Data Driven Decision-Making:

Making Big Data Useful

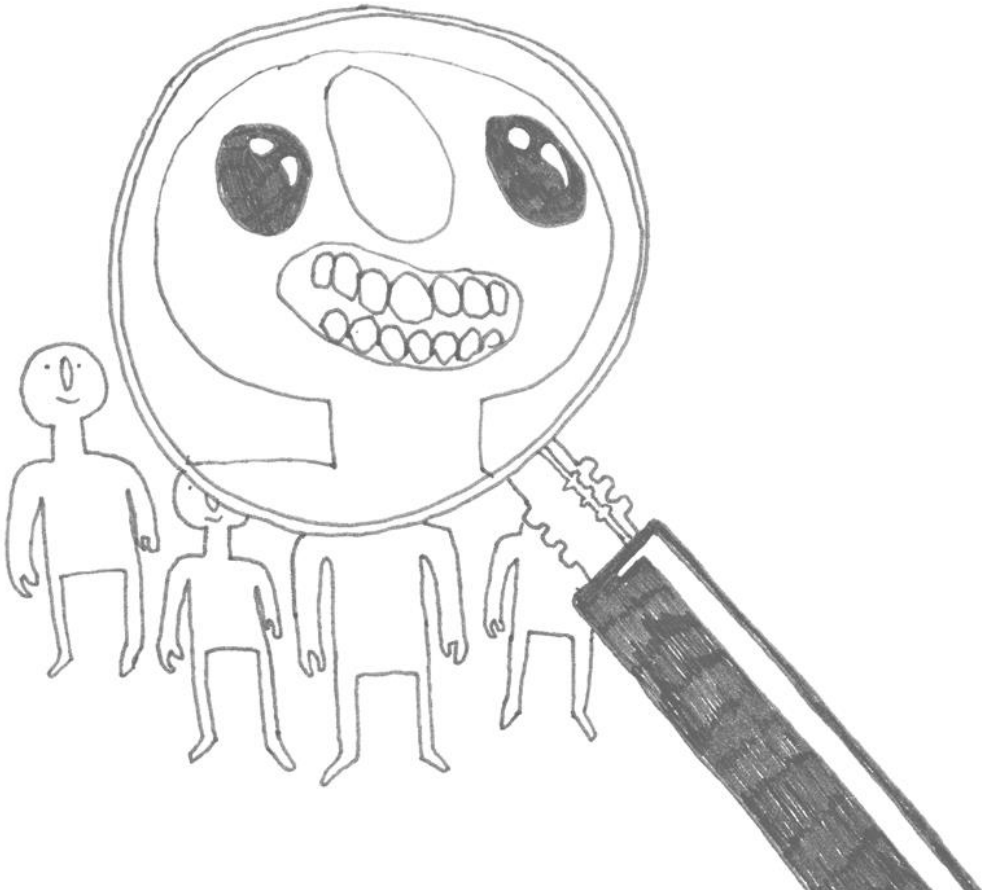
Cimeon Ellerton – The Audience Agency

the audience agency

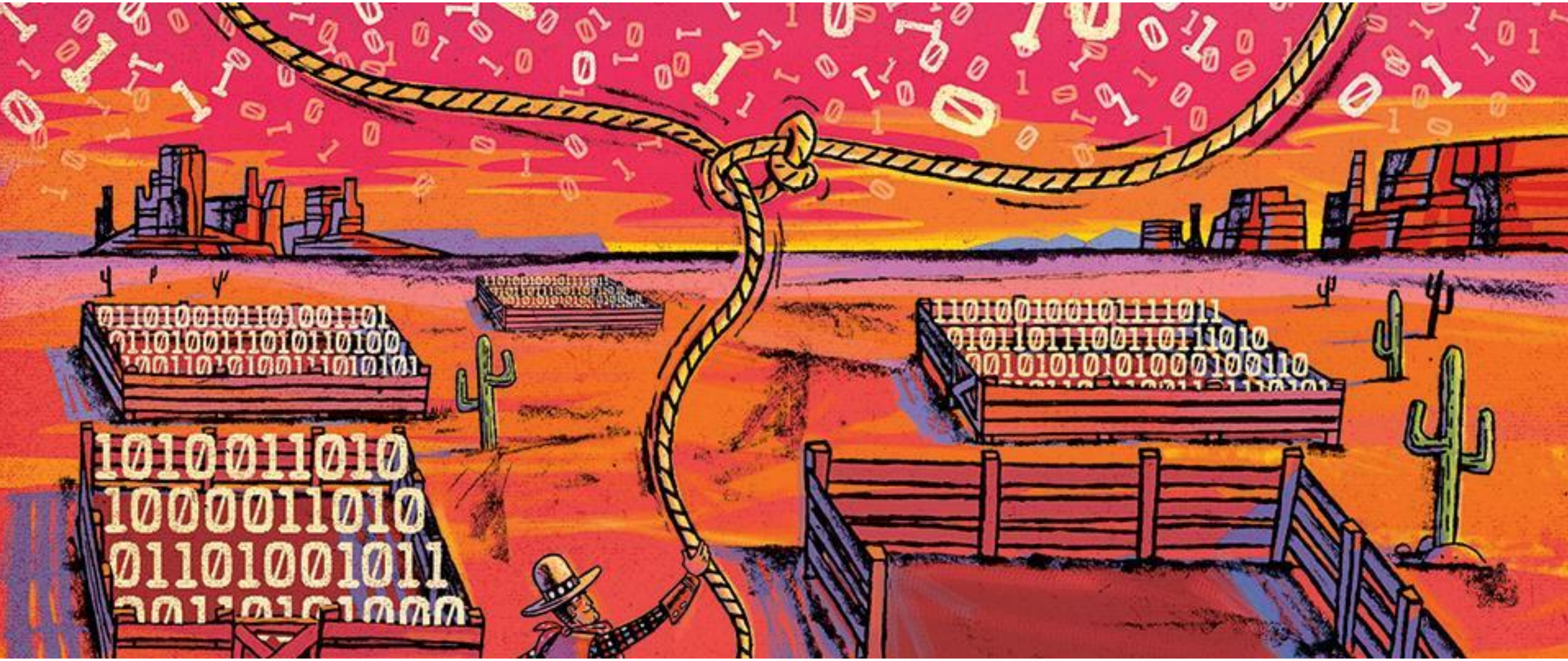
Big Spenders

- Norwegians spend more per head on music than any other country*

206.37 NOK (23.58 USD) per person



*International Federation of the Phonographic Industry



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Big Data = Big Brother

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1984, Headlong Theatre Co

A sinister instrument of the state?

A force for change?

Hans Rosling, building awareness of world poverty with data

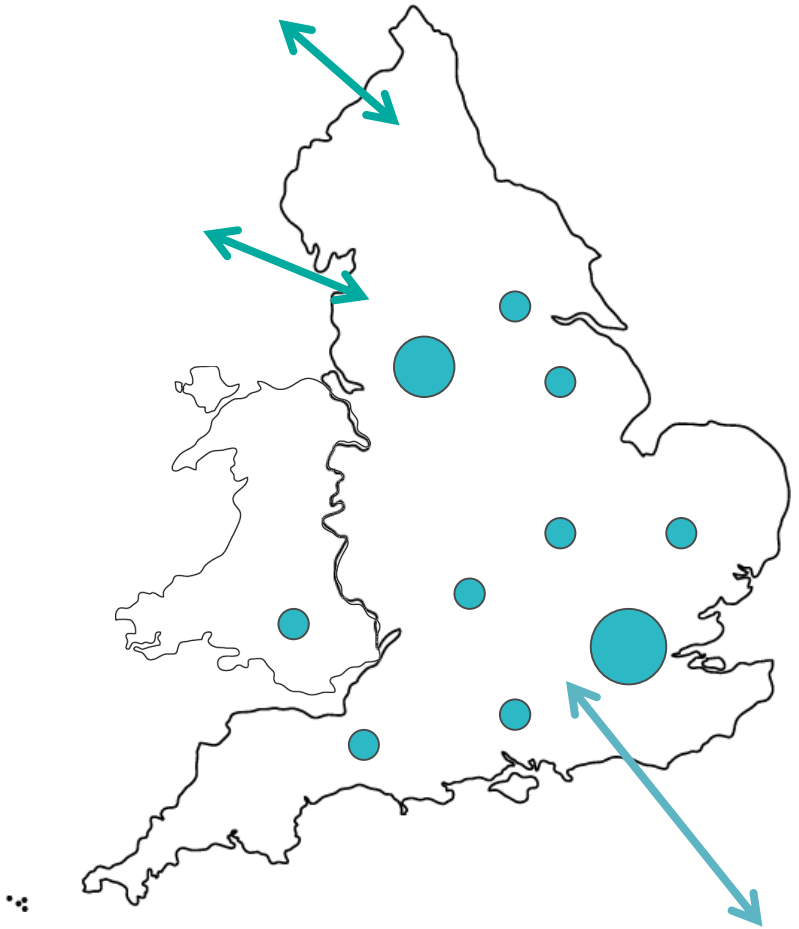
A recipe for inclusion?

Audience, Greenwich & Docklands International Festival

The Audience Agency

leading insight-driven audience policy and practice

- Not-for-profit, mission-led
- Sustainability + access
- 800+ arts, museums & heritage
- Broker collaboration
- Audience intelligence & strategy



Research, Data, Software, Facilitation, Consultancy

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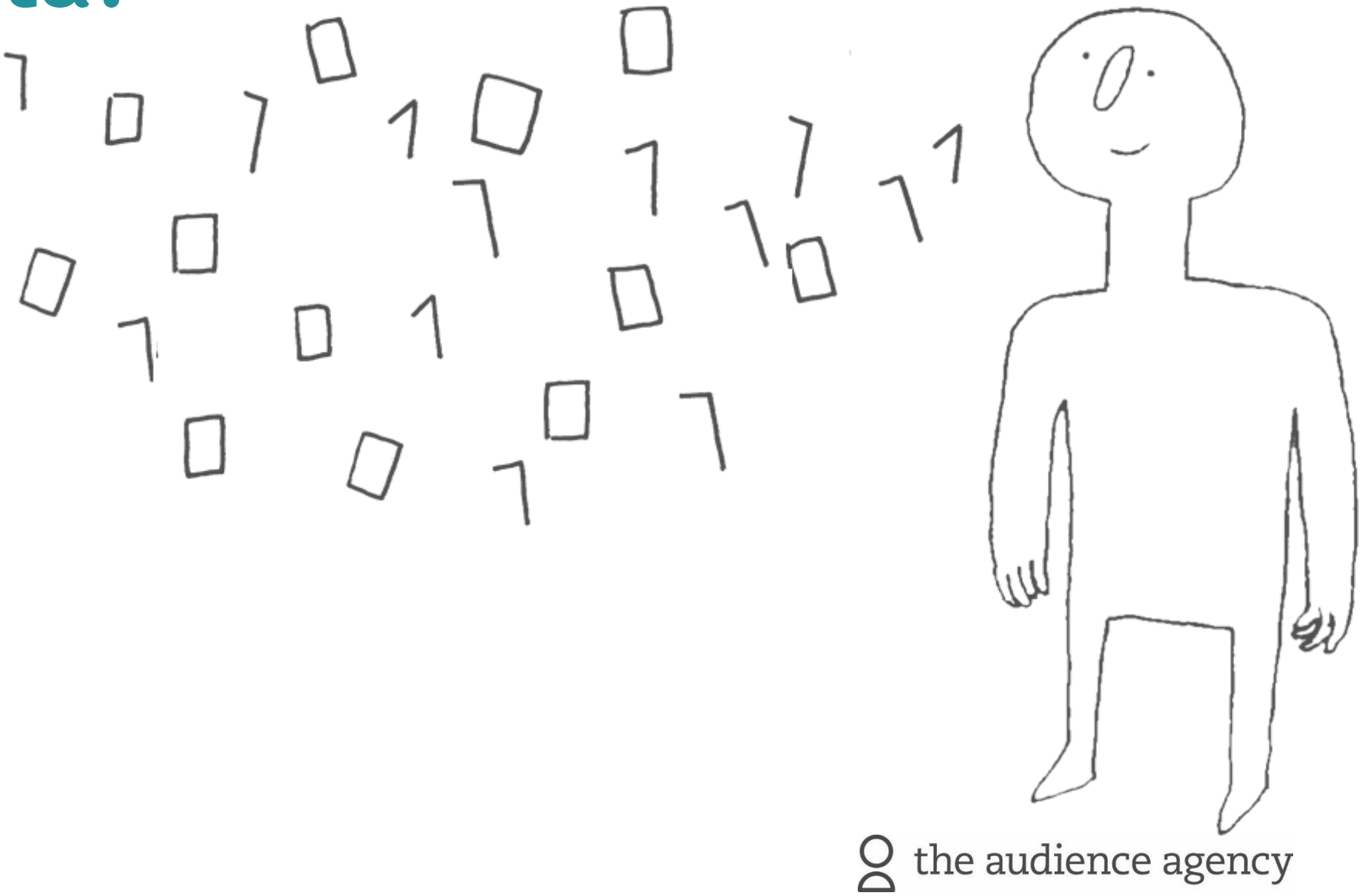
The Audience Agency:
co-operative, give-and-gain model

Big Data?

Volume
Variety
Velocity
Veracity



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audience finder

700+ cultural organisations sharing data to build audiences

40 x co-operative groups
Open and free to all
Condition of funding

Behaviour + attitudes + demographics

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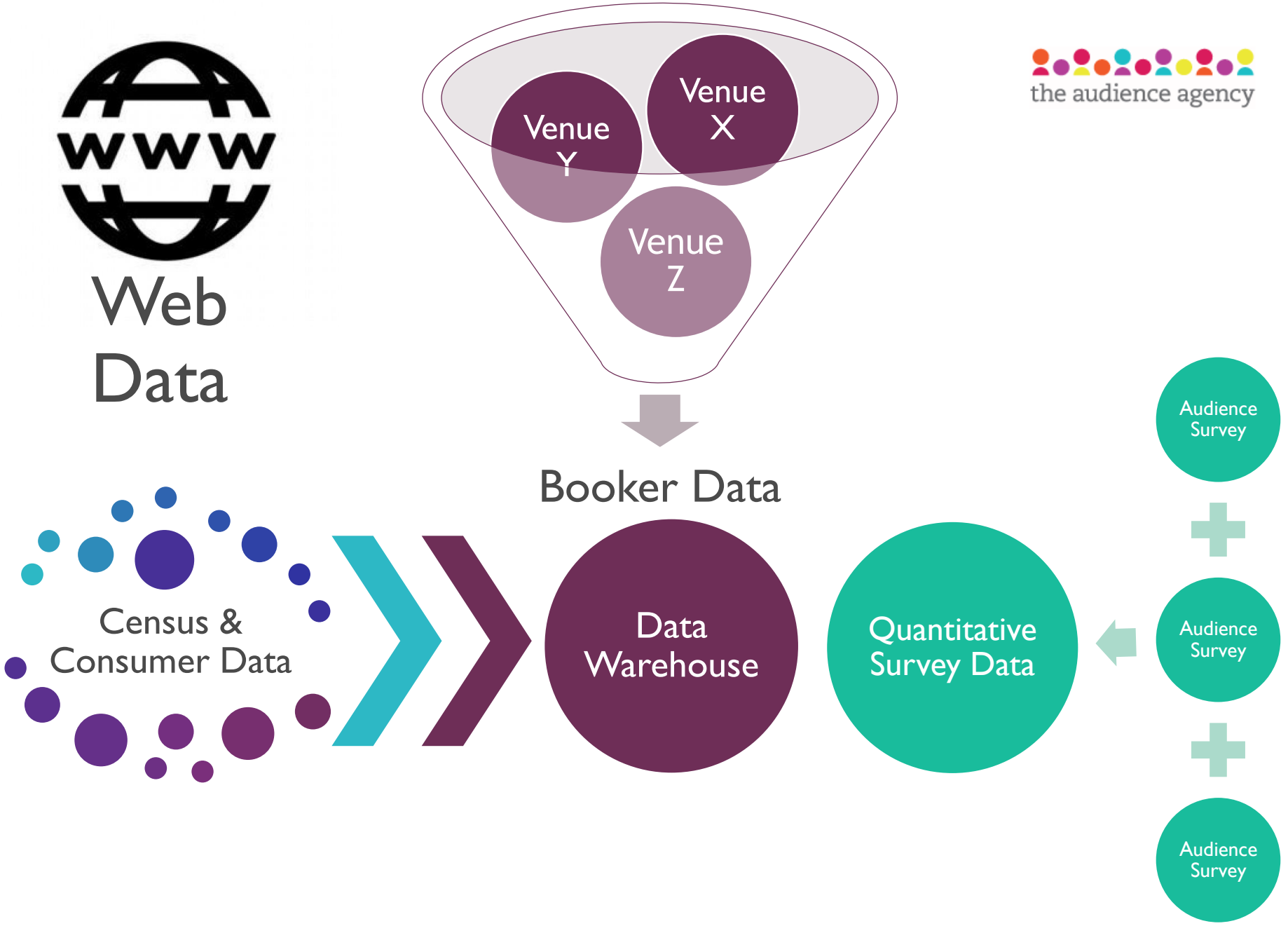
Web Data
Venue Y
Venue X
Venue Z
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Booker Data
Census & Consumer Data
Data Warehouse
Quantitative Survey Data
Audience Survey
Audience Survey
Audience Survey

Headlines
Customer Profile
Ticket Price / Spend
Booking Frequency
Booking Day
Advance Booking
Party Size
Artform Crossover
Location

Filters

Box office data: Example Org

Compared with: London Performing Arts

Timeframe: 2012-13

Artform: All

Zero value sales

Bulk purchase

TOTAL BOOKERS	TOTAL TICKETS	AVG. PARTY SIZE
46,622	191,535	2.14
SELECTED COMPARISON 719,798	SELECTED COMPARISON 3,060,286	SELECTED COMPARISON 2.15

TOTAL INCOME	AVG. TICKET YIELD	NO. OF PERFORMANCES
£2,581,172	£13.48	2,304
SELECTED COMPARISON £79,700,597	SELECTED COMPARISON £26.04	SELECTED COMPARISON 14,120

TALK TO OUR TEAM

FREE

Need help or advice on how to use Audience Finder?

> Contact us

Summary

Visitor Profile

Age

Sex

Ethnicity

Disability

Occupation

Education

Family Make-up

Segmentation

About Visit

Location

Filters

Primary Survey: Example Group

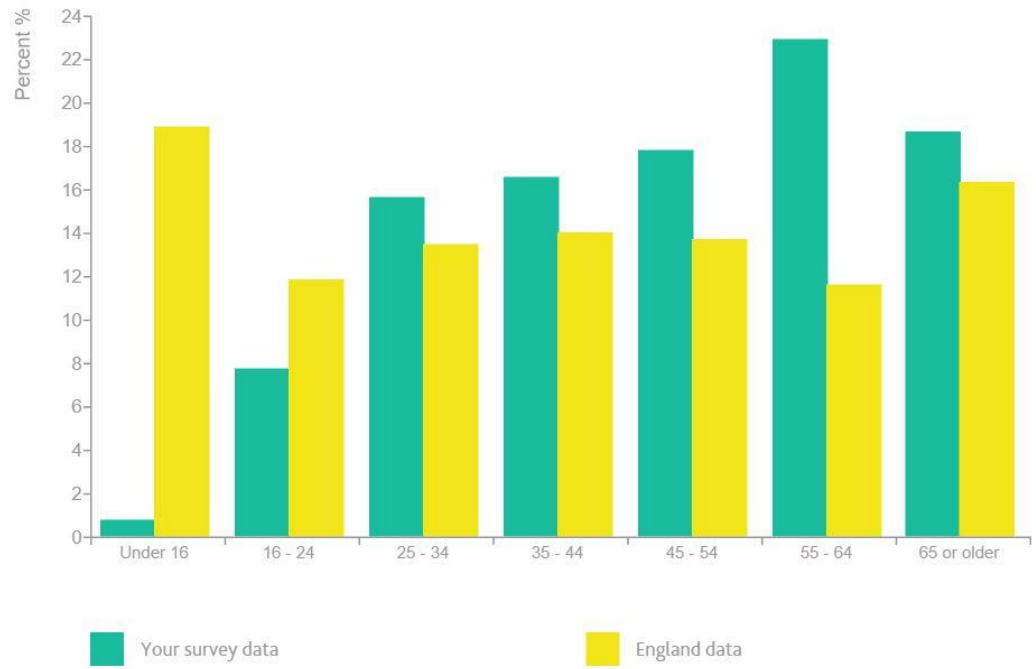
Compared with: National Data (England)

Timeframe: All responses

AUDIENCE AGE GROUP

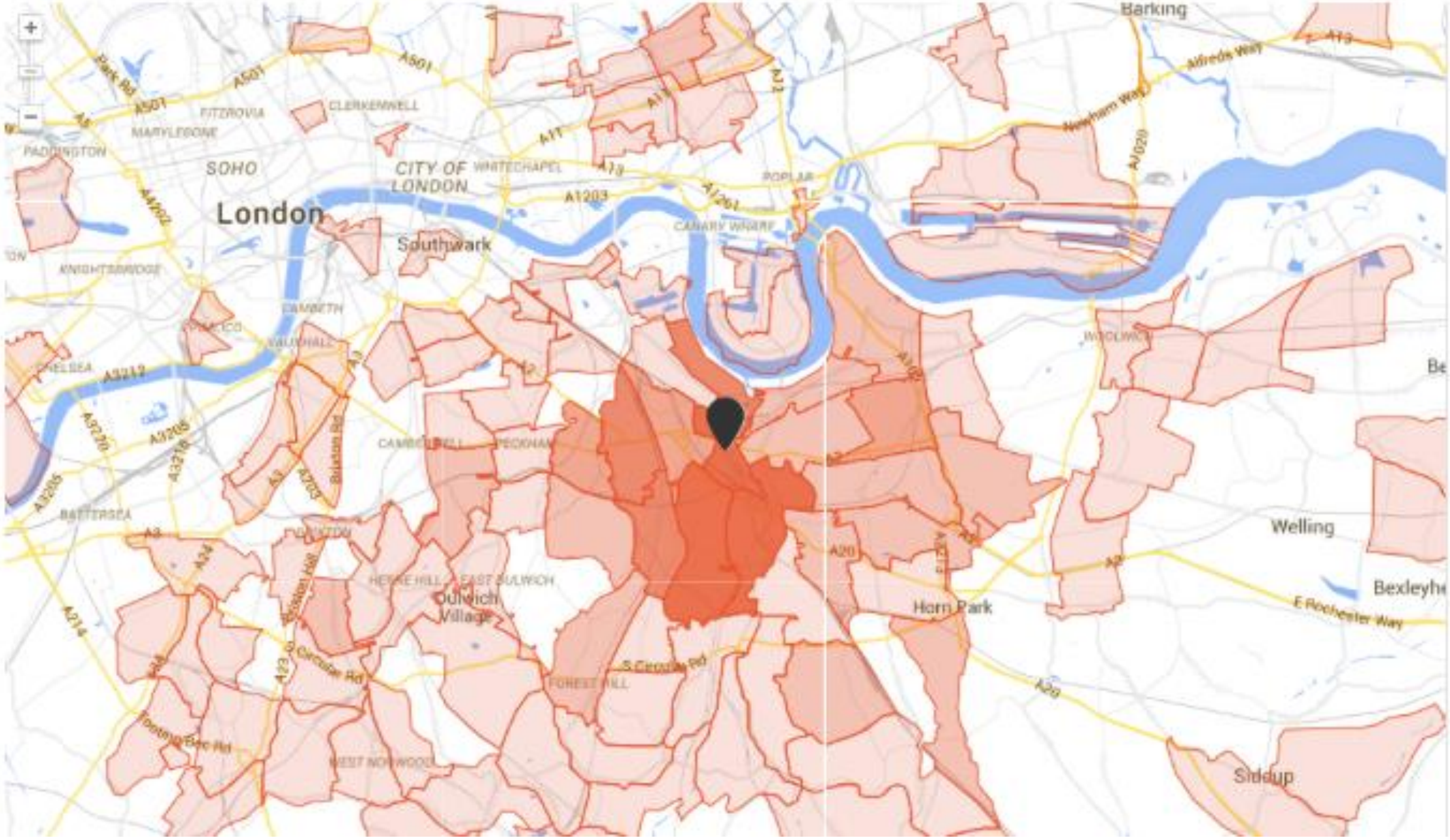
Which of the following age groups do you belong to?

Margin of error: 1%

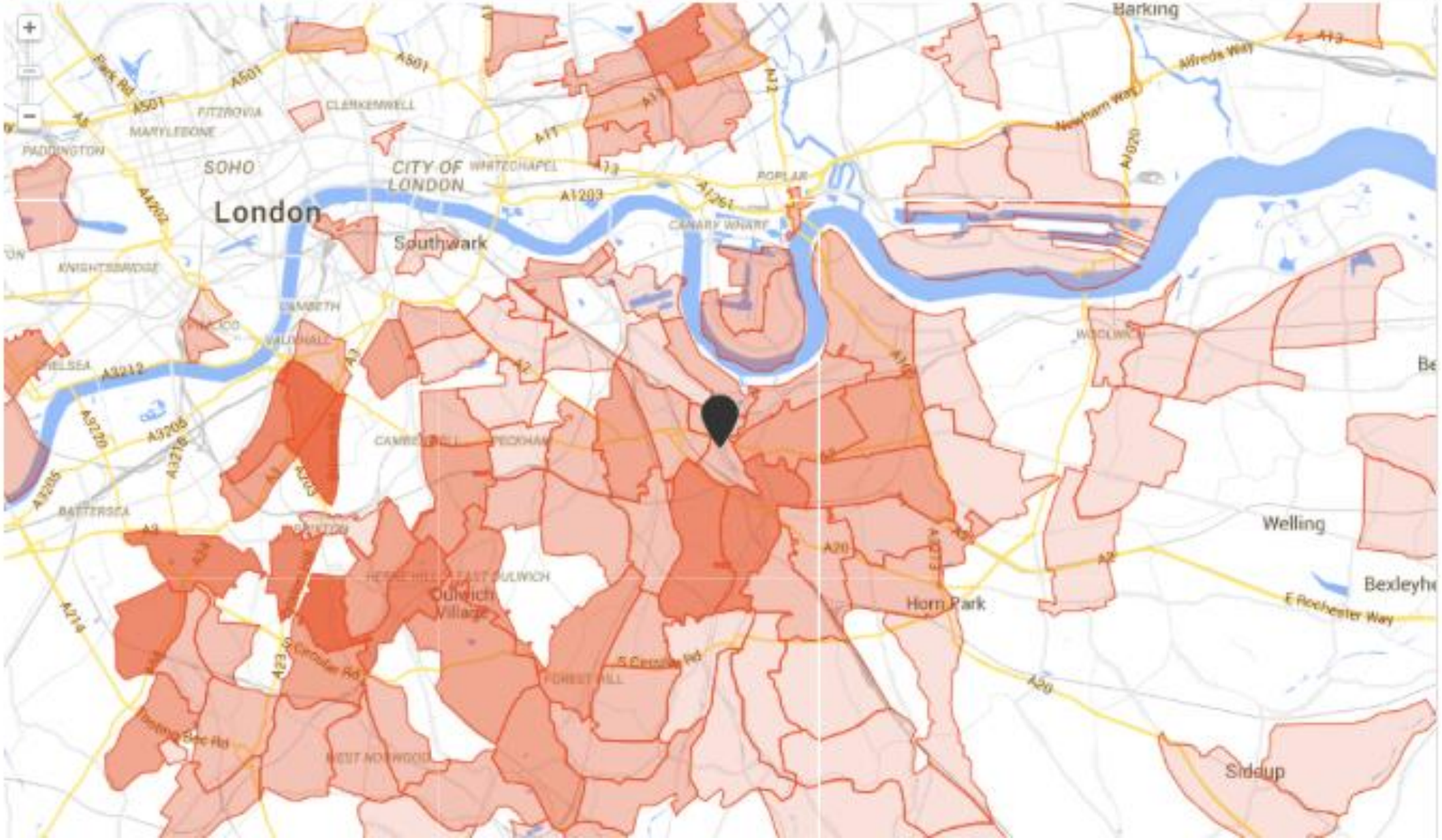


Your organisation's survey responses were last updated on 21 Jan 2016

ALL BOOKERS | MY BOOKERS | DIFFERENCE | RESET



ALL BOOKERS | MY BOOKERS | DIFFERENCE | RESET



Use the buttons to toggle between your bookers, and all the bookers in your cluster organisations combined and to compare between them.

ALL BOOKERS | MY BOOKERS | DIFFERENCE | RESET

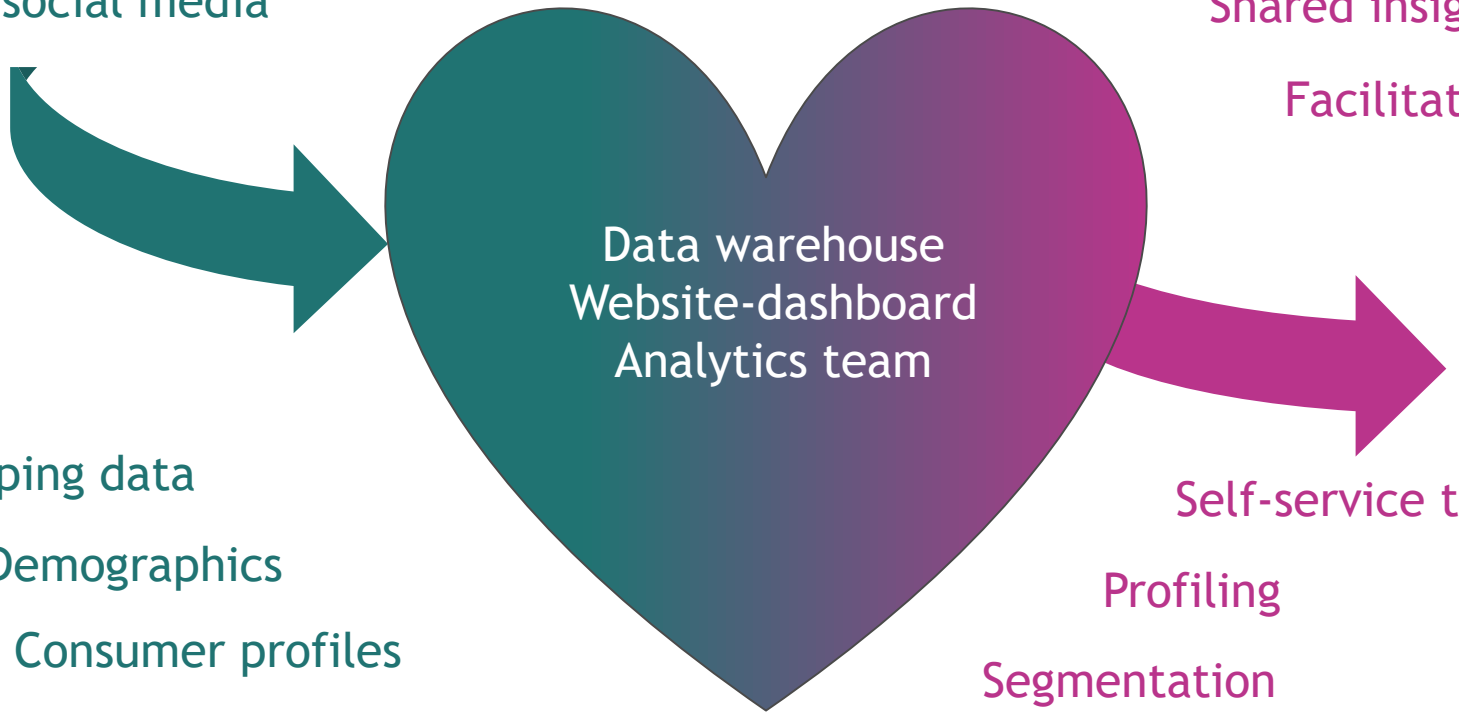
audience finder

National survey data

CRM, Ticket-buyer data

Transaction data

Web, social media



Mapping data

Demographics

Consumer profiles

Inventory data

Infrastructure

Dashboard analytics

Benchmarks

Group reports

Shared insight

Facilitation

Self-service tools

Profiling

Segmentation

Mapping

Bespoke

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A Case Study: English National Opera

Understanding First-time Attenders

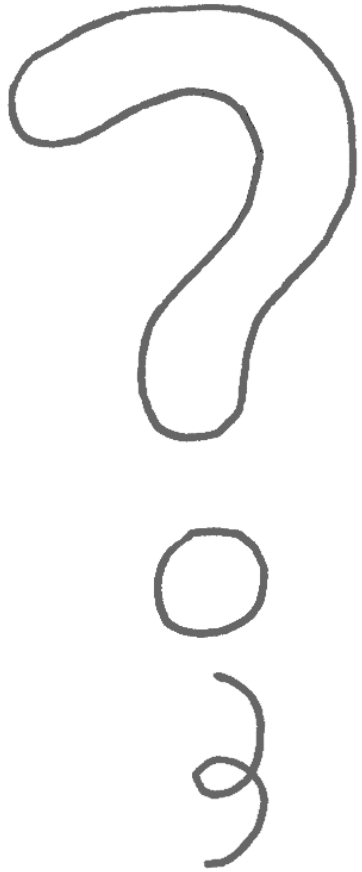
Meet “Maria”

Maria’s night at the English National Opera – what the data tells us

- Her first booking at the London Coliseum
- Out for an evening with her guest at *La Bohème*
- It’s likely to be a special night:
  - She planned it 6 months in advance
  - She chose the best seats in the house
  - She treated them to champagne in the interval
- Lives in Islington, North London

What else does Maria do?

- What other venues does she attend
- What other arts and culture does she like?
- What are her booking patterns?
- How much does she pay?
- How frequently does she attend?



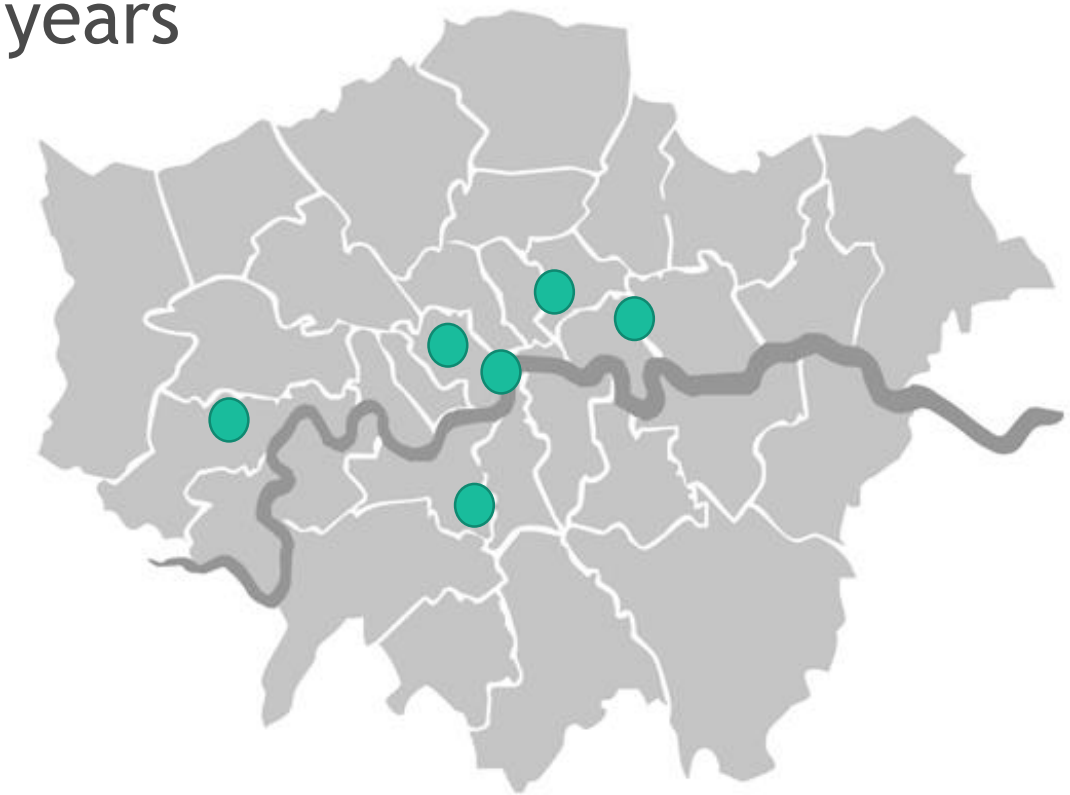
Maria's Culture Habits

- Maria attended 6 other venues in 3 years

6 Operas

14 Plays

8 Concerts



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Books 76 days in advance

Pays £17 per ticket

Books 139 days in advance

Pays £43 per ticket

Books 156 days in advance

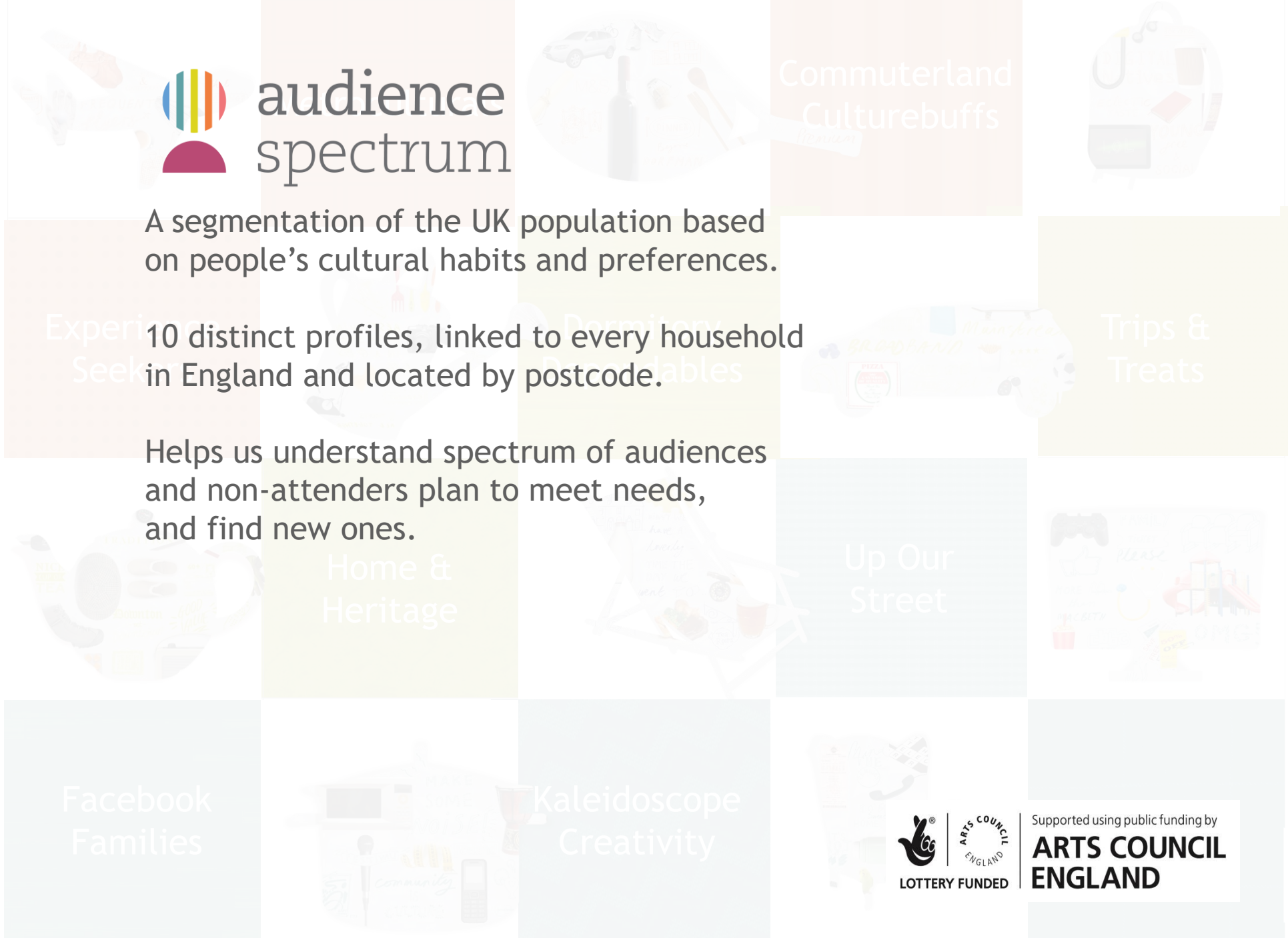
Pays £63 per ticket

audience spectrum

A segmentation of the UK population based on people's cultural habits and preferences.

10 distinct profiles, linked to every household in England and located by postcode.

Helps us understand spectrum of audiences and non-attenders plan to meet needs, and find new ones.



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Using Data for Prediction

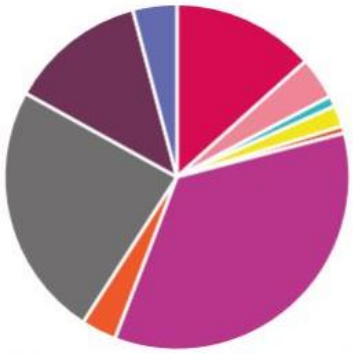
What if we could predict what sort of an audience we might get for a gig, before we've even booked the musicians?

Audience Predictor

Edit Performance Settings

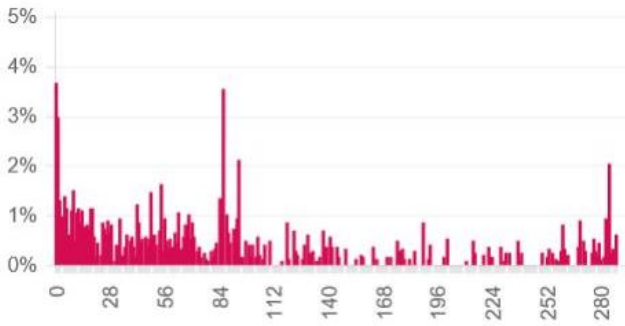
Based on 8 matching performances of 3 distinct productions from 2 organisations, scoring from 0.71 to 0.71.

Audience Spectrum Segments



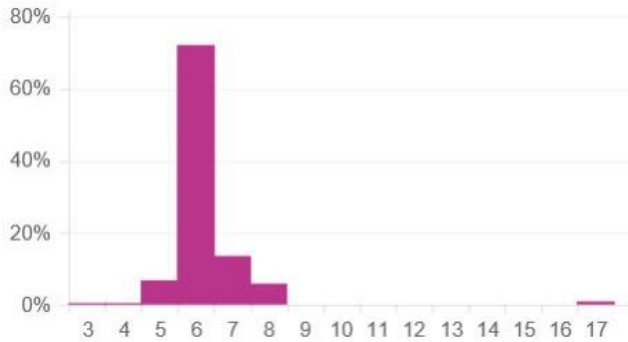
- Home & Heritage
- Metroculturals
- Heydays
- Facebook Families
- Kaleidoscope Creativity
- Commuterland Culturebuffs
- Up Our Street
- Dormitory Dependables
- Trips & Treats
- Experience Seekers

Booking Time



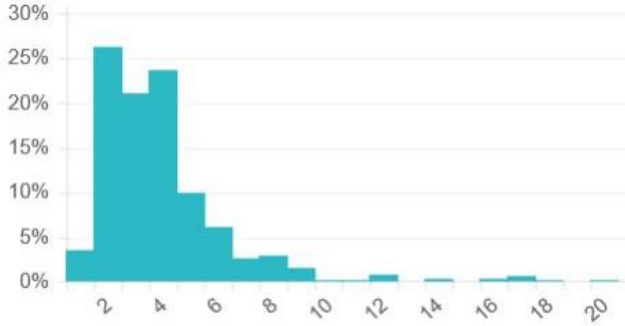
Average: 110.19

Ticket Price



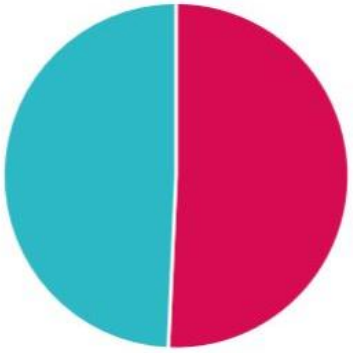
Average: 6.26

Group Size



Average: 4.13

Ticket Purchase Channel



Online Other

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How does it work?

- *The maths:*

$$c(p_1, p_2) = \frac{\sum_i w_i \delta_i}{\sum_i w_i}$$

Exploring **predictive** power…
leveraged £80m + £15m per year from government
by predicting the size, location, profile and
appetites of potential audiences

Recently opened: Home in Manchester, leading the repositioning of the city through culture

Over to you…

Thank You

Cimeon Ellerton – The Audience Agency

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