



Shopping Demands – Work, Rest and Play

Graham Smith, CACI Limited

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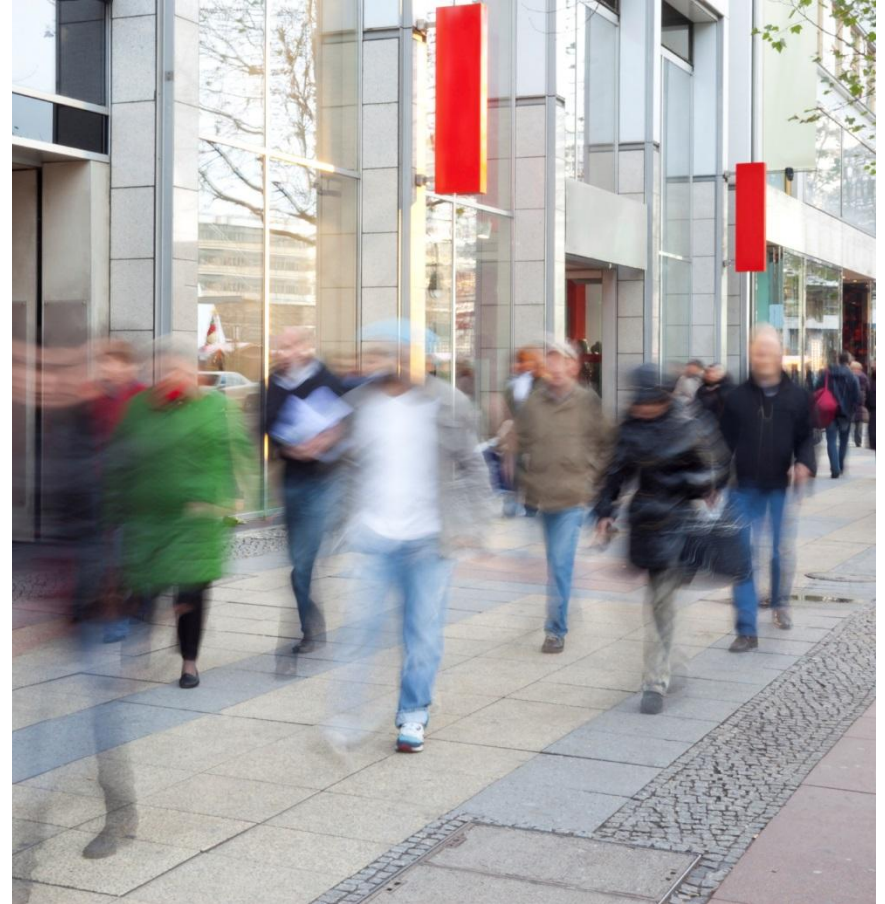
Harnessing Open Data for Business Advantage CGG Seminar

Agenda

- Overview of retail categories by customer activity
- Case Study – Southern Co-operative
- Using Open Data to identify Convenience Hotspots
- Working to spend
- When Open Data fails – burn the heretic!

Have legs, will travel - Considering a customer's activity

- Usually Resident
- Student Term Time / Out of Term
- Workplace
- Journey to Work
- Shopping
- Leisure
- Tourist
- Visiting Friends and Family



Case Study – Southern Co-operative

- Operate over 160 convenience stores
- Requirement for local “micro” analysis of locations to support turnover model
- Benchmark new sites vs existing sites
- Supporting evidence for investment:
 - New store openings
 - Developing existing sites
 - Refurbishment of current stores

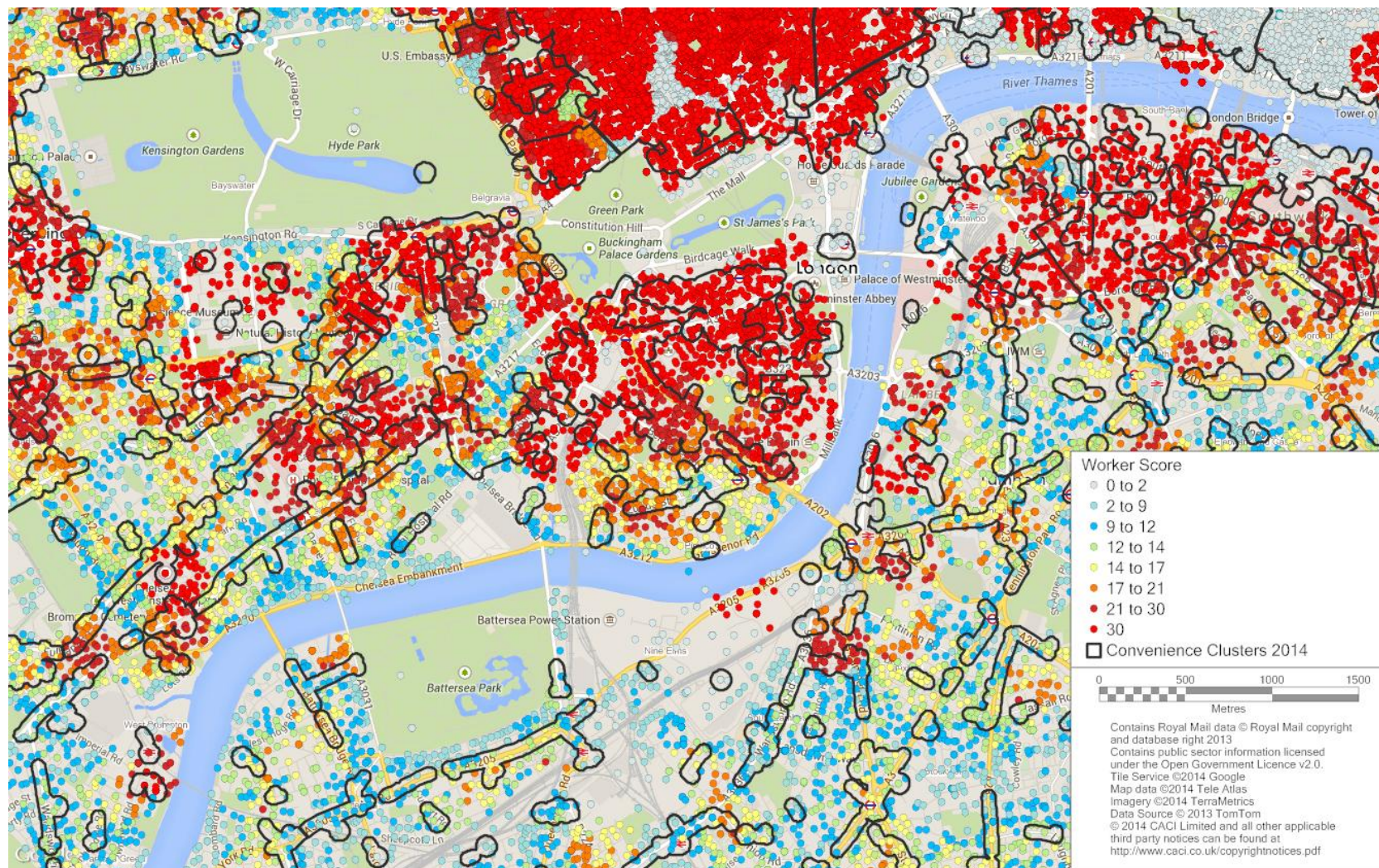
Case Study – Southern Co-operative

- The solution:
 - Spatial model within a GIS
 - Bespoke turnover model to simulate new openings
 - Catchment reporting
- Able to identify key customer types, profile membership data, tailor communications and offer increased ROI on marketing spend
- Open data inputs alongside commercial data to support understanding of customer location and activity

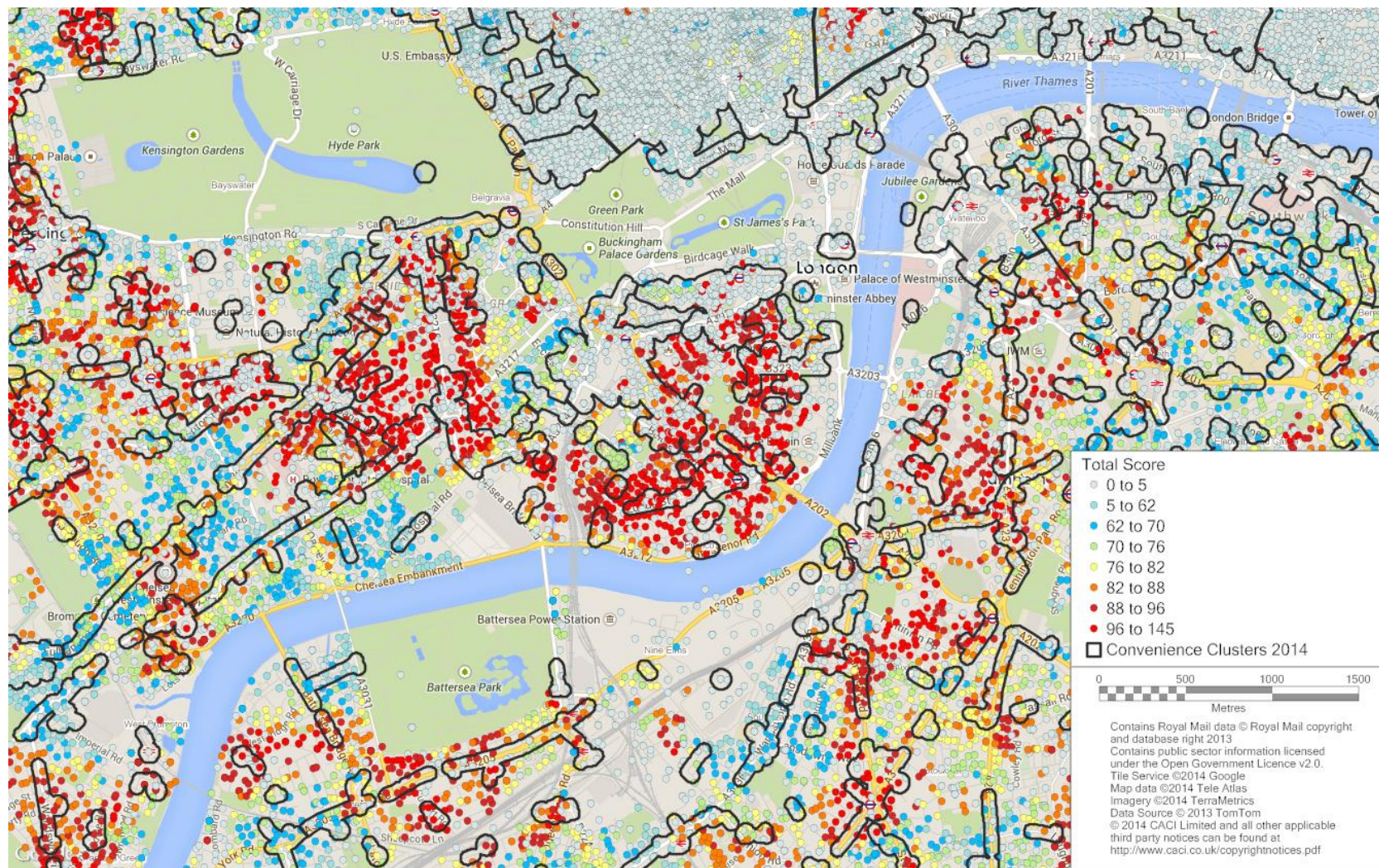
Hot 100: the UK's hottest convenience store postcodes

- The Grocer commissioned Top 100 convenience store opportunities
- Scores based on factors including:
 - Density of households
 - Levels of competition
 - Supporting retail
 - Number of workers
 - Train stations
 - Schools
- Convenience Clusters scored on:
 - Average and total score within 500m
 - Size of centre

Convenience Hotspots – Worker Score



Convenience Hotspots – Total Score



Hot 100: the UK's hottest convenience store postcodes

NAME	Post Area	Region	Average Score 500m	Total Score 500m	Households 500m	Acorn Category					Dominant Group	Best Fit
						Affluent Achievers	Rising Prosperity	Comfortable Communities	Financially Stretched	Urban Adversity		
London - Pimlico	London SW	London	101	36,905	9,781	0%	57%	0%	2%	40%	City Sophisticates	Waitrose
London - Victoria	London SW	London	96	25,566	4,192	31%	51%	0%	2%	17%	City Sophisticates	Waitrose
Glasgow - Hillhead	Glasgow	Scotland	79	15,118	4,442	35%	50%	2%	12%	0%	City Sophisticates	Waitrose
London - Earls Court	London SW	London	86	24,427	7,290	10%	88%	0%	0%	2%	City Sophisticates	M & S
London - Maida Vale	London W	London	103	21,898	8,345	0%	74%	0%	1%	25%	City Sophisticates	Waitrose
Surbiton - St. Marys Road	Kingston-upon-Tl	Outer London	81	13,760	3,626	11%	82%	2%	4%	0%	City Sophisticates	Tesco
Leicester - Highfields	Leicester	East Midlands	84	15,416	4,323	0%	0%	0%	70%	30%	Modest Means	Asda
Leicester - Stoneygate	Leicester	East Midlands	86	13,857	4,270	0%	0%	5%	88%	8%	Modest Means	Asda
London - St Johns Wood	London NW	London	98	20,728	3,960	24%	56%	1%	0%	20%	City Sophisticates	Waitrose
London - Notting Hill - Westbourne	London W	London	87	22,113	8,075	3%	83%	0%	0%	14%	City Sophisticates	Waitrose
Manchester - Moss Side	Manchester	North West	75	12,226	2,673	0%	5%	0%	55%	40%	Student Life	Asda
London - Notting Hill - Harrow Rd	London W	London	99	19,485	6,929	0%	51%	0%	1%	48%	City Sophisticates	Asda
London - West End	London W	London	71	27,040	2,103	15%	84%	0%	0%	0%	City Sophisticates	Waitrose
Brighton - Lewes Road	Brighton	South East	74	11,933	5,445	0%	45%	12%	37%	6%	Student Life	Tesco
Sutton - Mulgrave Road	Sutton	Outer London	76	11,122	3,155	1%	57%	7%	29%	6%	Career Climbers	Tesco
Glasgow - Southside Central	Glasgow	Scotland	66	13,476	5,692	0%	14%	2%	65%	19%	Student Life	Asda
London - Swiss Cottage	London NW	London	93	19,897	3,549	21%	72%	0%	4%	2%	City Sophisticates	Waitrose
London - Belsize Park	London NW	London	95	19,104	5,523	2%	81%	0%	0%	17%	City Sophisticates	Tesco
Morley - Queen Street	Leeds	Yorkshire and Th	88	11,277	2,174	2%	10%	14%	29%	46%	Young Hardship	Morrisons
St Leonards	Tunbridge Wells	South East	73	10,923	4,468	0%	0%	4%	6%	89%	Young Hardship	Morrisons
Leicester - Rowlatts Hill	Leicester	East Midlands	72	12,527	2,773	0%	0%	8%	92%	0%	Modest Means	Morrisons
Hull - Garden Village	Hull	Yorkshire and Th	71	11,408	3,189	0%	0%	1%	8%	91%	Young Hardship	Morrisons
Bristol - Redfield	Bristol	South West	69	11,730	3,311	0%	0%	41%	13%	45%	Young Hardship	Morrisons
Barnoldswick	Blackburn	North West	71	11,301	2,538	0%	2%	7%	61%	30%	Modest Means	Morrisons
Rochester	Medway	South East	76	10,111	2,470	2%	4%	23%	30%	41%	Young Hardship	Asda
Birmingham - Saltley	Birmingham	West Midlands	98	10,636	2,584	0%	0%	5%	92%	3%	Modest Means	Morrisons
Edinburgh - Restalrig	Edinburgh	Scotland	73	10,343	3,624	8%	11%	8%	27%	46%	Difficult Circumstances	Asda
Wembley - Thurlow Gardens	Harrow	Outer London	72	10,113	2,759	0%	16%	32%	27%	25%	Successful Suburbs	M & S
Bristol - Redland	Bristol	South West	58	14,373	4,059	22%	58%	0%	21%	0%	City Sophisticates	Waitrose
Portsmouth - Fratton	Portsmouth	South East	73	10,122	4,328	0%	1%	13%	67%	19%	Student Life	Tesco
London - Bow - St. Stephens Road	London E	London	86	18,408	5,515	0%	38%	0%	9%	52%	Struggling Estates	Asda
Nottingham - Sneinton	Nottingham	East Midlands	74	9,655	3,374	0%	0%	5%	17%	78%	Young Hardship	Morrisons
Bristol - Bedminster	Bristol	South West	62	12,977	4,787	0%	25%	65%	7%	4%	Starting Out	M & S
Bristol - Easton	Bristol	South West	67	10,874	3,276	0%	0%	1%	19%	80%	Young Hardship	Asda
London - South Kensington	London SW	London	87	18,008	3,860	26%	74%	0%	0%	0%	City Sophisticates	Waitrose
Bradford - Manningham	Bradford	Yorkshire and Th	70	11,453	2,773	0%	0%	6%	93%	1%	Modest Means	Asda
Norwood Green	Southall	Outer London	101	9,697	2,485	0%	7%	25%	58%	9%	Modest Means	Morrisons
Leeds - Hyde Park	Leeds	Yorkshire and Th	67	10,592	3,972	0%	4%	0%	89%	7%	Student Life	Asda
Isleworth - St. Johns Road	Twickenham	Outer London	77	8,392	2,431	17%	38%	23%	6%	15%	Career Climbers	Sainsburys
Sutton - Lower Road	Sutton	Outer London	65	11,805	3,449	7%	32%	36%	13%	11%	Career Climbers	M & S
Surbiton - Glass Place	Kingston-upon-Tl	Outer London	63	12,961	3,144	6%	51%	9%	15%	18%	Career Climbers	Tesco
Gateshead	Newcastle-upon-	North East	66	12,951	3,436	0%	1%	22%	17%	60%	Young Hardship	Morrisons
Edinburgh - Bruntsfield	Edinburgh	Scotland	55	13,751	6,832	3%	33%	0%	54%	9%	Student Life	Tesco
Mitcham Junction	Sutton	Outer London	75	8,658	2,622	0%	0%	3%	15%	82%	Struggling Estates	Asda
Norbury	Croydon	Outer London	74	8,782	2,704	0%	1%	32%	7%	59%	Struggling Estates	Asda
Birmingham - Handsworth	Birmingham	West Midlands	75	8,459	2,551	0%	0%	1%	91%	9%	Modest Means	Morrisons
Glasgow - Pollokshields	Glasgow	Scotland	74	8,826	2,646	2%	16%	24%	26%	32%	Struggling Estates	M & S

Hot 100: the UK's hottest convenience store postcodes

- Which retailer is best suited? Based on:
 - Low market share (based on sales in postcode area)
 - Good demographic suitability
 - Combined “Best Fit”
- Where are the opportunities?
 - 60% in lower affluence areas
 - 40% in London
 - Vast majority in major cities (Birmingham, Bristol, Leeds, Glasgow..)
 - Morrisons and Asda account for over 50% of top 100 opportunities

Using Open Data to Understand Worker Demand for Retail

- Census
 - Census Workday and Workplace Population
 - Census Origin-Destination Flows
- Business Register Employment Survey (BRES)
 - not open, but another option. Restricted data, licence required
 - The official source of employee and employment estimates by detailed geography and industry (5 digit SIC 2007) . Available from country down to lower level super output area and Scottish data zone
 - Also used to update the Inter-Departmental Business Register (IDBR), the main sampling frame for business surveys conducted by the ONS

Importance of Worker Demand for Comparison Retail

Retail Centre	Total Spend (£m pa)	Residential	Worker	Tourist
London - West End	£5,067	56%	9%	35%
Brighton	£792	76%	4%	21%
London - Canary Wharf	£463	47%	49%	4%
Dundee	£276	83%	7%	10%
Scarborough	£165	71%	4%	21%
Wythenshawe	£43	96%	3%	1%
All Centres		84%	6%	10%

Source: Retail Footprint © CACI Limited 2014

Census vs BRES

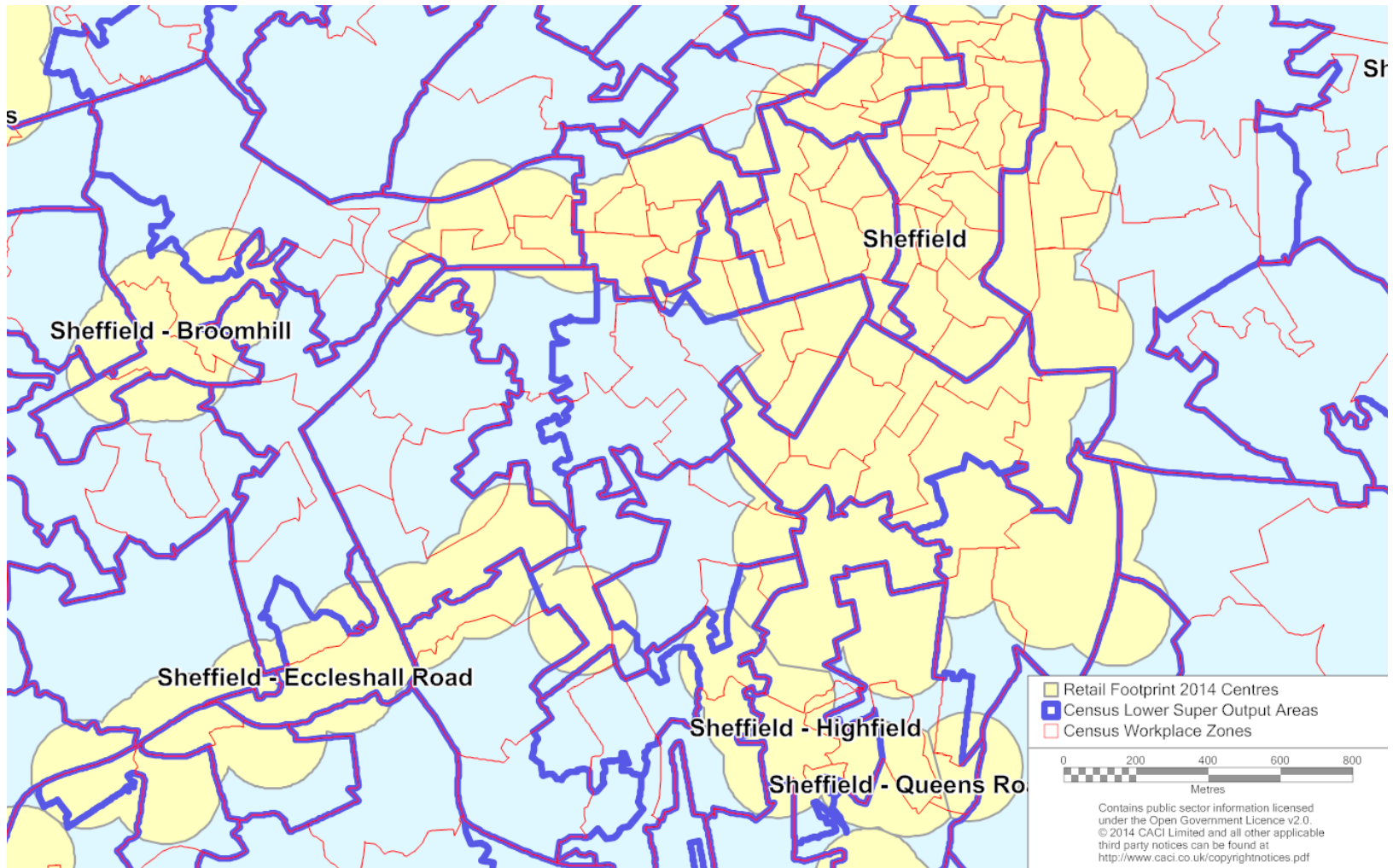
Census

- Workers down to OA/WZ level
- All population
- Covers all UK
- No restrictions on use
- Updated every ten years

BRES

- Workers down to LSOA/DZ level
- Survey-based estimates (~80k)
- GB only
- Restricted use. Licence required
- Updated annually

Workplace Geography



BRES

- CACI started using BRES data as an input to modelling spend estimates prior to the release of 2011 Census workplace population data
- Idea that it would provide an ongoing source of annually updated information avoiding the “knowledge void” between censuses
- How does it measure up now that 2011 Census figures are out?

BRES: How does it measure up to the Census?

- Total workers in England and wales:
 - Census 2011: 26.75 million
 - BRES 2012: 24.25 million
- BRES employment estimates exclude certain elements of the self employed, for example working owners of very small businesses not registered for VAT or PAYE will not be included in the BRES estimates. Neither will Government Supported Trainees and members of HM Armed Forces. Employment estimates from the census and BRES are thus not directly comparable. You will always find that the census has higher estimates of overall employment than BRES.

BRES: How does it measure up to the Census?

- At a 2001 LSOA level, there is a correlation of 0.981 between the two sets of numbers – pretty good all round.
- There are some big differences though
- Estimates of worker population for 4,834 retail centres across the UK were derived from BRES figures prior to 2011 Census release
- For now, we consider 2011 Census the most reliable in general terms, but BRES will increase in value again the further we get from the census date

When Open Data fails – burn the heretic!

- Social Housing Estimates
 - Option 1 - Census
 - Option 2 - National Register of Social Housing (NROSH)
 - Option 3 - Land Registry Commercial Dataset
(owned by a housing association or local authority)
- NROSH – useful prior to 2011 census release, but no assurance of accuracy, and some major discrepancies with the census
- Land Registry Commercial Ownership dataset – NOT open data, but very comparable with the census

Census, NRoSH and Land Registry Social Housing Estimates

Local Authority	Census 2011	NRoSH 2011	Land Registry 2014	NRoSH - Census Absolute Difference	LR - Census Absolute Difference
Birmingham	99,496	41,313	61,138	58,183	38,358
Southwark	52,638	15,344	62,495	37,294	9,857
Sunderland	32,357	58,376	35,897	26,019	3,540
Wolverhampton	28,637	5,134	16,949	23,503	11,688
Manchester	64,381	40,909	65,278	23,472	897
Sandwell	33,436	56,154	34,656	22,718	1,220
Lambeth	45,378	23,281	45,787	22,097	409
Liverpool	57,394	40,889	64,611	16,505	7,217
Wandsworth	26,430	10,125	39,038	16,305	12,608
Barnet	19,180	8,393	20,301	10,787	1,121

Land Registry Difference < 500

Local Authority	Census 2011	NRoSH 2011	Land Registry 2014	NRoSH - Census Absolute Difference	LR - Census Absolute Difference
Lambeth	45,378	23,281	45,787	22,097	409
Mansfield	8,196	2,157	7,840	6,039	356
Westminster	27,323	21,702	27,606	5,621	283
Canterbury	7,408	2,007	7,367	5,401	41
St. Edmundsbury	7,320	1,977	7,427	5,343	107
Waveney	7,148	2,679	6,990	4,469	158
East Hampshire	5,672	1,274	6,078	4,398	406
Stoke-on-Trent UA	25,993	22,116	25,722	3,877	271
Derby UA	20,249	22,858	20,257	2,609	8
Nottingham UA	37,393	39,497	36,922	2,104	471

Summary – Fitness for Purpose, Not Open for Open's Sake

- Understanding retail behaviour requires a wide range of inputs
- There are many types of data source - some open, some commercial, and some free but with use restrictions
- A fitness for purpose approach is recommended
- Don't just use open data because it happens to be freely available
- Open is good, but we should be continually balancing the merits of different datasets, and in some cases use a combination. The effort shows in the results

CACI
