

Location planning for delivery of public services in Birmingham

Customer Knowledge
Birmingham City Council
12th November 2013

- **Who We Are**
- **What We Use**
- **What We've Done**
- **What More We Could Do**

Who We Are

Customer Knowledge Team

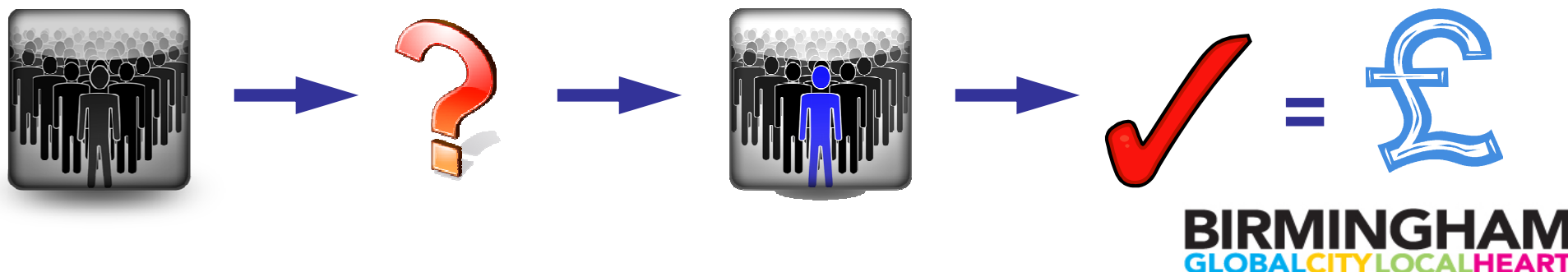
- Focusing on customer needs to change what and how we do things
 - Central hub of intelligence and analysis
 - Training, mentoring and guidance
 - Support services in understanding and targeting customers
 - Service review and redesign

Customer Profiling

- Help services **understand who their customers are & where they live** as part of developing strategies & service redesign

Create income & efficiency savings

- **£24m of savings** over 10 years
- **Targeting services directly** to those who need them most



What We Use

1. Customer Segmentation Profiling

- Segmentation is the process of dividing the population into distinct subsets (segments) that have similar characteristics, behaviours and needs

What does Birmingham use?

Mosaic Public Sector 2009 classification

- Split on key person demographics
e.g. gender, age, income, housing type
- Includes information on attributes
e.g. health, benefits, communication preferences



Geographic focus:

- Segment groups are assigned at a postcode & household level – who lives where?
- Analyses characteristics from household to LSOAs to wards to city-wide
- Potential to match & compare groups to other postcode/household level information
e.g. Index of Multiple Deprivation, Service Data, Business Data

Mosaic Public Sector Groups Birmingham

Segment Short Description	% Birmingham
A Residents of isolated rural communities	0.02
B Residents of small and mid-sized towns with strong local roots	1.60
C Wealthy people living in the most sought after neighbourhoods	2.36
D Successful professionals living in suburban or semi-rural homes	3.04
E Middle income families living in moderate suburban semis	12.68
F Couples with young children in comfortable modern housing	1.59
G Young, well-educated city dwellers	10.54
H Couples and young singles in small modern starter homes	3.83
I Lower income workers in urban terraces in often diverse areas	20.10
J Owner occupiers in older-style housing in ex-industrial areas	7.04
K Residents with sufficient incomes in right-to-buy social housing	9.54
L Active elderly people living in pleasant retirement locations	1.85
M Elderly people reliant on state support	4.30
N Young people renting flats in high density social housing	8.46
O Families in low-rise social housing with high levels of benefit need	13.04

15 groups
69 sub-groups

Segment I

- Few qualifications
- Routine occupations
- Young singles and couples
- Some young children
- Ethnic diversity
- Small homes
- Crowded
- Below average income

Date Source and Copyright: Experian, 2011

What We Use

2. Micromarketer Generation 3 (MMG3)

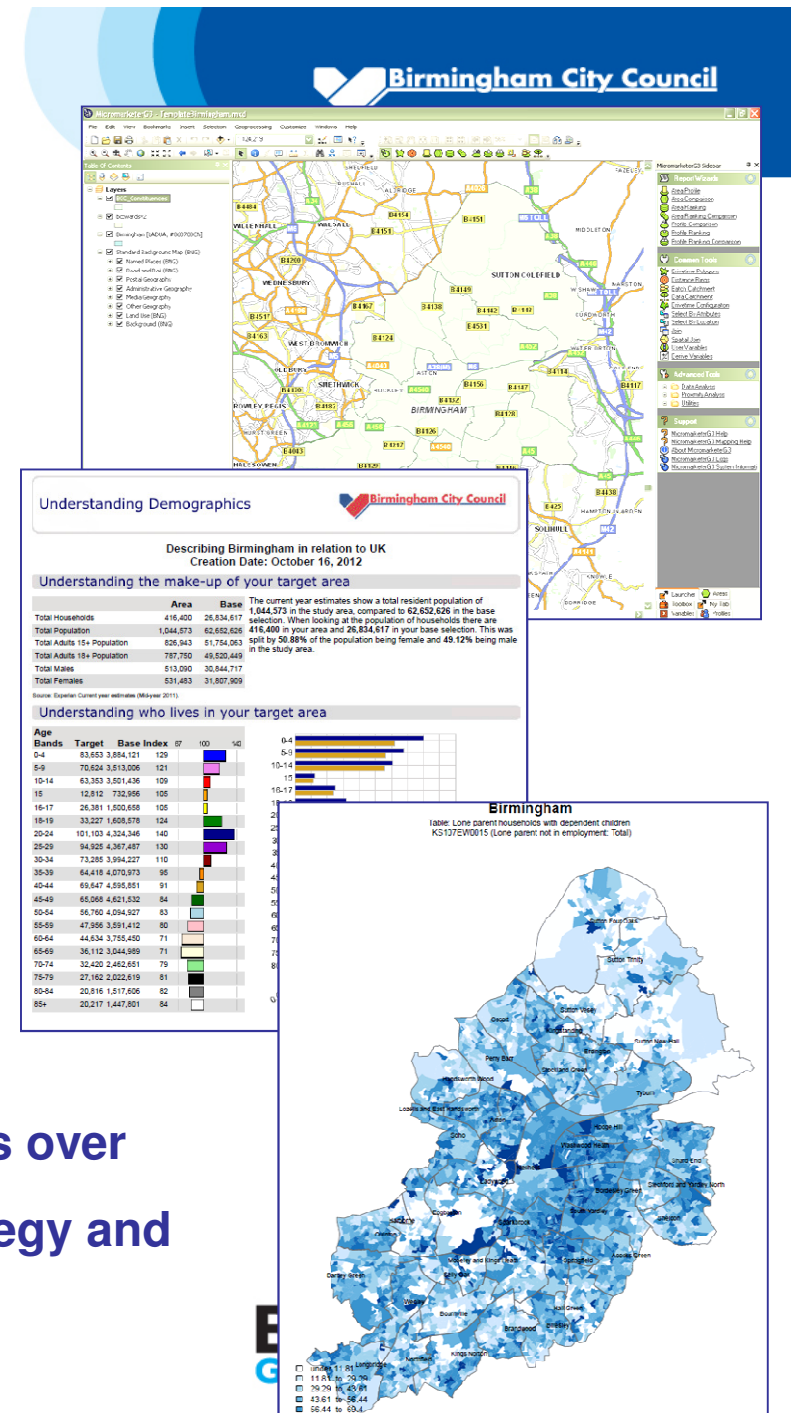
- ArcGIS geodemographic software from Experian
 - Analyse segments
 - Map and join internal/external data
 - Catchment & drive time area profiling
 - Advanced spatial tools, e.g. distance analysis

3. Demographics Online (DOL)

- Generates demographic reports on customised areas
 - Lifestyle, segmentation, housing, ethnicity, etc.
 - Comparisons to other areas

4. Census 2011

- Informs on Birmingham's characteristics and changes over time, from Output Area (OA) to city-wide. Used for strategy and policy analysis.



What We Use

5. Service-Level Data

Ability to map and analyse Council services

- Leisure centre & library activity
- Recycling routes
- Who uses the Council website
- Adoption & Fostering Location Analysis
- And even more...



	Company name	Address, line 1	Address, line 2	Town
1.	MARSHALL OIL LLP	Newhall Street	Cornwall Buildings 45-51	Birmingham
2.	DIRECT LINE	Direct Line House	10 Livery Street	Birmingham
3.	EVENING MAIL CLASSIFIED ADVERTISING GENERAL	28 Colmore Circus	Cauntton	Birmingham
4.	SECURITYCONNECTIONS	Mill Burn Way		Birmingham
5.	QUEEN ELIZABETH HOSPITAL	Queen Elizabeth Hospital	Edgbaston	Birmingham
6.	LONDON MIDLAND	102 New Street		Birmingham
7.	ATKINS FAITHFUL & GOULD	The Axis	10 Holiday Street	Birmingham
8.	DLA	Victoria Square House	Victoria Square	Birmingham
9.	THE BUILDING MANAGEMENT TEAM	The Council House		Birmingham
10.	CITY OF BIRMINGHAM MUSEUMS & ART GALLERY	Museum And Art Gallery	Chamberlain Square	Birmingham
11.	TAKE ONE MEDIA	10 Eyre Street		Birmingham
12.	SHOOSMITHS SOLICITORS	125 Colmore Row		Birmingham
13.	THREE BROADWAY	3 Broadway	Broad Street	Birmingham
14.	EQUIPOINT	1506-1508 Coventry Road	Yardley	Birmingham
15.	REDCLIFFE CATERING	Westbourne Road		Birmingham
16.	WEST MIDLANDS PROBATION SERVICE	52 Newton Street		Birmingham
17.	MORE THAN INSURANCE	Colmore Gate 2 6	Colmore Row	Birmingham
18.	BAILEY PEERLESS PRODUCTS	Liverpool Street		Birmingham
19.	BIRMINGHAM CITY CONNEXIONS	Charter House	100 Broad Street	Birmingham
20.	EQUIPOINT	Equipoint 1506-1508	Coventry Road	Birmingham

6. Business Data (from Bureau Van Dijk)

Online detailed database for all registered businesses

- Ability to extract data from specific LA/postcode
- Turnover, employee size, industry, branch locations, credit scores, etc.
- Can be mapped at a postcode/building level

What We Have Done

Behaviour Change

Case Study: '3 Days Booze Free' Campaign

Birmingham Drug & Alcohol Action Team (BDAAT) ran a '3 days booze free' awareness campaign directly to a pre-identified target audience at street level in key areas.

Origin of Campaign

BEN PCT originally developed this campaign (*based on a study showing that abstaining from alcohol for 3 days per week would reduce the risk of liver disease*) and approached BDAAT for continuing funding.

Who & Where They Targeted

BEN PCT/BDAAT identified *key wards/areas* on which to focus the campaign.

Target Audience: Women Aged 35+ (*group most at risk of suffering from alcohol related inequalities identified through analytical research*) & general public awareness raising.



How They Campaigned

Campaign Website

➤ A 'Support Hub'

On Street Activity

➤ Alcohol Treatment Agencies Staff directly 'sign people up' to the challenge and given a Campaign Challenge Pack

Behaviour Change

Case Study: '3 Days Booze Free' Campaign

Our role

For street-level communications:

Using Demographics Online & other mapping tools to:

- Identify specific places in the key areas/wards – *e.g. supermarkets in that area, theatres, community centres, bus routes* – that the risk group/local residents were likely to regularly visit or use.
- Profile at key ward/area levels:
 - Demographics, income, & likely main activities (cultural, sport and retail)
 - Top segment groups
 - Communication preferences

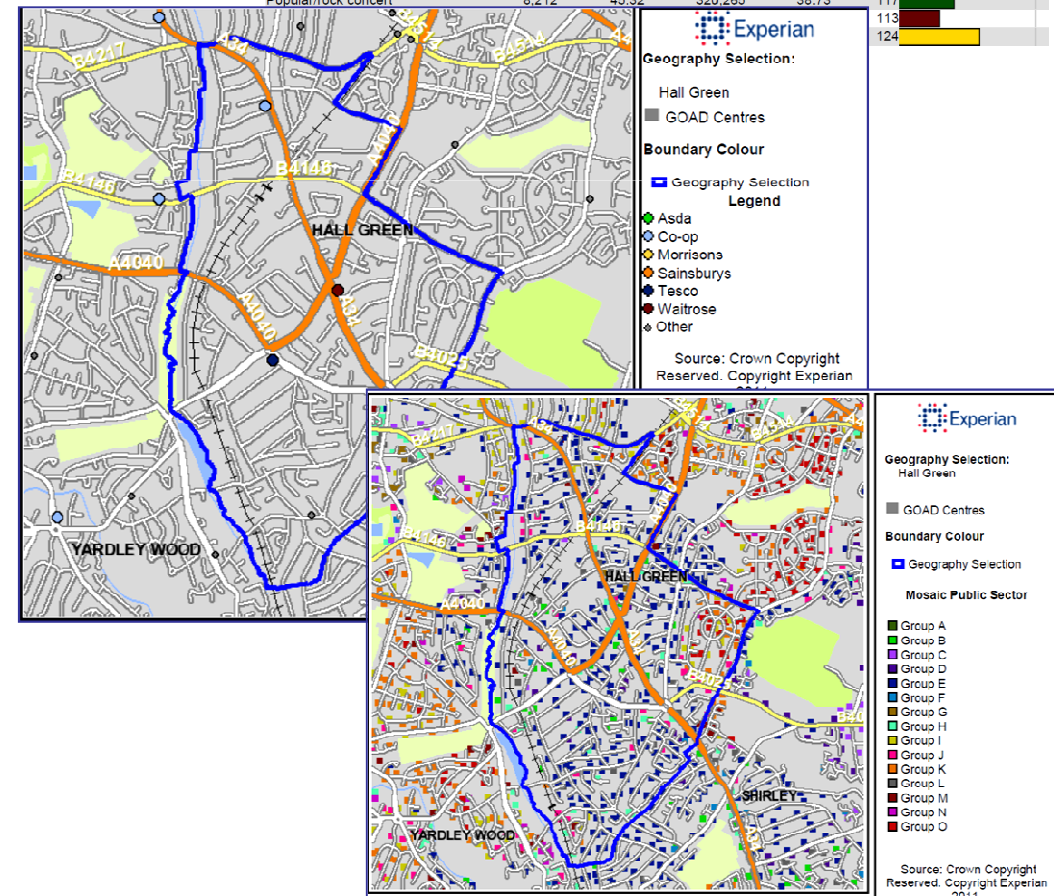
Understanding the retail expenditure by market share

Food Retail Market Shares helps retailers to evaluate their own and competitors' market share at a local and national level. It also enables manufacturers and distribution companies to target promotions based on relative brand strength. The figures below are based on both primary and top-up shopping expenditure.

Major Supermarkets	Spend in Area	%	Spend in Base	%	Index	100	483
Asda	£72,774	10.71	£5,408,657	10.01	84	100	483
Morrisons							
Sainsbury's							
Tesco							
Waitrose							

Performances and Exhibitions attended in last 12 months (Adults 15+)

	Target	Target %	Base	Base %	Index	105	141
Theatre	8,750	48.29	305,101	36.90	131		
Plays	5,863	32.35	211,383	25.56	127		
Opera	1,681	9.28	54,864	6.63	140		
Ballet	1,681	9.28	54,864	6.63	140		
Contemporary dance	1,356	7.48	57,901	7.00	107		
Classical concerts	2,452	13.53	89,168	10.78	125		
Jazz concerts	1,516	8.36	61,525	7.44	112		
Popular/rock concert	8,212	45.32	320,265	38.73	117		



Behaviour Change

Case Study: '3 Days Booze Free' Campaign

Output

A table – split by key areas - to display the most effective specific places and communications to use, for example:

Area	Top segments	Marketing Emphasis	What to target
Hall Green Constituency	1.F (35.09%) 2.G (13.68%) 3.C (13.34%) 4.E (6.38%)	<ul style="list-style-type: none">•Mixture of on-street, use of internet and telephone advice lines. No posters or leaflets•Aim indirectly at younger audience to influence older relatives who may drink	<ul style="list-style-type: none">•Target major city centre bus route no. 5a/6, no. 841 school bus public route, & bus stops that pass through Hall Green.•Target Tesco (at border) or Sainsbury's (centrally located).•The Mac (crossover targeting with Bournville)
Hall Green Ward	1.C (46.25%) 2.E (12.15%) 3.D (12.04%) 4.B (7.87%)	<ul style="list-style-type: none">•Recommend against bus advertising.•Calorie intake in some alcoholic drinks•Promotion of website through a free regional weekly or Birmingham Post/Mail	<ul style="list-style-type: none">•Tesco & potentially Lidl. Promote near lottery tickets.•Theatre 28, Hall Green or the Mac.•Community Associations/ Neighbourhood Watch (with emphasis on link between alcohol and crime)

Result

This information was used by BDAAT as part of a successful awareness-raising campaign in the key areas.

"We are in the middle of the campaign which is going really well. We have undertaken work in the supermarkets, GP surgeries and pharmacies.... " -Max Vaughan, BDAAT, Sept 2011

The same format was also used to provide a communications strategy to Sport England for promotion of an England Vs Jamaica Netball Match in Birmingham, Summer 2012.

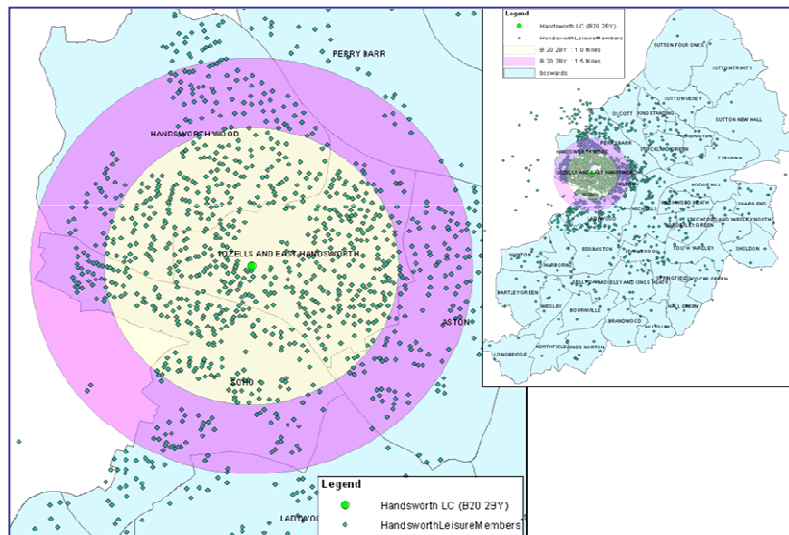
Service Planning

Case Study: Leisure Centre Analysis

Purpose: Detailed location analyses & profiling of all BCC leisure centre users & activities used to inform decisions on future leisure centres.

Data used: Leisure Centre Data, Mosaic Segmentation, Index of Multiple Deprivation

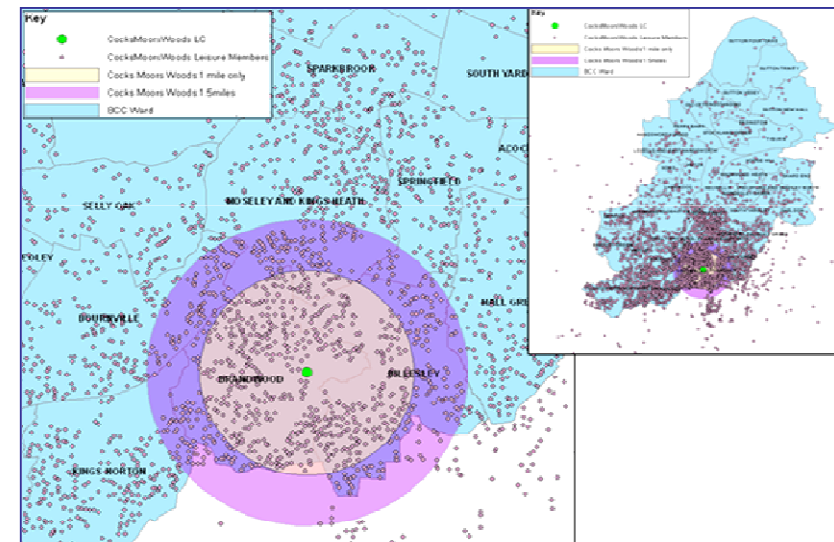
Step 1: Distance Analysis - How far do members travel? Are they always close to the LC?



Handsworth LC

Primarily attracts locals (within 1.5 miles radius)

Distance Type	Distance (miles)
Minimum Distance	0.00
Maximum Distance	23.51
Average Distance - mean	1.26
Average Distance - median (middle)	0.86



Cocks Moors LC

Attracts members from across the wider region

Distance Type	Distance (miles)
Minimum Distance	0.00
Maximum Distance	106.42
Average Distance - mean	2.29
Average Distance - median (middle)	1.83

Service Planning

Case Study: Leisure Centre Analysis



Further analysis of Birmingham's leisure centres (LCs) was based around profiling radius catchment areas (0-1, 1-1.5 miles from leisure centres, & outside 1.5 miles) of the LCs.

Step 2: Do the characteristics of the two LC's members and their activities vary, too?

Handsworth LC

69% members within 1 mile of the LC live in **highly deprived** areas, compared to 44% members over 1.5 miles away.

Largest Segment Group

I: Lower income workers in urban terraces in often diverse areas

Segment I is also the largest group for the LC's ward (Lozells & East Handsworth) and SOA

Cocks Moors Woods LC

62% members within 1 mile of the LC live in the **least deprived** areas, compared with 31% over 1.5 miles away

Largest Segment Group

E: Middle income families living in moderate suburban semis

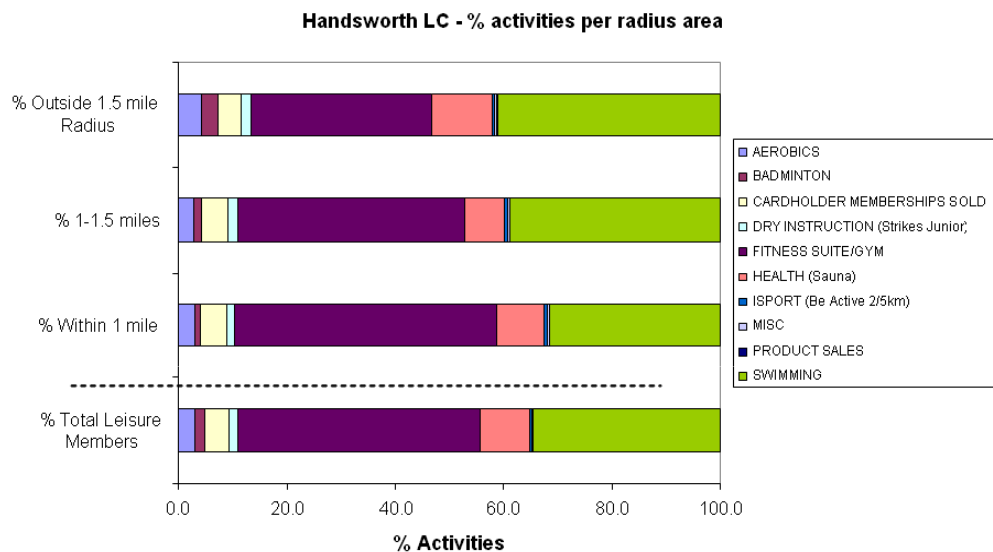
Segment E is also the largest group for the LC's ward (Brandwood) and SOA

Service Planning

Case Study: Leisure Centre Analysis

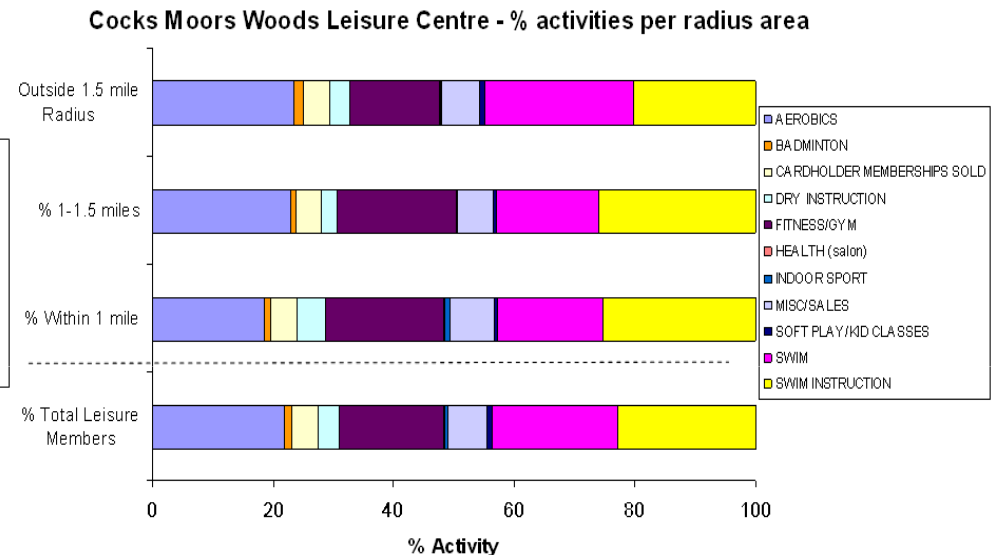


Step 3: % Activity by radius – using leisure members' postcodes



Fitness suite/gym is the most popular, followed by swimming.

As distance from centre increases, proportions of swimming increase as gym decreases (suggesting people will travel further for swimming than gym).



Swimming is the most popular, followed by aerobics and fitness/gym.

Outside of the 1.5 mile radius, proportions of swimming instruction decreases (likely due to link between local schools and swimming instruction), and proportions of swimming increases.

Service Planning

Case Study: Leisure Centre Analysis



Conclusion

Leisure Centres vary in the make-up of their leisure members, from different incomes and ethnic backgrounds, to distance people are willing to travel – i.e. **closeness to leisure members' location isn't always a factor**. It could be due to size of centre, quality of facilities, type of activities available, events held, links to schools, etc.

Each Leisure Centre has to be analysed on its own merits to determine the particular reasons for their level of popularity.

All sports location analysis has been positively received. Birmingham Sports & Events have frequently requested detailed location profiles on Birmingham leisure centres and leisure members' activity, to inform their ongoing service planning, such as:

- Sports & leisure activity participation by constituencies and wards
- Maps at all levels showing leisure centres and the home postcodes of their leisure members

Service Planning

Case Study: LINK Membership Mapping

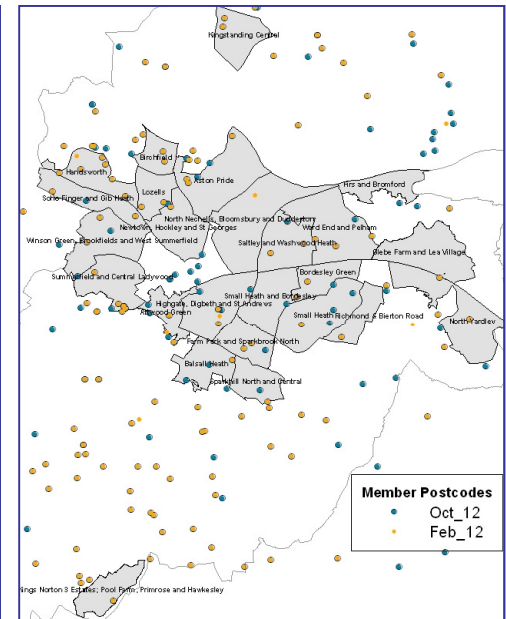
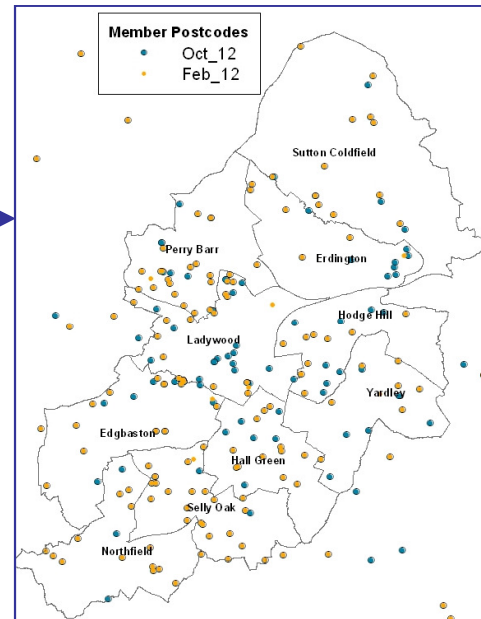
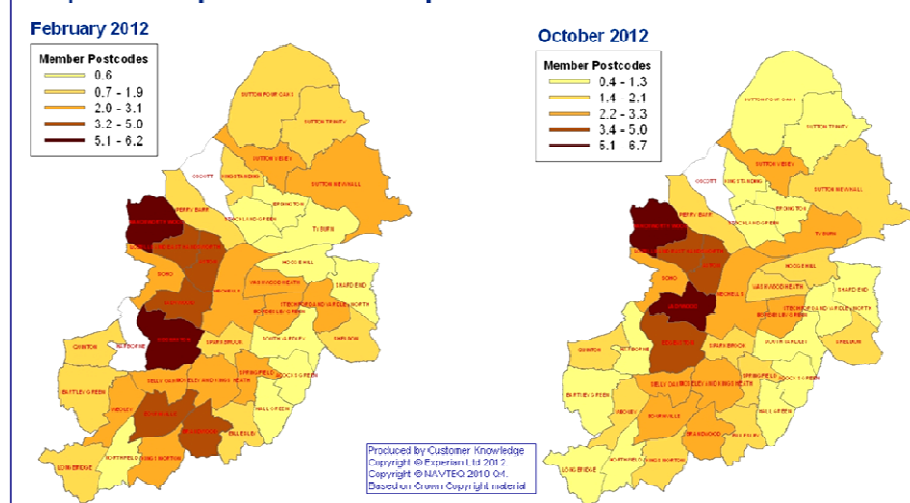
Purpose

Geographical analyses of Birmingham's Local Involvement Network's (LINK) membership over a period of time to inform & analyse an outreach plan to increase membership in the city.

Step 1: Using LINK membership data, compared member location of LINK over different points of time, mapped by:

- **Wards**
- **Constituencies**
- **Local Police Units**
- **Priority Neighbourhoods**
- **Index of Multiple Deprivation LSOAs**

Comparison Maps - % of members per ward



Step 2: Helped identify geographical and demographic gaps in member representation, e.g. % members in each ward

Service Planning

Case Study: LINK Membership Mapping

Segment Group	Birmingham %	Feb 12 Total	Feb %	Index Score	Oct 12 Total	Oct %	Index Score	% Change (between C & F)
B	1.6	6	4.5	284	5	2.6	162	-17
C	2.4	3	2.3	96	7	3.6	154	133
D	3.0	7	5.3	174	7	3.6	119	0
E	12.7	17	12.9	102	26	13.5	106	53
F	1.6	4	3.0	191	4	2.1	130	0
G	10.5	7	5.3	50	12	6.2	59	71
H	3.8	3	2.3	59	4	2.1	54	33
I	20.1	36	27.3	136	48	24.9	124	33
J	7.0	3	2.3	32	6	3.1	44	100
K	9.5	9	6.8	71	14	7.3	76	56
L	1.9	2	1.5	82	5	2.6	140	150
M	4.3	9	6.8	159	14	7.3	169	56
N	8.5	12	9.1	107	19	9.8	116	58
O	13.0	14	10.6	81	22	11.4	87	57
Grand Total		132			193			

LINK Membership – Segments Analysis

Highest Segment Group Total (Feb & Oct 12) and Highest Total Numbers Increase

• Segment I, which is the largest segment group in Birmingham, with a relatively low index of 124, which shows that this group is only slightly overrepresented in terms of Birmingham as a whole.

Group I: Lower income workers in urban terraces in often diverse areas

Overview

Key Features

- Few qualifications
- Routine occupations
- Young singles and couples
- Some young children
- Ethnic diversity
- Small homes
- Crowded
- Below average income
- Sport



Access Information

Receptive

- SMS Text
- Interactive TV
- National Papers
- Local Papers

Non Receptive

- Telephone

Service Channels

Receptive

- None significant
- Non Receptive
- Post

Group M: Elderly people reliant on state support

Overview

Key Features

- Older people
- Retired
- Public rented
- Nursing homes
- Grandchildren
- Bingo
- Familiar brands
- Post offices
- TV and newspapers



Access Information

Receptive

- Local Papers
- Face to Face

Non Receptive

- Internet
- Telephone
- Mobile Phone
- Interactive TV

Service Channels

Receptive

- Face to Face
- None Receptive
- Internet
- Telephone
- Mobile Phone
- Post

Most overrepresented (Oct 12)

• Segment M – most likely due to having much higher health and social care service needs than the rest of the segment groups in Birmingham.

BIRMINGHAM
GLOBALCITYLOCALHEART

Step 3: Segmentation analysis shows:

- Socioeconomic gaps in LINK membership compared with Birmingham.
- Any changes in the LINK membership over time.
- LINK's largest segment group & increase in no.'s:
 - I - Lower income workers
 - Also Birmingham's largest group
- Most overrepresented compared with B'ham:
 - Segment M (Elderly People)
 - Have highest health & social care service needs
- Communications preferences to increase uptake, e.g. targeting underrepresented group J through local papers & face-to-face.

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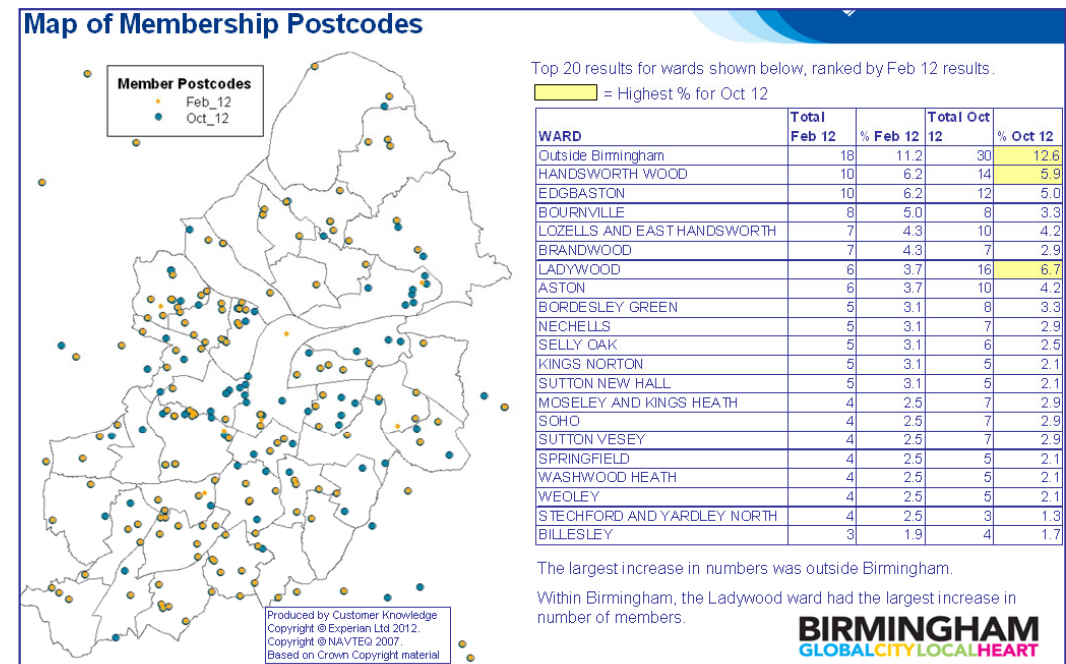
Service Planning

Case Study: LINK Membership Mapping (3)

Outcomes

We were able to provide detailed spatial and numerical insight at all geographical levels – e.g. identifying highest increases in membership by ward & constituency for LINK between February and October 2012.

“The information is being used in planning events, ensuring that we hold events in areas where the LINK has low representation. It has also helped the Host re-focus its outreach work in these areas – particularly utilising the information on how people like to receive information/engage.”
-Birmingham LINK Co-ordinator



Business Data

Case Study: Digital Birmingham ERDF Bids

Purpose

Business data for Birmingham ERDF bids.

Narrowing business intelligence to specific ERDF areas, ensuring only relevant business information is included.

Key Steps (Digital Districts bid)

Localised, detailed information on target areas

- Local demographics & segment groups (compared to Birmingham norm)
- Businesses categorised by:
 - Incorporated status
 - SME Status by no. of employees/turnover
 - Different SIC/Industry types

Outcome

Enables analysis of all aspects of relevant businesses for the ERDF bids.

Digital Districts Zones Data

BUSINESSES	Incorporated	Unincorporated	Total	% Total All Businesses
No of Employees (Site level)*				
- Micro-Entities (0-9 employees)	459	873	1332	26.3
- Small Companies (10-49 employees)	207	128	335	6.6
- Medium-Sized (50-250 employees)	17	15	32	0.6
- Larger companies, non-SMEs (Over 250 employees)	2	3	5	0.1
<i>No data on Employees</i>	3368	0	3368	66.4
Turnover (Company level)*				
- Micro-Entities (Turnover of less than £1.6 million)	2064	884	2948	58.1
- Small Companies (Turnover of £1.6 - 8million)	178	48	226	4.5
- Medium-Sized (Turnover of £8 - 39 million)	136	6	142	2.8
- Larger companies, non-SMEs (£39 million or more)	18	0	36	0.7
<i>No Data on Turnover</i>	1657	81	1738	34.2
Total No of Businesses in Area	4053	1019	5072	100

Unincorporated			
Primary UK SIC Code	Total	% Total	Main UK SIC codes
32120	106	10.40	32120 = Manufacture of jewellery and related articles 4778 = Other retail sale of new goods in specialised stores 5610 = Restaurants and mobile food service activities
4778	79	7.75	
5610	55	5.40	
82990	38	3.73	
32130	36	3.53	
7111	35	3.43	
5630	30	2.94	
6910	26	2.55	
90010	19	1.86	
95250	19	1.86	
7022	18	1.77	
45200	18	1.77	
25610	16	1.57	
85590	15	1.47	
96020	15	1.47	
96090	15	1.47	
4649	13	1.28	
86900	13	1.28	
46900	12	1.18	
47710	12	1.18	
68310	12	1.18	
3498	11	1.08	

Business Data

Case Study: Digital Birmingham ERDF Bids

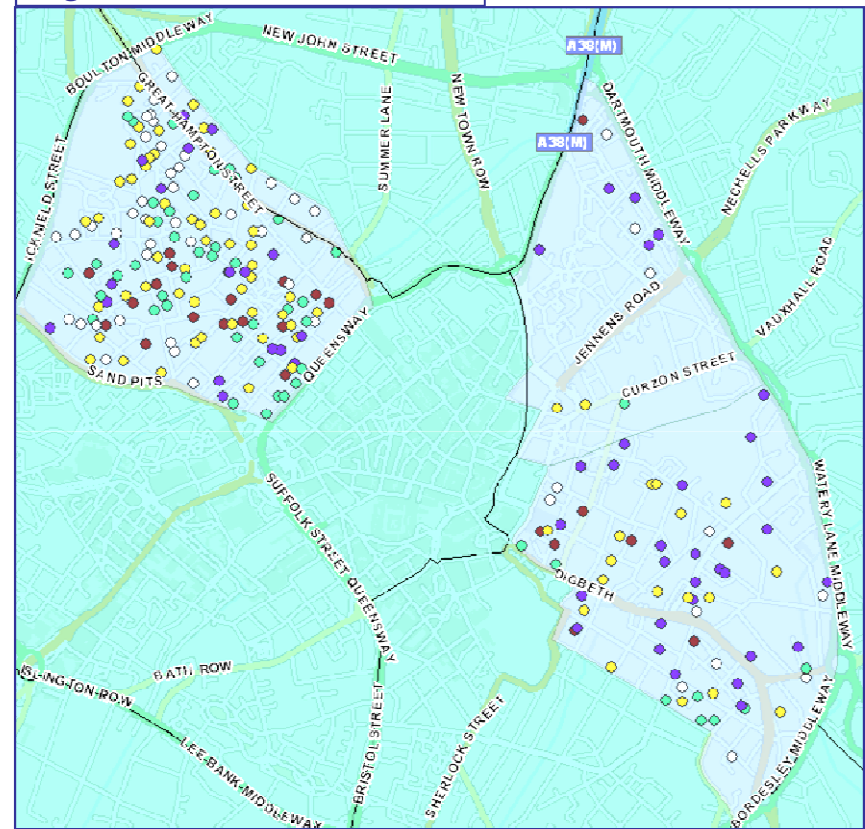
“The business location analysis supplied to us has enabled us to analyse and evidence the density and types of business in an area to justify intervention, particularly as ERDF can only be used for selected industries...

...The data has been **core to a number of ERDF funding business cases**, a recent and complex example being the Digital District application for which we needed small business information particular to very defined geographies and business classifications, and related to incorporation status...”

“...the data has actually helped justify the business case and our proposed intervention in the target areas.”

Digital Birmingham

Digital Districts Zones



Business Data

Case Study: North West Economic Strategy

Purpose

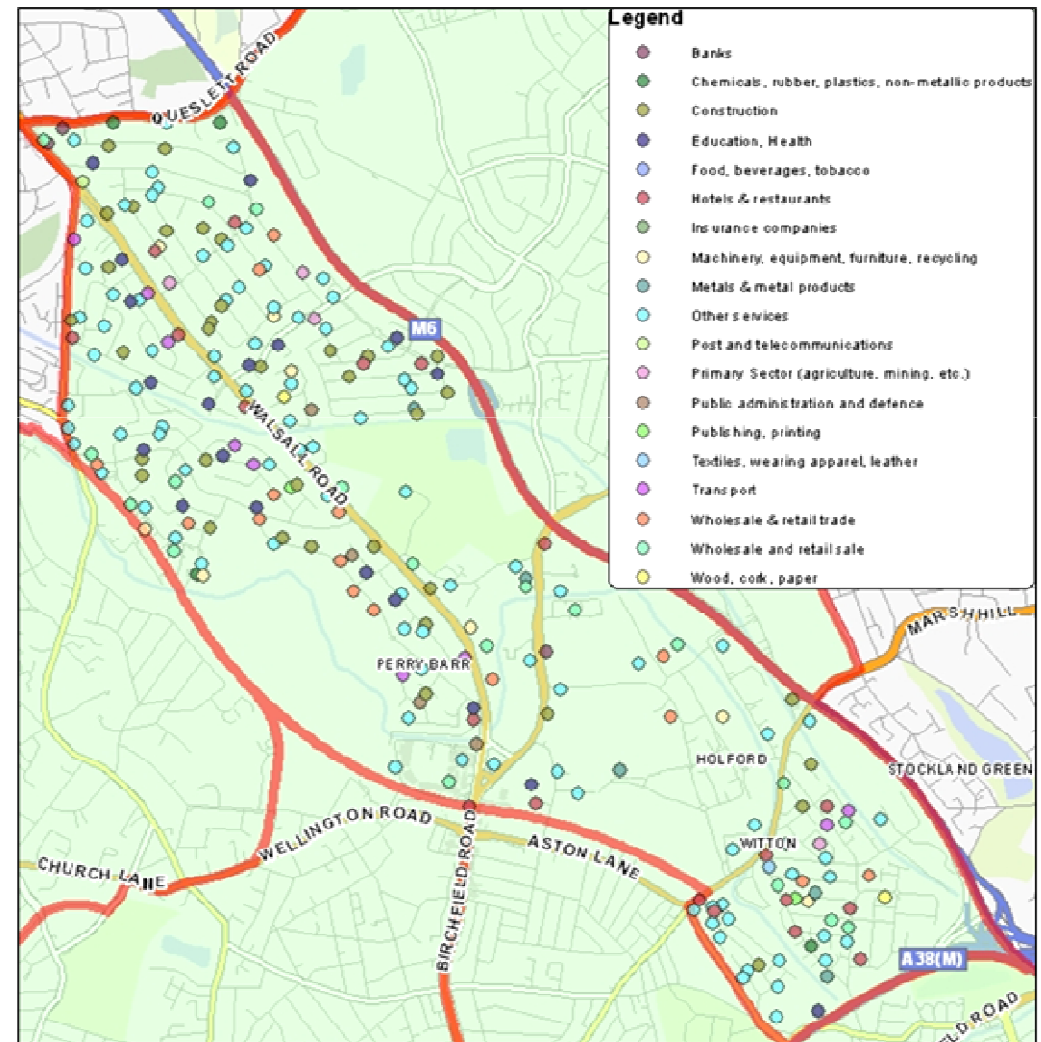
Provided business intelligence on North West Birmingham for the planning and regeneration Economic Strategy for that area.

Key Steps

Counts & maps showing postcode points of businesses colour coded by industry type for -

- All businesses by key wards
- Professional Business Services
- Growth Sector industries (identified by SIC code or Major Sector groups)
- Individual maps per growth industry type, e.g. manufacturing, information and communication, etc.

Perry Barr



Total Businesses = 1138

Business Data

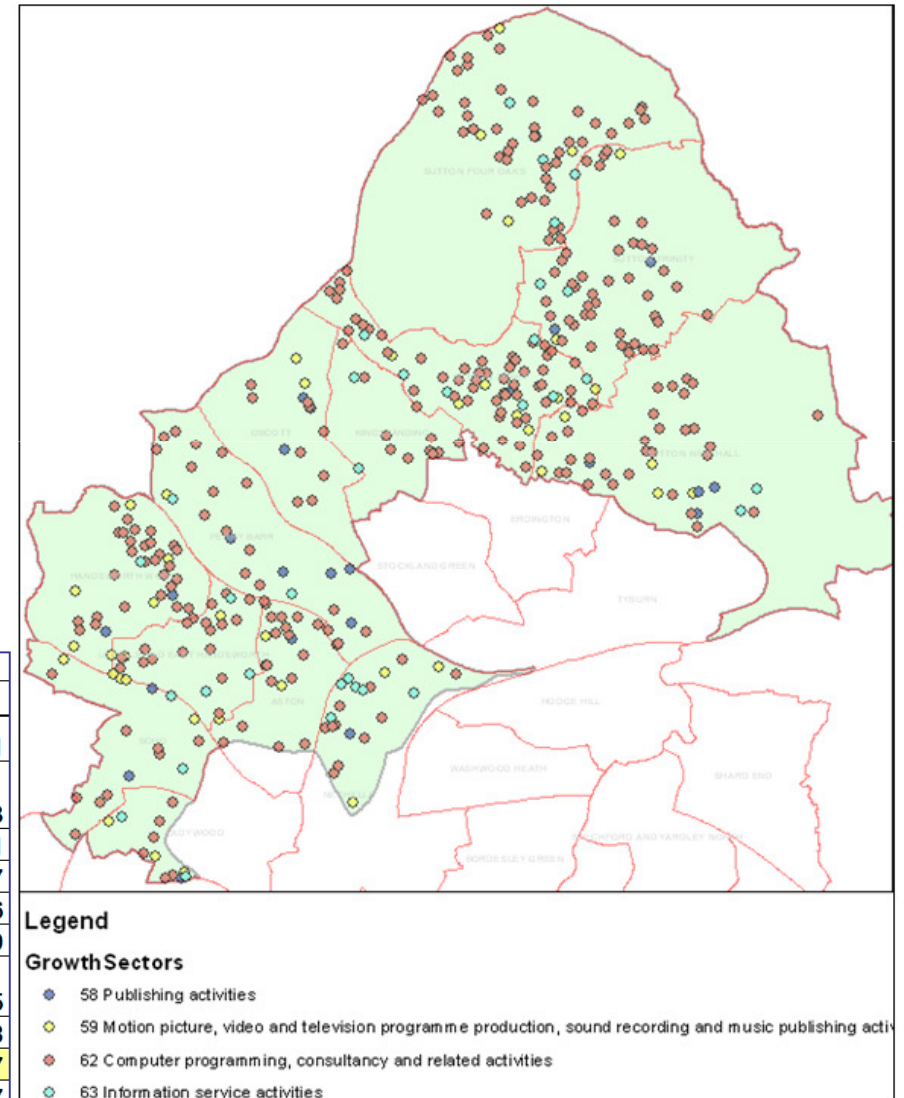
Case Study: North West Economic Strategy

Information and Communication

Feedback from Planning & Regeneration

“We have found the data very useful in understanding the types of businesses and economic activities taking place in the North West Birmingham area. The data will be used to help inform our economic strategy and align with planning and regeneration proposals for the area...”

SIC - SECTION	Unincorporated		Incorporated		Grand Total	
	Total	%		%	Total	%
ACTIVITIES OF EXTRATERRITORIAL ORGANISATIONS AND BODIES	6	0.1	-	0.0	6	0.1
ACTIVITIES OF HOUSEHOLDS AS EMPLOYERS; UNDIFFERENTIATED GOODS-AND SERVICES-PRODUCING ACTIVITIES OF HOUSEHOLDS FOR OWN USE	23	0.3	11	0.3	34	0.3
OTHER SERVICE ACTIVITIES	366	5.3	543	12.5	909	8.1
ARTS, ENTERTAINMENT AND RECREATION	195	2.8	108	2.5	303	2.7
HUMAN HEALTH AND SOCIAL WORK ACTIVITIES	391	5.7	351	8.1	742	6.6
EDUCATION	198	2.9	126	2.9	324	2.9
PUBLIC ADMINISTRATION AND DEFENCE; COMPULSORY SOCIAL SECURITY	6	0.1	52	1.2	58	0.5
ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES	782	11.3	214	4.9	996	8.8
PROFESSIONAL, SCIENTIFIC AND TECHNICAL ACTIVITIES	847	12.3	241	5.5	1088	9.7
REAL ESTATE ACTIVITIES	363	5.3	53	1.2	416	3.7



Channel Shift

Case Study: Smartphone Propensity Usage

Purpose

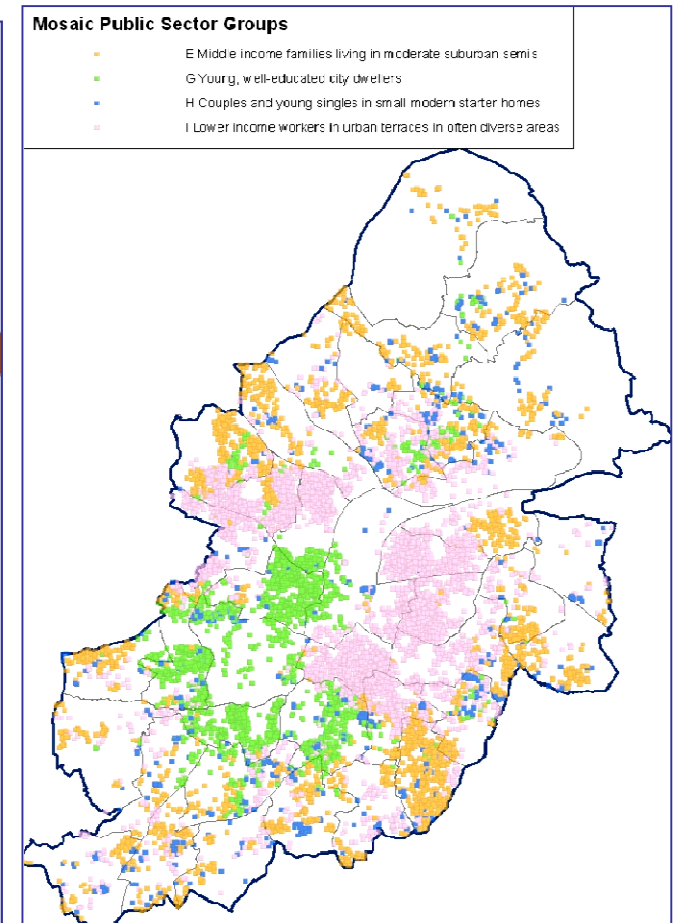
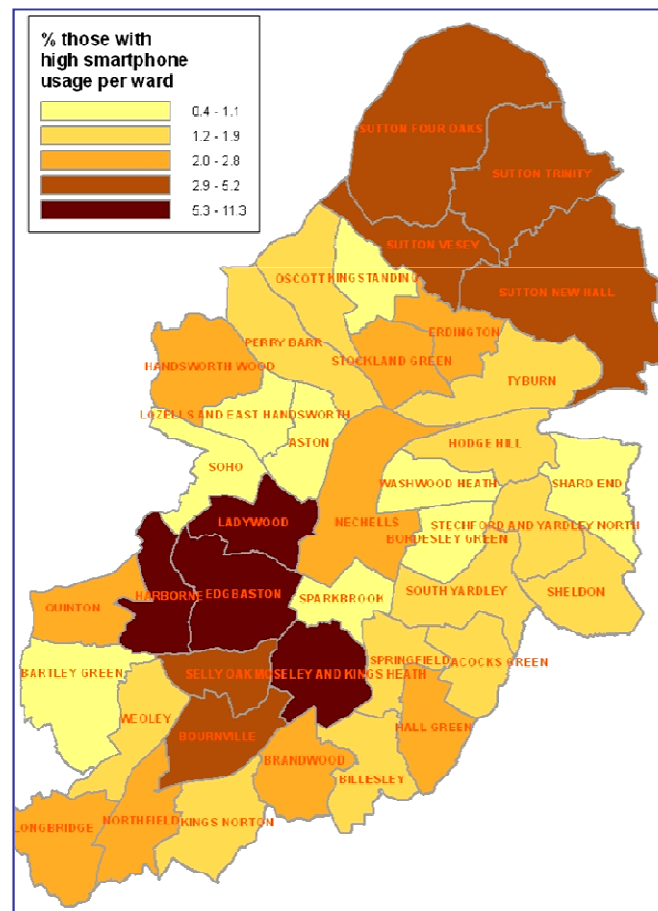
Identified **key characteristics for likelihood of Smartphone usage** for Birmingham Drugs & Alcohol Team (BDAAT) to get Department of Health funding for alcohol advice-related Smartphone apps & other new technologies.

Key Steps

- Mapped & identified spatial patterns for likelihood of Smartphone usage at a household level (Main householder)
- Linked households with high usage to Mosaic Public Sector profiles - socioeconomic characteristics.

Outcome

High usage tended to be in areas with a concentration of young adults & (to a lesser extent) with higher incomes



Targeting Through Population Profiling Elections

Purpose

To increase no. registered voters and meet requirements of the Individual Electoral Registration. Initial ward profiles to more effectively target non-responders and hard-to-reach groups.

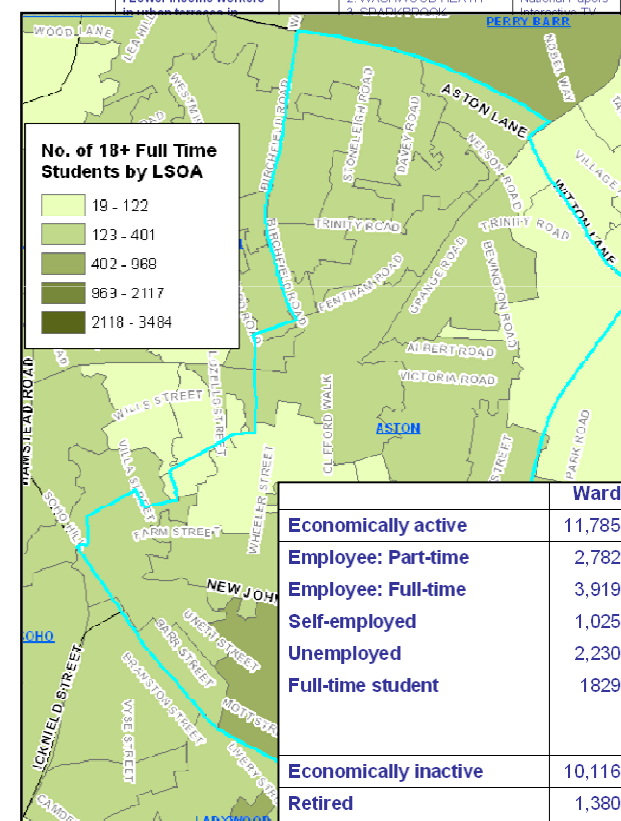
Key Steps

LSOAs with

- low % registered 16-17 year olds
- high % full-time students
- No. of non-responding properties per postcode
- Segmentation profile
- Ethnicity and main language / proficiency in English
- Housing tenures & type - *strong link between non-responders and flat accommodation*
- No. of Communal establishments & residents in them
- Employment/Full-time Student Proportions

Communication Preferences

Segment Short Description	% of B'ham	Top Wards	Accessing Information		Service Channels	
			Receptive	Non-receptive	Receptive	Non-receptive
E Middle income families living in moderate suburban semis	12.68	1. HALL GREEN 2. HANDSWORTH WOOD 3. PERRY BARR	Interactive TV Internet Telephone	Face to Face	Mobile Phone Post Telephone Internet	Face to Face
I Lower income workers in urban terraced areas		1. BORDESLEY GREEN 2. WASHWOOD HEATH 3. SPARKBROOK	Local Papers National Papers Interactive TV	Telephone	None significant	Post
				Internet	Face to Face	Post Mobile Phone Telephone Internet



	Ward	Ward %	B'ham %
Economically active	11,785	53.8	64.2
Employee: Part-time	2,782	12.7	12.7
Employee: Full-time	3,919	17.9	33.1
Self-employed	1,025	4.7	6.9
Unemployed	2,230	10.2	7.1
Full-time student	1829	8.4	4.4
Economically inactive	10,116	46.2	35.8
Retired	1,380	6.3	10.7
Student (including full-time students)	3,735	17.1	9.7
Looking after home or family	2,252	10.3	6.4
Long-term sick or disabled	1,271	5.8	5.3
Other	1478	6.7	3.7

Targeting Through Population Profiling Elections

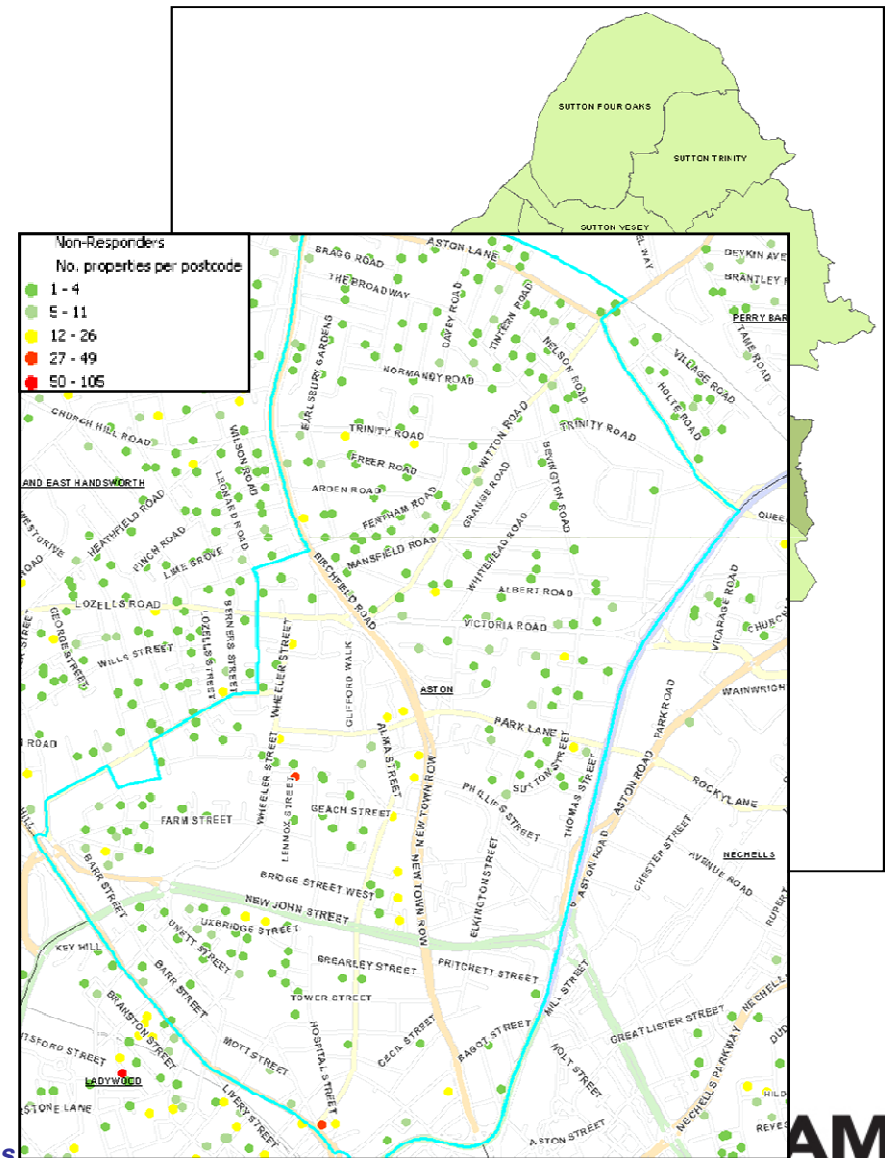
Outcome

- Enable Elections to produce communications & engagement strategy
- Target more precisely specific areas/streets with high rates of non-responders, with relevant key messages
- Target areas for online registration

Further analysis shows that at least 42% of non-responders are in flat properties*, with likely common reasons for non-response, such as:

- Transient/non-permanent residents
- Students/young professionals
- Empty properties
- Potential issues of form not delivered to individual's post box properly
- General apathy

**This is based on a search for the term 'flat', 'apartment', 'tower', 'heights' in the address or where known to be purpose built flats. The actual % of flats is likely to be higher as some will have been missed from this search.*



What More We Could Do...

- Further household-level analysis of customers (citizens and businesses)
- More integration of future census releases into geodemographic profiles
- Birmingham population projections spatial analysis
- Expanded use of data visualisation tools for geodemography
- Further behaviour change and channel shift projects
- Equality of location trends in digital accessibility
- Distance analysis across all services/local businesses
- Work more closely with the private sector?***Any suggestions?***