

Big Data in Practice

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Overview slide

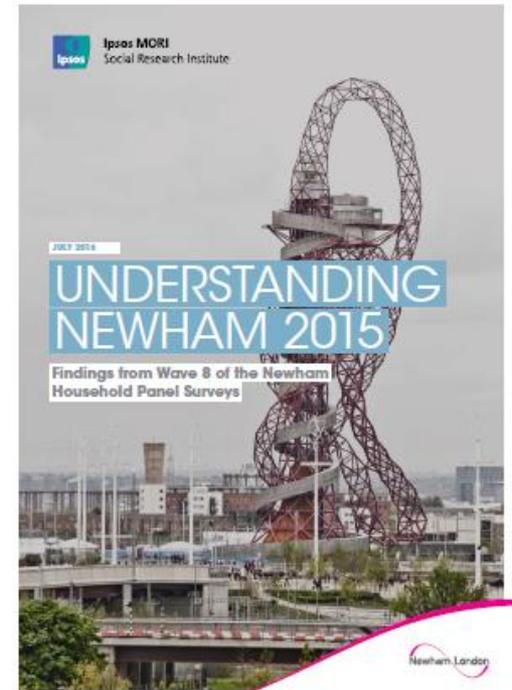
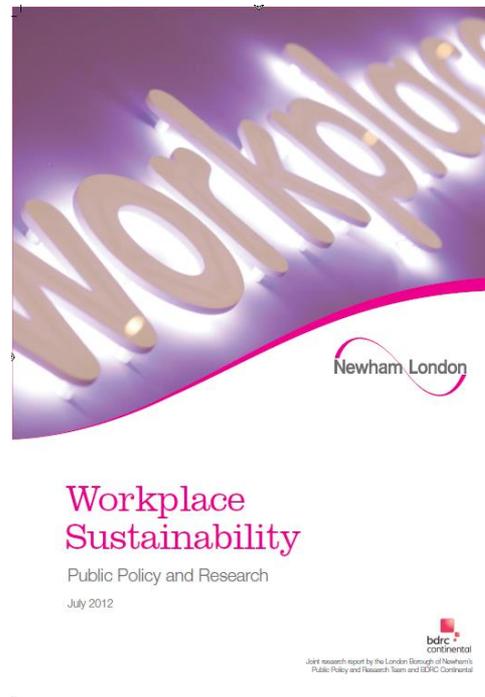
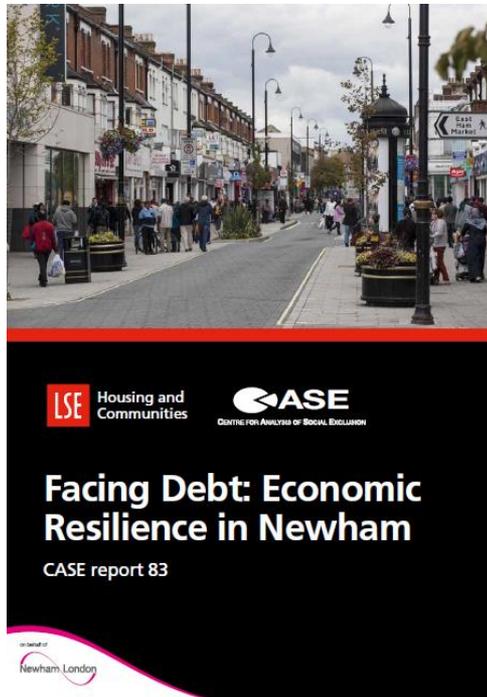
- About Newham and our approach to research
- Evaluation using administrative data
- The data warehouse and its role improving research and evaluation
- Questions

About Newham

- GLA estimates put Newham's population at about 338,600 in 2016
- Deprivation is high in Newham but improving. The area ranked 25th in IMD 2015, down from 2nd in 2010
- It is the most ethnically diverse place in the UK with no single ethnic group having a majority
- It also has a young population with 63% of the population 35 or under, compared to 45% for the UK overall



Research at Newham



Evaluation before the Data Warehouse

- Focus on impact evaluation with some mixed-method evaluation
- RCT is gold standard, quasi-experimental with a derived control group more practical
- Use of administrative data where possible to make the most of resources and reduce the burden of data collection
- Examples: Families First (Troubled Families) evaluation, Newham's Reading Guarantee evaluation

Example evaluations

Families First

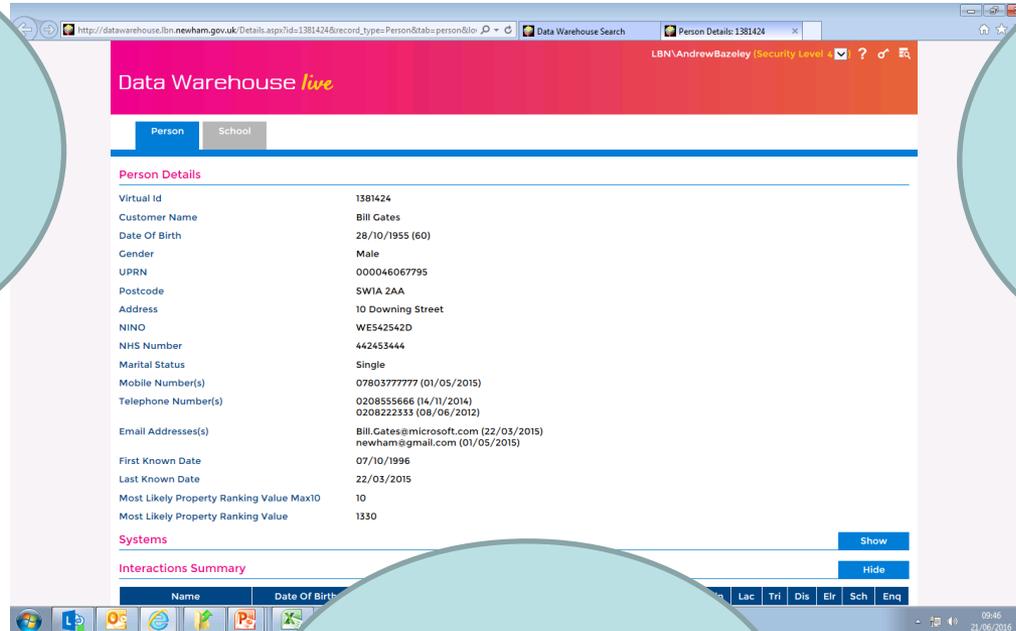
- Mixed-method evaluation combining administrative data, primary data collection by frontline practitioners and qualitative interviews
- Issues with data sharing, the population size, burden on practitioners, data quality and changes to the programme over time

Reading Guarantee

- Impact evaluation led by Staffordshire University using administrative data from 344 pupils, “difference in difference” and an historic control group
- Results showed the programme nearly doubled the expected progress of pupils with 75% of those who were behind in their reading catching up

What is the Data Warehouse?

Brings together key data from across LBN systems into a single repository



Data is matched used using property and person matching software

Can generate a single record for people and properties

Why is the data warehouse needed?

- Combining data through the data warehouse gives added value by providing a more holistic understanding of residents
- Initiated in 2012 to enable enforcement of Newham's landlord licencing scheme
- Later adopted as a corporate programme to support service transformation and drive efficiencies
- It supports analysis of a wide range of variables using predictive modelling techniques in order to target a number of areas- for example early intervention, enforcement, and anti-fraud activity

Evaluations using the Data Warehouse

Workplace

- Newhams employment scheme **Workplace** is currently being evaluated
- Part of the evaluation links Workplace customer data with other data from data warehouse
- Analysis is being conducted to get a better view of who uses services and who is more likely to find jobs
- Predicative analytics also being used

PRS

- An evaluation of Newham's **Private Rented Sector licensing scheme** is currently underway
- Data on ASB and Council Tax payments from the data warehouse is being linked to properties
- This data is being analysed to see if licensing has had any affect in these areas

Benefits and limitations

Benefits of data warehouse:

- Data is stored in one place
- Data is standardised and quality assured
- Staff time is reduced in a range of areas- collecting, inputting and cleaning data for evaluations
- Faster analysis in the long-term
- Cost effective

Limitations of data warehouse:

- It does not exactly replicate LBN systems
- Limited to the data held and currently collected
- Data is mainly service interaction/ demographic data, no behavioural or opinion data

Future evaluation in Newham

- Greater use of the data warehouse to scope and deliver research and evaluation
- Mixed-method evaluation using qualitative research to ensure delivery adheres to the specified model
- Focus on embedded services with large intervention groups
- Proactive work with services at inception to ensure data is collected in the correct format to facilitate evaluation

Thanks and any questions?

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<https://www.newham.gov.uk/research>