

# The Value of Census Information in Location Planning at Sainsbury's

A Personal View

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The footer features a horizontal bar with a red-to-orange gradient background. On the left, there is a vertical yellow stripe. The Sainsbury's logo and tagline are positioned on the right side of the bar.

**Sainsbury's**  
*Try something new today*

## Introduction to Sainsburys

- J Sainsbury plc was founded in 1869 and today operates a total of 927\* stores comprising 556 supermarkets and 371 convenience stores.
- Across the UK, Sainsburys' stores fulfil an average of 21 million customer transactions a week, employ around 150,000 colleagues and more than 2000 suppliers.
- Over 60% of the UK population lives within 10 minutes of a Sainsburys' store

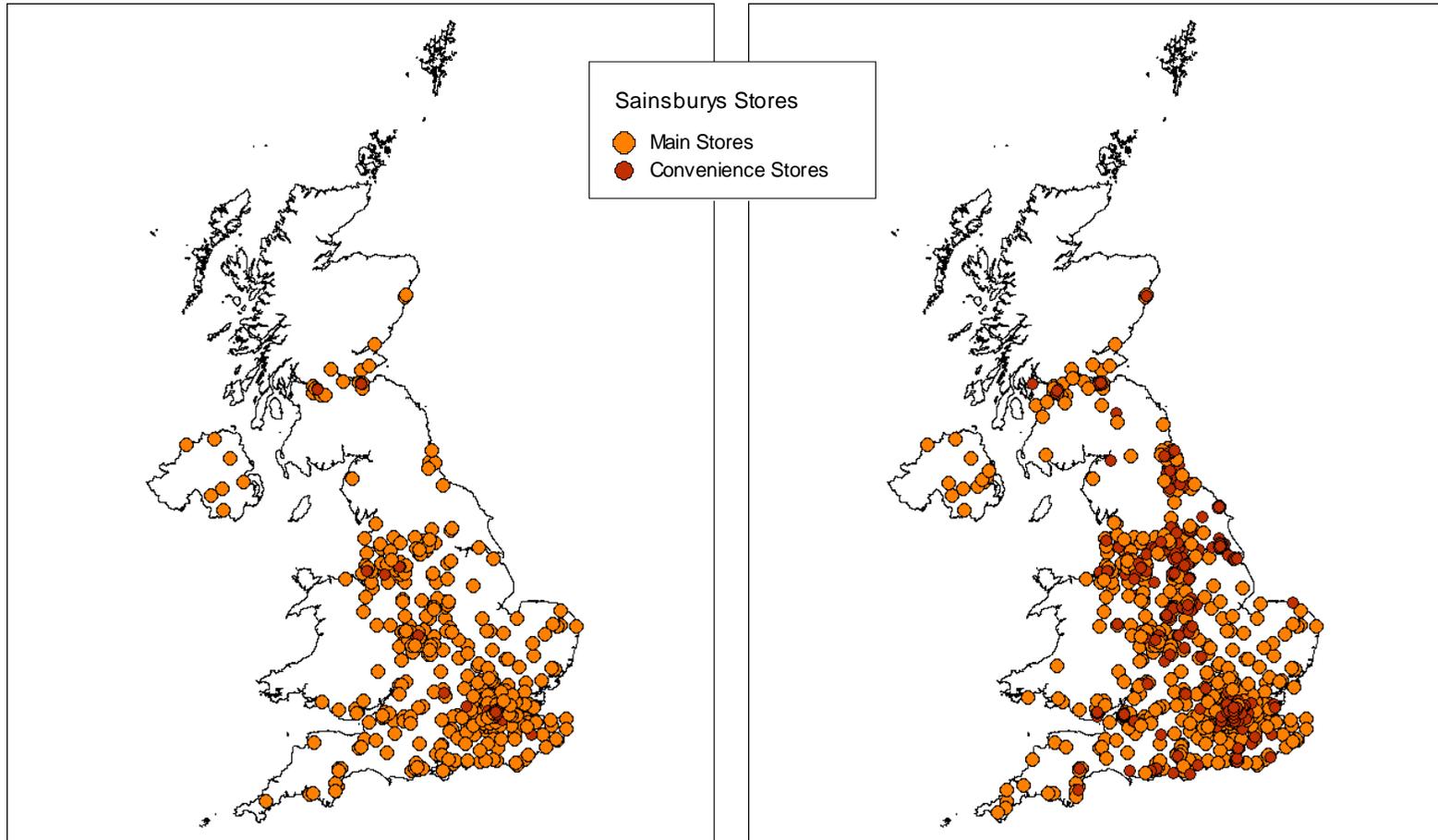
\*19<sup>th</sup> March 2011

## Sainsbury's Space Growth

- In the two years since March 2009 Sainsbury's gross supermarket space has increased by 15.9%, exceeding our two-year space growth target of 15% and generating over 6,000 new jobs across the UK.
- In the last year alone we added a gross 1.5 million square feet of space equivalent to an increase of 8.5% and we expect to maintain this momentum next year.



## Sainsbury's Changing Estate since release of 2001 Census data



March 2003

March 2011

## Network and Investment Planning Team Remit

Responsibilities include:

- Forecasting sales for new stores and extensions
- Assessing acquisition opportunities
- Planning Network Strategy
- Post-Investment Analysis
- Tracking internal pipeline and opening programme
- Tracking competitor openings
- Forecasting Competitor Impacts

## Tools and Resources

### Tools

- GIS
- Isochrone generator
- Mathematical Models
- SQL Databases
- Site Visits

### Resources

- Location Planning team of about 30 analysts
- Demographic Data
  - Census
  - Population Projections
  - ACORN
  - Expenditure Estimates
- Store Locations
- Loyalty Card Data
- Mapping Data
- Postcode data

## Main Site Forecast Process

### Steps Involved:

- Define catchment area of new store and identify competitor stores including other Sainsbury's stores
- Run Gravity Model to estimate food market shares at OA level
- Identify stores with similar characteristics to use as analogues
- Refine market shares using analogue stores
- Produce food sales estimate by applying market shares to grocery market estimates
- Estimate non-food sales using analogue stores
- Estimate external trade using analogue stores
- Aggregate estimates to produce a sales forecast

## Gravity Model Inputs

- Attribute data for Site and Competitors:
  - Location
  - Sales Area
  - Sales
  - Car-Parking
  - Urban / Rural Score
  - Location Type e.g. High Street, Retail Park etc.
- Store – OA Drivetime Matrix
- ACORN Profiles of each Operator
- Population Projections by OA for 2011
- Grocery Expenditure estimates by OA derived from EFS
- Social Grade by OA (from 2001 Census)

## Analogue Attributes

In addition, many other attributes are used to identify and compare analogue stores:

- Catchment demographics:
  - Car availability }
  - Ethnic profile } all from
  - Numbers of single-person households } 2001 Census
  - Proportion of pensioners }
  - ACORN Profile
- Store attributes
  - Sales area, including food / non-food ratio
  - Sales volume and trading intensity
  - Competitive environment
  - Market shares by drivetime and OA calculated using loyalty card data

## Convenience Site Forecast Process

The main differences to Main store forecasting are as follows:

- Small radial catchments rather than drivetimes e.g.  $\frac{1}{4}$  or  $\frac{1}{2}$  KM
- Traditional Gravity Model inappropriate due to high 'leakage' and convenience shopping rarely being the primary trip driver.
- We use a customised gravity model which segments demand by different groups e.g. residents, workers, shoppers, travellers.
- To complement this we use an Analogue Model in conjunction with a Scorecard which scores analogues segment by segment using appropriate variables for example:
  - Locations of other drivers of trade, e.g. schools & universities, health centres, transport nodes, other services e.g. banks, dry cleaners etc.
  - Daytime populations e.g. students, workers, commuters, drivers

## Census Data – Pro's and Con's

### Pro's

- Breadth of coverage (UK)
- Depth of coverage (number of variables)
- SWS helps us to estimate day-time populations
- Small area building blocks
- Free at point of use
- Basis for geodemographic classifications
- Underpins population estimates and projections

### Con's

- 10 yearly snapshot
- Workers and students still difficult to locate and quantify accurately
- Confidentiality rounding makes data complicated to use
- OA Centroids get out of date as centres of population shift

## Other Government Datasets currently used

In addition to the Census we do use a number of other government datasets some obtained directly from public sector suppliers and some from third-party resellers, these include:

- Obtained directly from public sector suppliers:
  - OS Raster mapping data
  - Admin boundary data
  - Naptan transport node locations
- Obtained from third-party resellers:
  - Population estimates and Projections (via CACI who produce OA-level estimates)
  - Expenditure Estimates from EFS (again CACI produce customised grocery spend estimates for us at OA level)
  - Postcode locations and Postcode Sector boundaries (from Pitney Bowes MapInfo)

## Value and Impact of use of Census Data in Location Planning

- Since the release of the 2001 Census data in 2003, Sainsbury's has opened over 450 new stores and extended over 100.
- 70% of store openings in the last two years were in Scotland, Wales and the South West. These are areas outside Sainsbury's traditional heartland where few analogue stores were available, so accurate estimates of ROI would not have been possible without good demographic data.
- The investments are too large to rely on 'gut-feeling', for example to build a new superstore might cost in excess of £20 million.
- The immediate financial costs and long-term losses caused by a poor location decision can not be over-estimated.

Thank you

