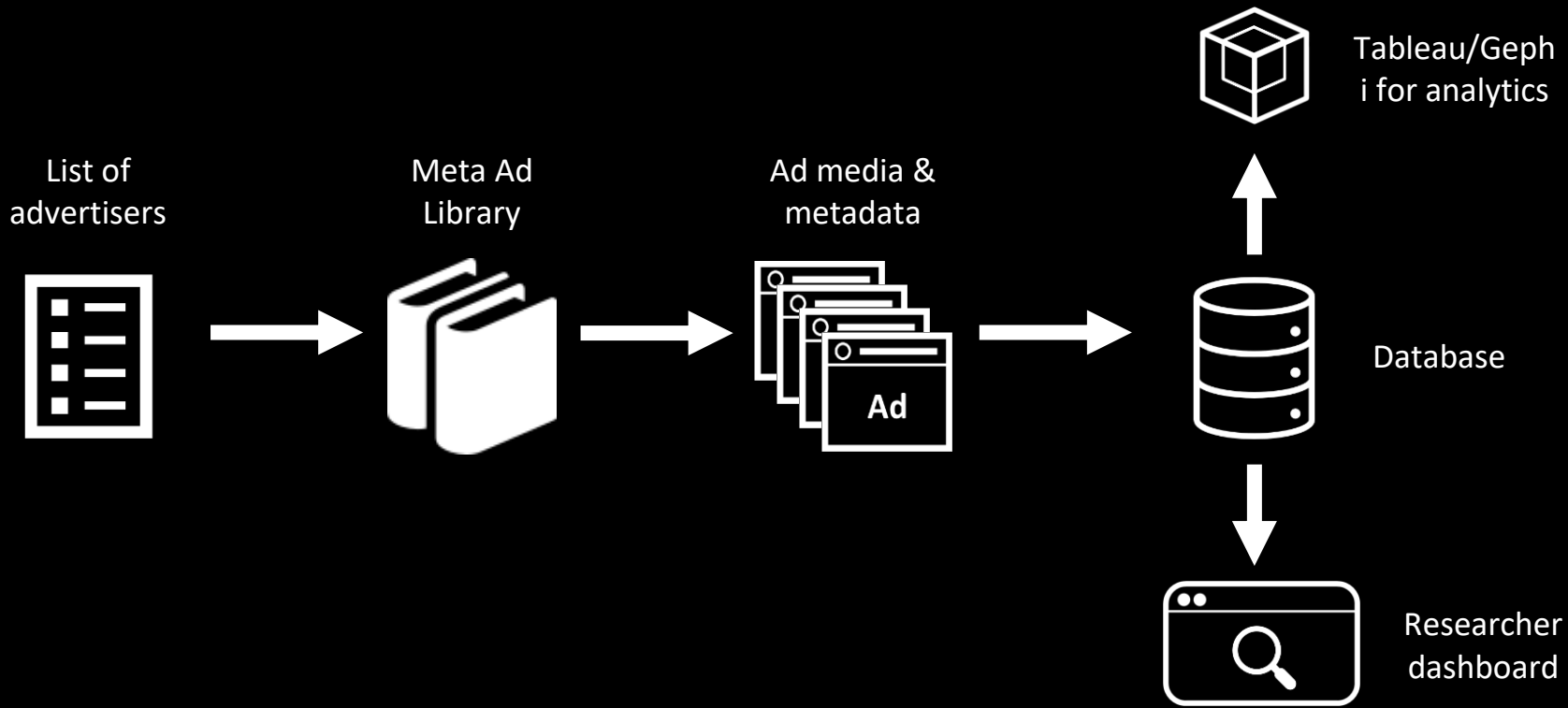


# Data gathering from transparency libraries

The image shows a screenshot of the Meta Ad Library interface. The top navigation bar includes "Meta", "Ad Library", "Ad Library Report", "Ad Library API", and "Branded Content". The main heading is "Ad Library". Below it, there is a search instruction: "Search all the ads currently running across Meta technologies, as well as:" followed by a list of criteria: "• Ads about social issues, elections or politics that have run in the past seven years" and "• Ads that have run anywhere in the EU in the past year". A link "See what's new" is provided. The "Search ads" section allows filtering by location (Australia) and ad category. The search results are displayed in a grid. The first result is for "Carlsberg" with the text "Perfectly balanced Pilsner since 1847. Available at the Stamford Grand Adelaide, Glenelg". It features a video player showing a green beer can. Below the video are "Raw JSON" and "Download Media" buttons. The second result is also for "Carlsberg" with the text "Perfectly balanced Pilsner since 1847. Available at The Lockleys Hotel, Fulham". It also features a video player and "Raw JSON" and "Download Media" buttons. On the right side, there is a "Shop Now" button and a "James Squire" result with the text "Crack open a can of James Squire Ginger Beer. Available at your local bottle shop around Aus." and "Raw JSON" and "Download Media" buttons. At the top right of the results area, there is an "Export to JSON" button. The interface also shows pagination controls and a "Showing 31 - 60 of 77185 results" indicator.



# Process






# Custom plugin



## The Australian Ad Observatory

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Home > Extensions > ADM+S - The Australian Ad Observatory



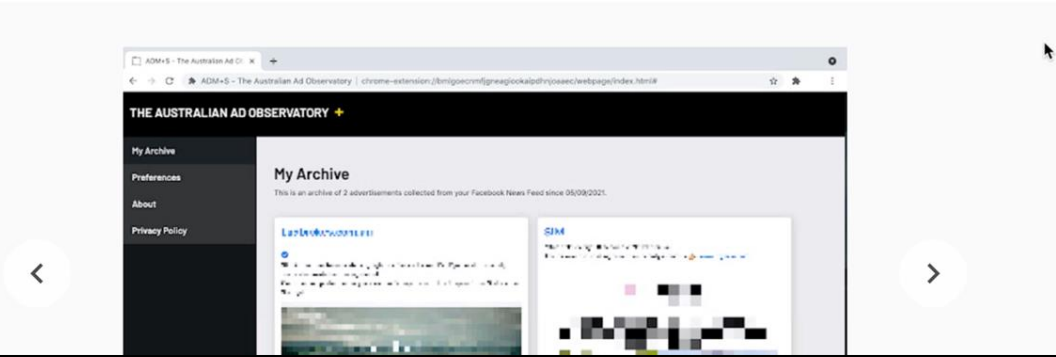
# ADM+S - The Australian Ad Observatory

Add to Chrome

Offered by: ADM+S

★★★★★ 0 | Social & Communication | 1 users

- Overview
- Privacy practices
- Reviews
- Support
- Related





# THE AUSTRALIAN AD OBSERVATORY +



## CONSENT FORM FOR QUT RESEARCH PROJECT

- Browser Plugin -

Australian Ad Observatory

QUT Ethics Approval Number XXXXXXXXXX

Are you currently residing in Australia?

Yes No

What is your gender?

Please select

What is your current age?

Please select

What is your postcode?

2000

What is your level of education?

Please select

What is the main language you speak at home?

Please select

What is your party preference?

Please select

What is your current employment status?

Please select

What is your annual income?

Please select

Thank you, this concludes the demographic information section. Please click the button below to send these details and complete the browser plugin installation, or cancel the installation without sending any information.



My Archive

Preferences

About

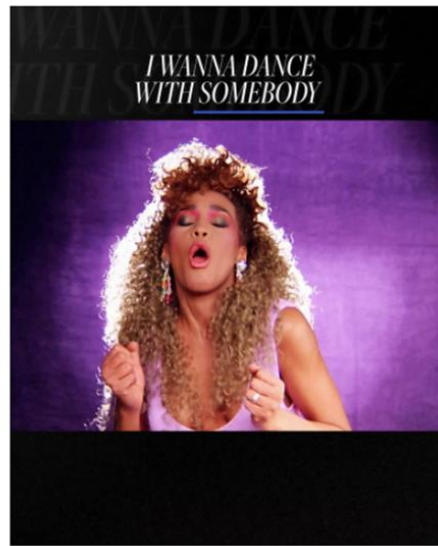
Privacy Policy

# REVIEW ADS IN YOUR AD ARCHIVE

Ads you donate can be reviewed  
in your Ad Archive.

## My Archive

This is an archive of 585 advertisements collected from your Facebook News Feed since 11/05/2022.



Ad Targeting  
[Age and Gender](#) [Location](#)

The comeback the world didn't know it needed.  
 Chip 'n Dale: #RescueRangers, now streaming on @DisneyPlusAu.



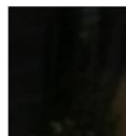
View site information

Ad Targeting  
[WAISTUIInterestsType](#) [Age and Gender](#) [Location](#)

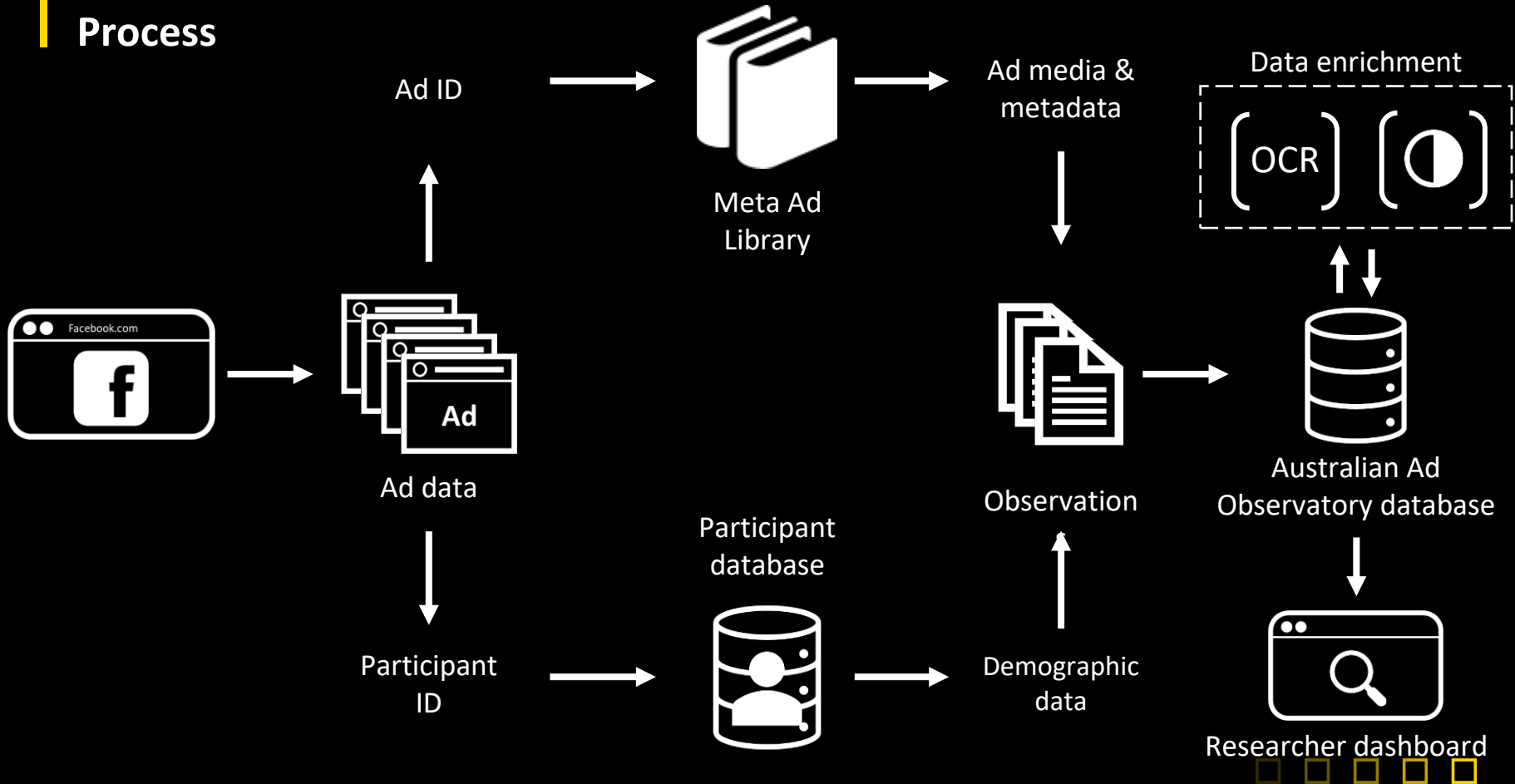
Minions, Assemble! #Minions: The Rise of Gru only in cinemas June 23.



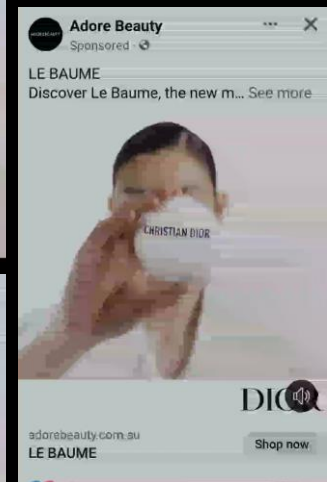
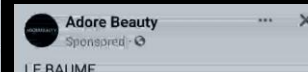
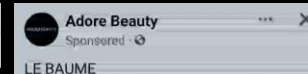
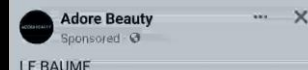
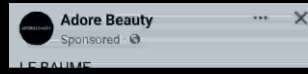
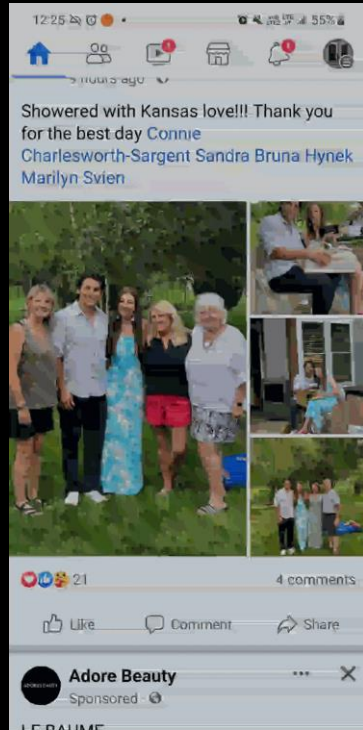
The stuff of nightmares



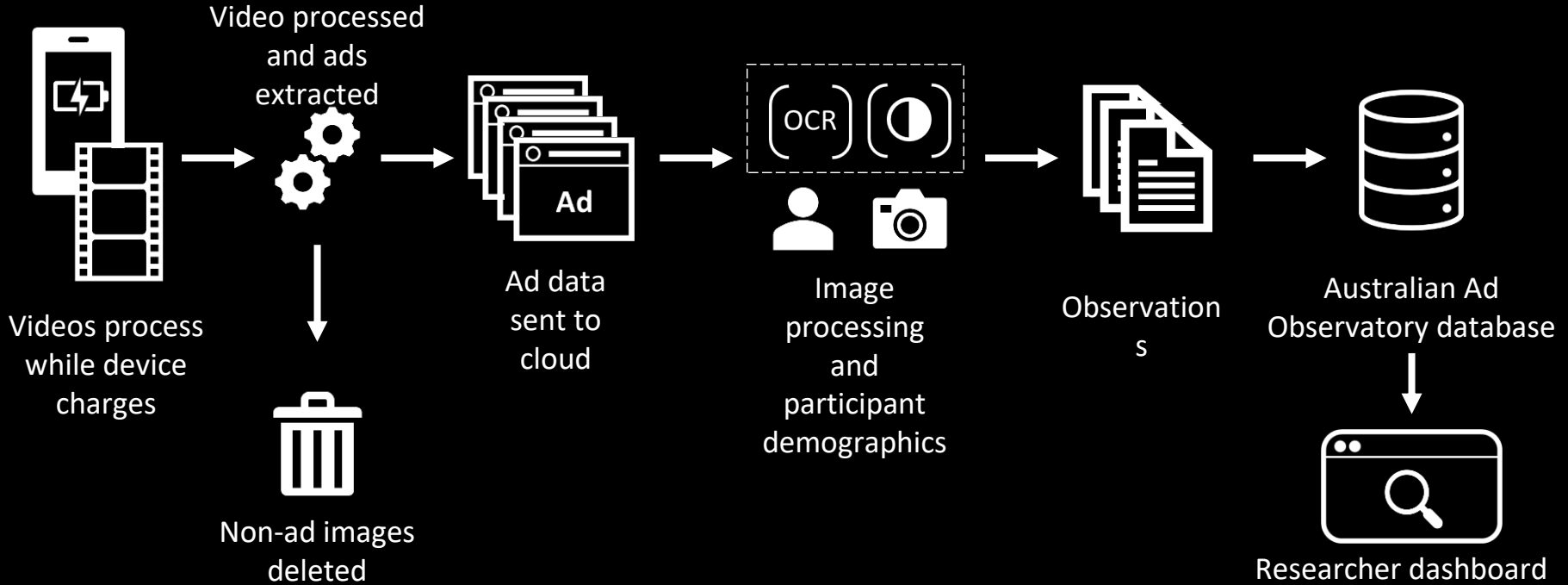
# Process



# Mobile app



# Process



## Complementary capabilities

	Are we able to observe content of digital ads published on platforms?	Can we access advertiser information and meta-data?	Are we able to see the types of users targeted?	Can we observe patterns of ads as they unfold in user feeds?
Data gathering from transparency libraries	Yes	Yes, as published in the library	Partially, only for political and social issue campaigns*	No
Custom browser plugin	Yes	Partially, by cross-referencing with transparency library	Yes, based on participant self-reported data	Partially, for Facebook in browser only
Mobile app	Yes	Only as visible in ad images	Yes, based on participant self-reported data	Yes

# From libraries to sequences





Thanks for listening



## Research Infrastructure for Social Data and Digital Platforms.

### The digital transformation challenge

The next decade will see a new wave of digital transformation and many challenges in the way data, communication and digital platforms operate. Large-scale online data has the potential to substantially contribute to the capacity of business, government and the community to understand and address Australia's major social, economic and public policy challenges.

*"ASDO would provide tools and resources to deliberately gather and analyse online user experience data, dramatically extending access to social media data beyond the small*

#### Contacts

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