

Customer Segmentation

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1. What is Customer Segmentation?

In 2005/2006 the council undertook an exercise to help it to understand more fully the make up of the resident population of the borough.

The exercise involved using data to classify the resident population of the borough into one of 12 groups or segments.

The product of this exercise is called Customer Segmentation. It involves analysing a large number of different sets of data about people in order to identify residents who share similar characteristics and who are then assigned a label and description.

The hundred's of different sets of data are available for the smallest possible geographical area which is the full postcode (e.g. W6 9JU).

As a London Borough Council our Customers are the local residents who live in Hammersmith & Fulham and also visitors to the Borough. Customer Segmentation focuses on the local residents only.

The LBHF Customer Segmentation is an adaptation of a commercial product called Mosaic Public Sector from Experian.

Peter Cummings, Head of Public Sector, Experian's Business Strategies division, said: "It is very rare that Experian brings on a new client who immediately grasps a full appreciation of what Mosaic Public Sector can do for them and achieves so much in such little time. In Hammersmith & Fulham's case, they have created a custom-built classification that captures the unique socio-demographic composition of this borough and allows the development of citizen focused strategies."

2. How Customer Segmentation can be used

Customer Segmentation was applied to Hammersmith & Fulham (H&F) as part of the Council's Customer First Access Strategy (See Case Study: Customer First Access Strategy).

This section contains quotes slightly adapted from publicity material from Experian, the commercial company that sells Mosaic Public Sector, and from which the H&F Customer Segmentation is adapted.

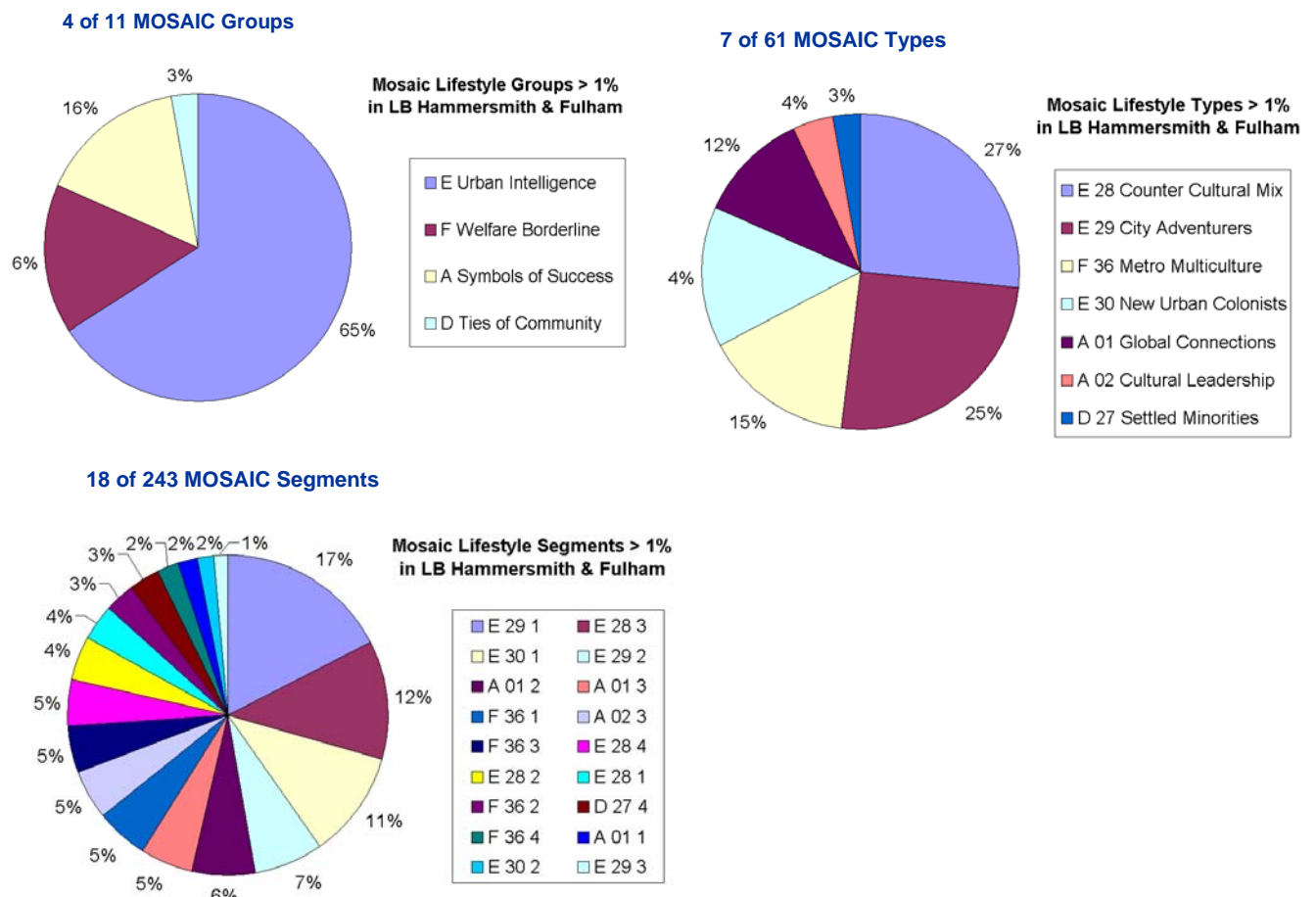
- A key trend in the public sector is the move towards public services that are designed around citizens and based on their specific needs and behaviours. Different groups of citizens require differing services and will respond through different channels and messages.
- Mosaic Public Sector [Customer Segmentation] provides a consistent and systematic view of the demographic and lifestyle characteristics of each customer group.
- Customer insight is the key to maximising resources through targeting the right services and communications to the right communities, starting at the lowest geographic levels, postcode.
- As a local authority need in-depth knowledge of the characteristics and needs of their residents in order to provide relevant, focused and cost-effective services.
- Mosaic Public Sector [Customer Segmentation] provides this detailed understanding, supporting decision making and policy formulation at both a strategic and an operational level.
- Mosaic Public Sector [Customer Segmentation] could be used with Hammersmith & Fulham in a number of ways:
 1. Identifying the specific needs of the population so that appropriate services can be developed
 2. Facilitating effective targeting of scarce resources by locating the demand for services – see the section which is a case study about the LBHF Customer First Channel Strategy.
 3. Providing a methodology for benchmarking a local authority's performance across a wide range of indicators against relevant comparator authorities
 4. Tailoring communication methods and messages to maximise response, service take-up and awareness

Mosaic Public Sector [Customer Segmentation] provides a 'common currency' that enables the same citizen to be viewed in the same way by all public bodies, thereby assisting joined-up government and partnership working. Customer Segmentation is an adaptation of Mosaic Public Sector and can still be compared with the original Mosaic Public Sector and the Royal Borough of Kensington and Chelsea (RBKC) are in the early stages of a project where they may use the H&F adaptation of Mosaic. Therefore as an example there is potential here for joined up local government work.

3. How the Mosaic Public Sector product was adapted for use in Hammersmith and Fulham

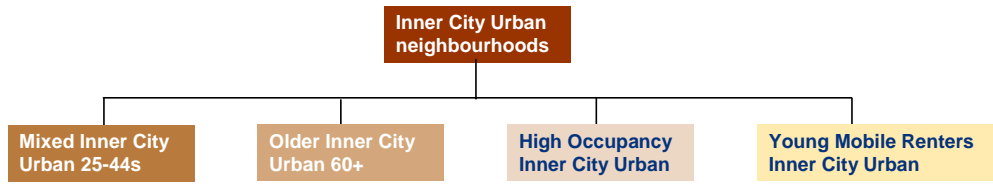
A broader commercial product was deliberately chosen over local authority data so we could more easily ascertain customer behaviour in the context of how they undertake transactions in the private sector. This allowed us to gain insights into what their wider expectations might be overall; not just confined to dealing with a local authority. Furthermore Mosaic Public Sector distinguished itself from other commercial products for two reasons. Firstly it offered information at a more detailed level which allowed a greater deal of statistical discrimination between various areas. Secondly it offered clear information on channel and media preferences which is something we were particularly interested in.

Following this the Mosaic Public Sector data was analysed so that we could categorise Hammersmith & Fulham into clearly identifiable groups to aid our understanding of the borough's makeup. Mosaic Public Sector profiles are available at three levels; groups, types and segments. The diagrams below show the number of Mosaic Public Sector profiles available to Hammersmith & Fulham at each of the three hierarchical levels. When looking at the hierarchical levels in isolation it was felt that they over generalised the population of Hammersmith & Fulham as we are a relatively small area with local characteristics that are significantly different to the national average.

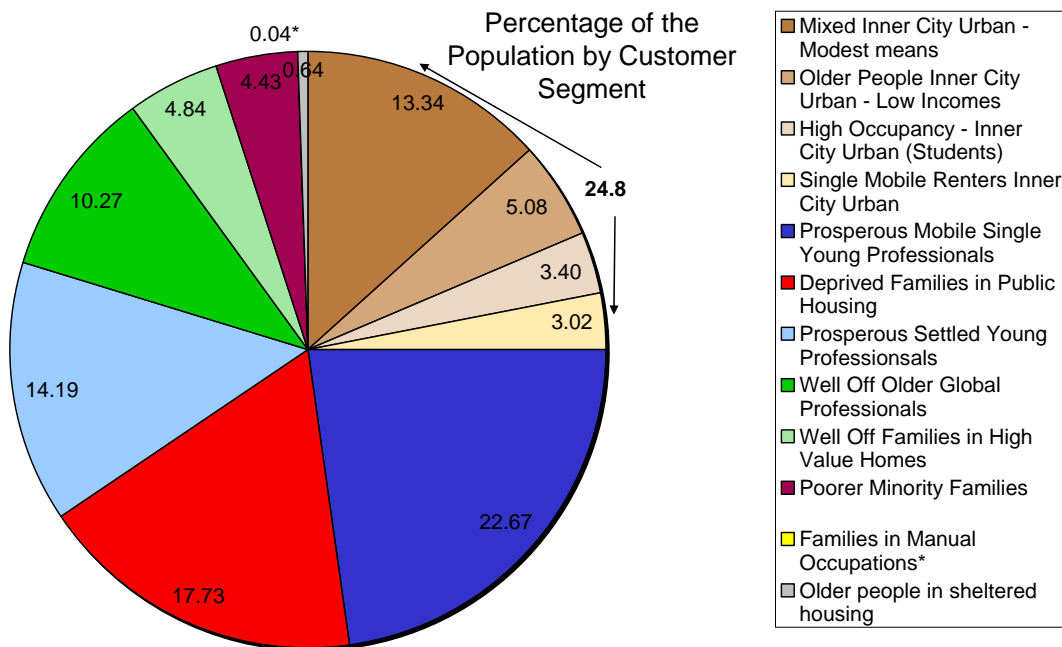


It was therefore decided that the different levels of the Mosaic Public Sector would be used where appropriate. This idea was proposed to Experian and after discussion it emerged that it is indeed possible to merge segments that have the same parent type (see Appendix Detailed Methodology). A good example of this process was the 'Inner City Urban Neighbourhood' type that represents 25% of the borough. It exhibited a wide spectrum of characteristics and was difficult to classify due to the fact that when looking at the most

important indicators such as means, type of tenure, demand for services, age and deprivation etc it lead to the conclusion that they were average for the borough. The importance of this type led us to divide it into 4 segments, which are shown in the diagram below.



This process resulted in classifying the borough into 12 categories that represent a combination of groups, types and segments. Thus creating a bespoke version of Mosaic Public Sector to suit the needs of Hammersmith & Fulham. As Mosaic Public Sector was designed as a commercial tool we felt it appropriate to rename the 12 segments so that they would be more inline with local government terminology. For the final 12 customer segments see diagram below.



4. Results

See the following page for the Borough level Customer Segmentation Map. The other maps and charts on this are not included in this report due to file size.

Maps – Borough level

Customer Segmentation see the following page
Residential Areas (Customer Segmentation without colour shading)
Well Off Older Global Professionals
Well Off Families in High Value Homes
Families in Manual Occupations
Poorer Minority Families
Older People Inner City Urban - Low Incomes
High Occupancy - Inner City Urban (Students)
Mixed Inner City Urban - Modest means
Single Mobile Renters Inner City Urban
Prosperous Mobile Single Young Professionals
Prosperous Settled Young Professionals
Deprived Families in Public Housing
Older people in sheltered housing

Maps – Ward level

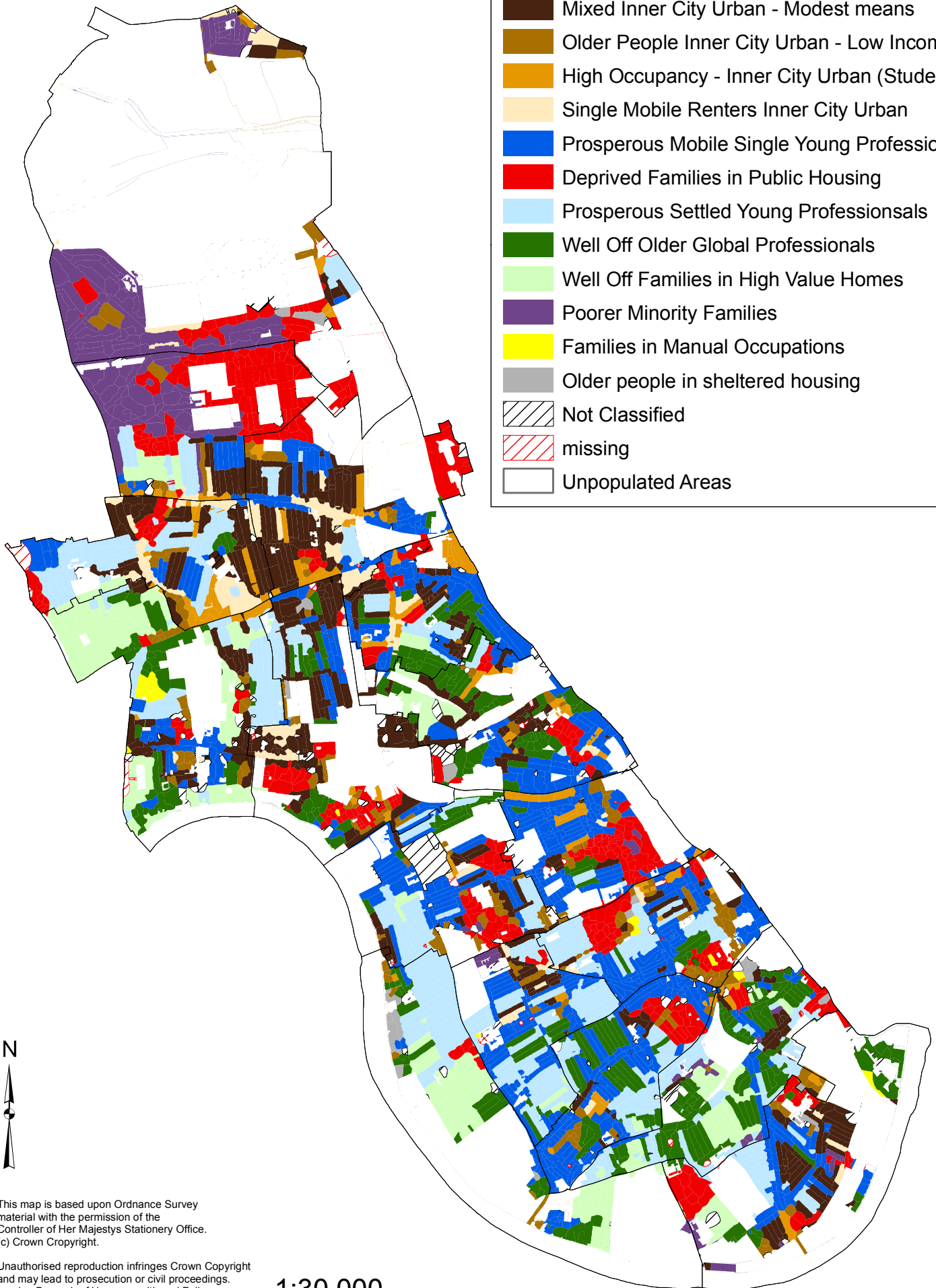
Addison
Askew
Avonmore and Brook Green
College Park and Old Oak
Fulham Broadway
Fulham Reach
Hammersmith Broadway
Munster
North End
Palace Riverside
Parsons Green and Walham
Ravenscourt Park
Sands End
Shepherd's Bush Green
Town
Wormholt and White City

Bar charts – Customer Segmentation Profile of Ward level

Addison
Askew
Avonmore and Brook Green
College Park and Old Oak
Fulham Broadway
Fulham Reach
Hammersmith Broadway
Munster
North End
Palace Riverside
Parsons Green and Walham
Ravenscourt Park
Sands End
Shepherd's Bush Green
Town
Wormholt and White City

Customer Segmentation

LONDON BOROUGH OF
HAMMERSMITH
AND FULHAM



- Mixed Inner City Urban - Modest means
- Older People Inner City Urban - Low Incomes
- High Occupancy - Inner City Urban (Students)
- Single Mobile Renters Inner City Urban
- Prosperous Mobile Single Young Professionals
- Deprived Families in Public Housing
- Prosperous Settled Young Professionals
- Well Off Older Global Professionals
- Well Off Families in High Value Homes
- Poorer Minority Families
- Families in Manual Occupations
- Older people in sheltered housing
- Not Classified
- missing
- Unpopulated Areas



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1:30,000

0 0.5 1 2 Miles

5. Case Study: Customer First Access Strategy

The Customer First Access Strategy allows assumptions to be drawn about the preferred behaviour of the residents within the Customer Segments, and helps the council understand where to better focus its service provision to meet the needs and preferences of its residents.

The Customer First department wanted to develop a project to improve how residents can contact and deal with the council. This primarily involved:

- The location and range of facilities at reception offices
- Making telephone services more customer friendly
- Increasing the breadth of the web service

In order to achieve this, the Customer First department are currently implementing the Access Strategy for more details check the details on the Intranet:

<http://theintranet/Departments/Customer%5FFirst/Customer%5FFirst%5FProgramme/>

Understanding who our customers are is a prerequisite for ongoing service delivery.

To identify who our customers are, two tools were used:

- Customer Segmentation data based on profiling the Borough's population based on a key set of demographic and other indicators
- The Client Index data which records actual service usage by a customer for a broad range of services within the council

The Client Index is a recent project which consolidates customer data from various service delivery systems and matches customers who appear in different systems. The Client Index will give us a view of the breadth of services any individual uses across the council to provide a more holistic view of how the customer is interacting with the council.

The Client Index project is still developing so it at the time (Sept 2005) it was not possible to extract information about the multiple service use of individuals. However the Client Index project team had collated customer datasets from several departments and the Customer Access strategy team were provided with extracts from these departmental inputs into the Client Index. The extracts included the UPRN (Unique Property Reference Number) and count of the number of users of the selected service at that UPRN. Using the co-ordinates held in the corporate property gazetteer for each UPRN the service datasets were geographically plotted and the distributions analysed.

This allows us to:

- Identify the locations in the Borough where density of demand for a service is highest based on where customers live
- Correlate the service uptake data with the Customer segmentation to identify any trends for services across customer segments and add this service consumption information to the 12 customer segment profiles.

To test and prove the validity of the *LBHF Model of the Customer* a survey of residents was conducted (see the LBHF Model of the Customer report – available from the Customer First department contact Chris Naylor).

6. The other ways of describing the Borough and Customer Segmentation

Borough Profile (BP) – The BP¹ presents information about the Borough on a range of topics and with some data down to Ward level.

2001 Census and the Index of Multiple Deprivation (IMD2004) – The Council published two reports from the Census which give a range of data down to sub-Borough level:

Report 1: Key Statistics for Wards², and

Report 3: Indicators of Deprivation in H&F³

The latter presents data and maps relating to deprivation down to the level of Output Areas (of which there are 605 in H&F). Also included are details of the Index of Multiple Deprivation.⁴ The Indicators of Deprivation report also includes the results of a Cluster Analysis using 35 Census variables which identifies 10 clusters within which there are similar characteristics. Customer Segmentation takes the Cluster Analysis a stage further by adding in a range of non-Census data, mainly from commercial datasets.

Ward Profiles – Are under development. The Draft proposal is that the data in the Ward Profiles is split into four main areas: Customer Segmentation; Quality of life indicators; Community indicators and Economy indicators. More information about the borough and the variations between wards can be found in the Borough Profile.

eGIS – Currently has a Census Channel and a Deprivation Channel. A Statistics and Census Channel is under development that would have Census and Deprivation statistics interactively in map form as well as Customer Segmentation.

¹ Borough Profile is available and interactive on the H&F external website:
http://www.lbhf.gov.uk/Directory/Council_and_Democracy/Statistics_and_Census_Information/Borough_profiles/41255_Borough_Profile_service_page.asp

² Report 1 is available on the H&F external website:
http://www.lbhf.gov.uk/Directory/Council_and_Democracy/Statistics_and_Census_Information/Census_information/20278_2001_Key_Statistics.asp

³ Report 3 is available on the H&F external website:
http://www.lbhf.gov.uk/Directory/Council_and_Democracy/Statistics_and_Census_Information/Census_information/44382_2001_Census_Part_1_menu.asp

⁴ IMD2004 from the Office of the Deputy Prime Minister (ODPM) now the Department of Communities and Local Government (DCLG)
<http://www.communities.gov.uk/index.asp?id=1128440>

7. Appendix - Detailed Methodology

The reason for creating a bespoke version of Mosaic Public Sector is that the London Borough of Hammersmith & Fulham is atypical compared to the country as a whole. As an Inner London Borough it has local characteristics that are significantly different from the national average as described in the following paragraphs.

Population

Hammersmith & Fulham (H&F) is 1 of 13 inner-London boroughs on the transport routes between the City and Heathrow. As a result H&F is home to many major international companies, particularly those in Media and Entertainment, including the BBC site at White City.

At the 2001 Census the population of the Borough was 165,242. With a population density of 101 persons per hectare, this makes us the 4th most densely populated local authority in England and Wales.

Ethnicity

There are above average proportions of ethnic minorities in the borough and this population is growing.

The proportion of residents of ethnic groups other than white has gone up from 17.5% in 1991 to 22.1% in 2001. The largest grouping is people of Black ethnic origin (11.1%) and within this broad grouping the proportion of people of Black or Black British Caribbean origin is the eleventh highest of any local authority in England & Wales. Also the proportion of Irish as an ethnic group (4.8%) is the third highest of any local authority in England & Wales.

However the ethnic minority population is lower than Inner London as a whole (34.3%) or Greater London (28.9%).

Country of Birth

As well as ethnicity, country of birth is also a factor that makes the Borough atypical. A third (33.6%) of all Borough residents were born outside the UK, a rise from 28.4% in 1991. The Borough has the 15th highest proportion of any local authority in England & Wales of people born outside the European Union.

Household Types

In terms of household type the Borough has the second highest proportion of any local authority in England & Wales of single people in the adult population at 54.7%.

Four in ten (40.3%) of all households consist of just one person. Likewise the Borough has the third lowest proportion (26.0%) of adults who are married or re-married. Some 13.1% of adults are living as cohabiting couples.

Step Guide

There are a series of steps in the methodology of creating a bespoke version of Mosaic Public Sector and the following paragraphs attempt to explain them in detail.

In summary the steps are:

- 1. Why Mosaic Public Sector?**
- 2. Mosaic Public Sector Hierarchy; Groups, Types and Segments**
 - a. 4 of 11 Mosaic Public Sector Groups**
 - b. 7 of 61 Mosaic Public Sector Types**
 - c. 18 of 243 Mosaic Public Sector Segments**
- 3. Interpretation based on analysis from Census data**
- 4. The idea to use different levels of the Mosaic Public Sector hierarchy**
- 5. Aggregating to OA and Visualising Mosaic Public Sector Segments**
- 6. Variation between Segments and selecting appropriate level of the hierarchy**
- 7. Describing the mix of Segments, Types and Groups**
- 8. Renaming for the Public Sector**
- 9. Updating the Customer Segmentation with a new postcode directory**

Step 1. Why Mosaic Public Sector?

So once the decision was made to buy in some external data, which product should we choose? Well for our purpose, describing an Inner London Borough, there were two important reasons for choosing Mosaic Public Sector (For more detail see Appendix - A Review of Two Commercial Segmentation Tools).

Firstly Mosaic Public Sector Segments is effectively a Sub-Types classification and is a 'finer' level segmentation than available elsewhere. Which allows a greater deal of statistical discrimination between areas.

Secondly there is clear information on channel and media preferences in the accompanying Portrait Literature from the Multi media CD for all the 11 Groups and 61 Types. Though as of last September there was not the same Multi media information available for Segments.

Step 2. Mosaic Public Sector Hierarchy; Groups, Types and Segments

Why Bespoke Mosaic Public Sector? Well this goes back to the section showing the atypical nature of the Borough.

Before Purchasing Mosaic Public Sector we were sent the Mosaic Public Sector Profiles of each level of the Mosaic Public Sector hierarchy:

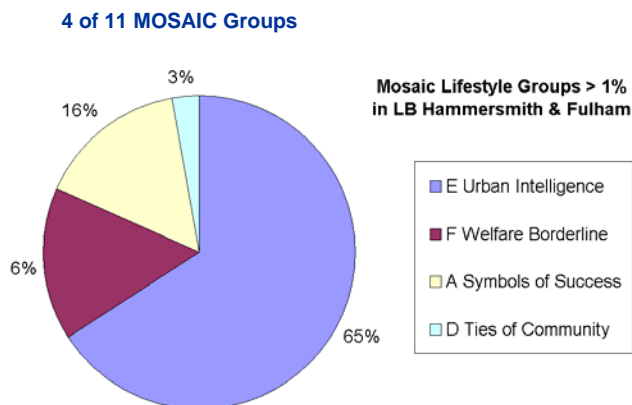
GROUPS

TYPES

SEGMENTS

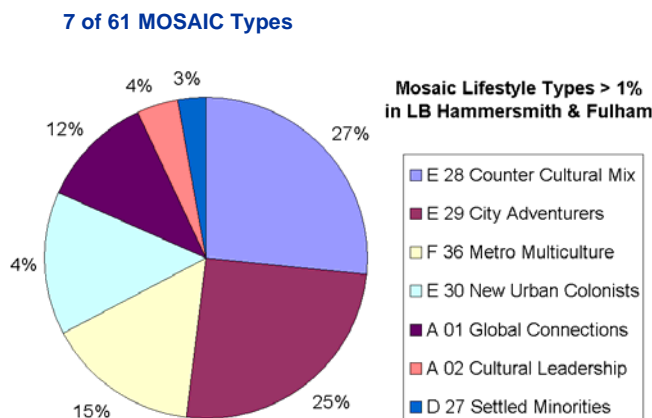
The following points describe the Mosaic Public Sector profiles for Hammersmith and Fulham at each of the three levels of the hierarchy.

Step 2a. 4 of 11 Mosaic Public Sector Groups



Of the 11 Groups, 4 are found in the Borough (With >1% of the population in each). With the one group, E Urban Intelligence, accounting for 65% of the population. We considered the GROUP level of the hierarchy to be too generalised. So we looked the next level...

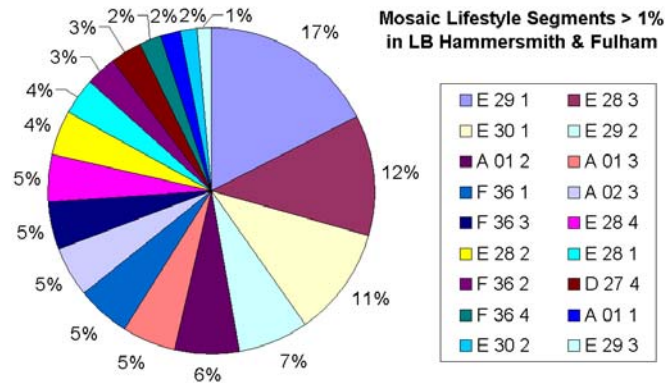
Step 2b. 7 of 61 Mosaic Public Sector Types



Of the 61 Types, 7 are found in the Borough (With >1% of the population in each) and the largest Type is E 28 Counter Cultural Mix with 27%, E 29 City Adventures is the next highest with 25% of the population. So over half of the population are classified as one of two Types, again we thought was too generalised. So we looked at the next level which is Mosaic Public Sector Segments...

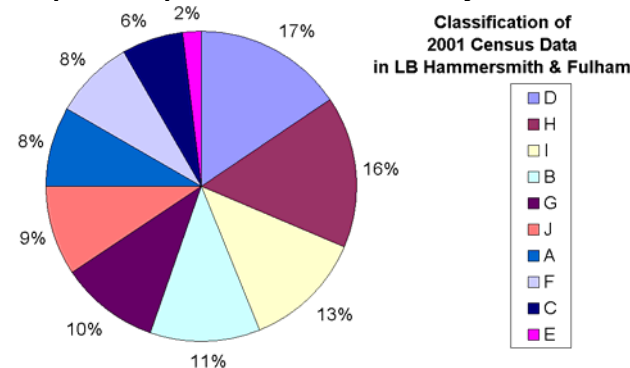
Step 2c. 18 of 243 Mosaic Public Sector Segments

18 of 243 MOSAIC Segments



Of 243 Segments, 18 are found within the Borough (With >1% of the population in each), the highest being E 29 1 with 17%. However whilst this is perhaps an appropriate proportion of the population to be in the largest category, there are too many Segments with a very small proportion of the population.

Step 3. Interpretation based on analysis from Census data



Our interpretation of the profiles at GROUP, TYPE and Segment level were influenced by our internal Census based profile of the Borough which categorises the population into 10 Groups where the largest category is 17%. We thought this seemed like a suitable proportion in each and there were 10 different categories.

Step 4. The idea to use different levels of the Mosaic Public Sector hierarchy

It was at this point of the project that we had the idea to use different levels of the Mosaic Public Sector hierarchy where appropriate i.e. a mixture of GROUPS, TYPES and Segments- to reach a compromise. We discussed the idea with our contacts at Experian and they advised that this was possible.

The important point is that the data variables on lifestyle and behavioural characteristics cannot be merged i.e. one Segment cannot be merged with another Segment. Therefore it is preferable to use a combination of the levels in the hierarchy without affecting data quality i.e. replacing all Segments that have the same Type with their 'parent Type' if the characteristics of the Segments in the Borough are very similar and could be equally well represented by broader characteristics of the parent Type.

Step 5. Aggregating to OA and Visualising Mosaic Public Sector Segments

To visualise the distribution in the Borough Mosaic Public Sector Segments data at postcode level was aggregated up to 2001 Census Output Areas (OA) by categorising the OA by the Mosaic Public Sector Segment with the largest number of postcodes in that OA.

Instead of 18 Mosaic Public Sector Segments in the pie chart profile with greater than 1% of the population (see Step 2c), due to the small size of some of the 605 OAs, there were 35 different Mosaic Public Sector Segments used to classify all the OAs.

Step 6. Variation between Segments and selecting appropriate level of the hierarchy

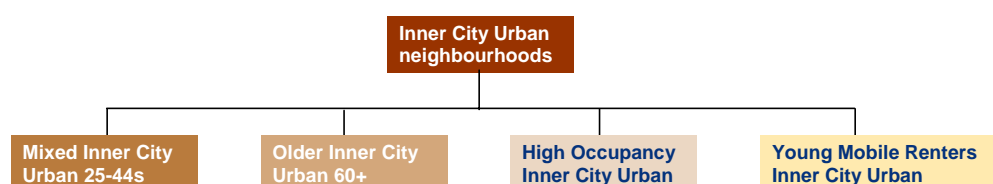
The spatial distributions of the OAs classified by 35 different Mosaic Public Sector Segments were analysed. The aim was to arrive at a reasonable number of groupings in a Hammersmith & Fulham context, fairly clearly differentiated but avoiding single Output Areas as separate groups. The aim was to reduce the number of categories from 35 to approx. 10 as this was the number in our internal census based geodemographic classification from the Census-based deprivation report¹

Maps of the distribution of the 35 Segments at OA level were analysed alongside the selected key variables from the approx. 400 variables that constitute each Segment to discover the extent of the variation between the Segments.

If there was significant variation (in terms of the local characteristics of the Borough) between the Segments it would be best to use the Segment level of the Mosaic Public Sector hierarchy.

If there variation (in terms of the local characteristics of the Borough) between the Segments was not significant it would be best to use either the Type level of the Mosaic Public Sector hierarchy or the Group level of the Mosaic Public Sector hierarchy

A good example of this process was the Counter Cultural Mix Type (described as Inner City Urban Neighbourhoods) that represents 25% of the Borough. This Mosaic Public Sector Type exhibited a wide spectrum of characteristics and was difficult to classify due the fact that when looking at the most important indicators such as means, type of tenure, demand for services, age and deprivation etc it lead to the conclusion that they were average for the borough. The importance of this Type led us to divide it into its four constituent Segments, which are shown in the diagram below.



There were inevitably some cases where a Mosaic Public Sector Segment that classified a very small number of households had to be incorporated into the nearest-fit group where the characteristics were reasonably similar, in order to avoid ending up with a large number of categories.

Differentiation between categories is mainly on the basis of demographic characteristics from Census data held within Mosaic Public Sector, though there is also differentiation between categories in terms of the lifestyle characteristics which come from non-Census commercial datasets.

This process reduced 35 Mosaic Public Sector Segments to 12 categories which were a mix of Segments, Types and Groups.

The Methodology table below shows exactly how Mosaic Public Sector has been adapted.

¹ 2001 Census Report 3: Indicators of Deprivation in Hammersmith & Fulham: LBHF Environment Dept 2005 p.63-96

Step 7. Describing the mix of Segments, Types and Groups

Characteristics identified under the 'Description' column in the Methodology table below refer to factors where the group scores fairly or very highly relative to the Borough average. The Borough average is taken to be more relevant here than the national average because of the unusual nature of Hammersmith & Fulham as an Inner London Borough compared to national demographics; for example a higher proportion of younger adults, single people, mobility and ethnic minorities. Thus for example a Type called 'Just Moving In' implying recent movers, do not appear as such from the data in a Hammersmith & Fulham context and so requires re-labelling.

In the final column of the Methodology Table, 'Other Comments', there are references to similarities between the groups identified and the Clusters identified in the Census-based deprivation report²

The Descriptions in the Methodology Table are expanded in the table Detailed Descriptions of Customer Segments (also below). The 12 categories that emerged from the process which adapted Mosaic Public Sector for use in LBHF are referred to as Customer Segments or The Customer Segmentation.

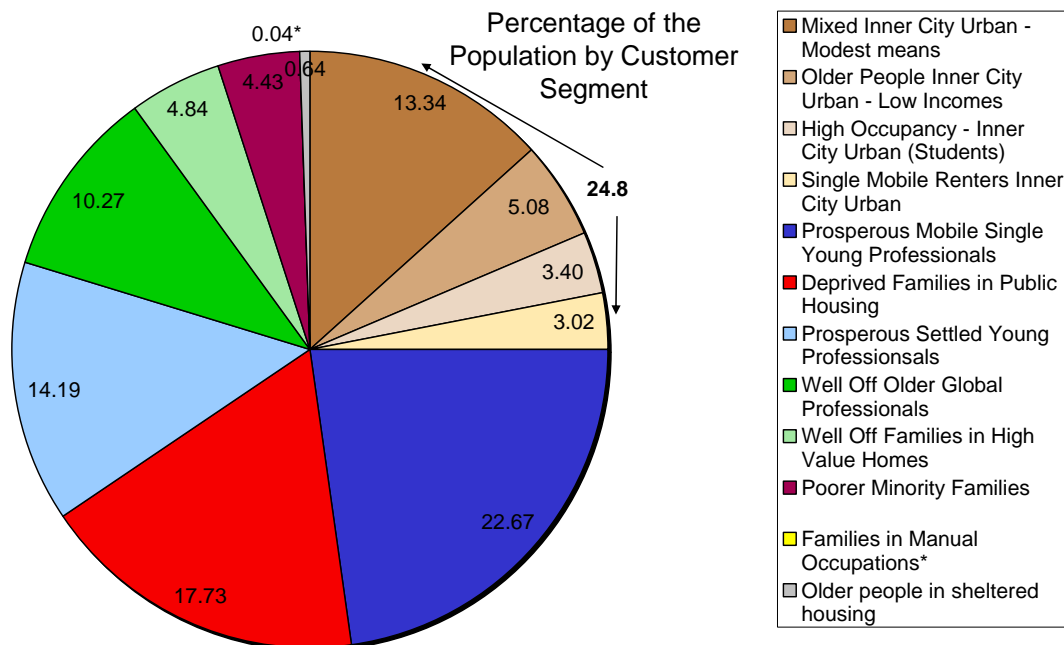
Step 8. Renaming for the Public Sector

As Mosaic Public Sector was designed as a commercial classification we decided to rename the chosen Group, Types and Segments so that the names would be more understandable (and more sensitive) for use in the public sector.

For Example City Adventures was re-named to Prosperous Mobile Single Young Professionals and Settled Minorities was re-named Poorer Minority Families

The new names are directly related to the characteristics identified by a detailed analysis of the variables and refer to factors where the categories (Customer Segments) scores fairly or very highly relative to the Borough average.

This is the resulting profile with the 12 categories shown in a pie chart like the Mosaic Public Sector profiles in Step 2. The colours are significant and are used throughout.



² 2001 Census Report 3: Indicators of Deprivation in Hammersmith & Fulham: LBHF Environment Dept 2005 p.63-96

Step 9. Updating the Customer Segmentation with a new postcode directory

The same information that is in the Methodology Table is displayed in MS Excel format (A lookup table of how to convert Mosaic Public Sector to LBHF bespoke version called Customer Segmentation.xls) but without information on the Descriptions and with new Mosaic Public Sector Segments that were found in the Borough in the 2005/06 update of the Mosaic postcode directory.

There are 51 Segments in the table, 35 Segments from the 2004/2005 aggregated to OA level process plus 16 Segments from the 2005/2006 postcodes.

The original process of adapting Mosaic used a postcode directory from 2004/2005 and 35 Segments were found in the Borough i.e. when the Segments data was aggregated up to 2001 Census Output Areas (OA) by categorising the OA by the Mosaic Public Sector Segment with the largest number of postcodes in that OA.

The MS Excel table includes 16 Segments (shown in red Text) that classified postcodes in the 2005/06 update of the Mosaic postcode directory. The exercise of aggregating to OA level was not repeated but the Mosaic Public Sector Segments were included in the lookup table and assigned to one of the twelve LBHF Customer Segments through the same careful analysis of variables.

In theory it is possible to do the whole process of adapting Mosaic without aggregating Segments to OAs and instead mapping the postcode boundaries by Segments and studying that distribution.

The MS Excel table is a crucial output as it is a lookup table of all 51 Segments and which level of the MOSAIC hierarchy should be used to categorise them. Here is an example to explain the table, using the Customer Segment Poorer Minority Families. There are six Mosaic Public Sector Segments that are reclassified as Poorer Minority Families, two Mosaic Public Sector Segments only occurred in the 2005/06 update of the Mosaic postcode directory (shown in red Text) and the four Mosaic Public Sector Segments were in the original 2004/05 Mosaic postcode directory that was first used in the analysis. The variables for the Mosaic Public Sector Segments shaded in Yellow and with text shown in red are judged to be locally very similar to the variables for the Mosaic Public Sector Segments shaded in Green and with text shown in bold. However since the Mosaic Public Sector Segments shaded in Green and with text shown in bold represent a larger proportion of the population locally then their variables are used to represent all Mosaic Public Sector Segments that are reclassified as Poorer Minority Families.

Conclusion

Mosaic Public Sector was created to categorise whole of UK and whilst there are Experian products such as MOSAIC London we thought it was appropriate for ourselves as an Inner London Borough to create a Bespoke Mosaic Public Sector.

In retrospect I foresee one possible criticism of our methodology which is how we aggregated Segments to Output Areas to visualise Mosaic Public Sector. And then we selected the appropriate levels of the Mosaic Public Sector hierarchy using maps of Output Areas shaded by Segments. It is important to state that the aggregation of Mosaic Public Sector to OA was only to as an aid to mapping the distribution. The Bespoke Mosaic Public Sector is for the full postcode unit. And postcoded data on the number of services used by residents can be given a Bespoke Mosaic code.

Also as the Bespoke Mosaic Public Sector is that full unit postcode it can be aggregated up to OA, Ward or Postal Sector.

After looking into the data sources of Mosaic Public Sector we decided at the outset to purchase the cheaper postcode level Mosaic Public Sector rather than the household level Mosaic Public Sector.

As we had received the Postcode file for our Borough with three attributes the Group code, Type Code and Segment Code, it was possible to re-categorise each postcode with the new LBHF Customer Segmentation code (a Bespoke Mosaic Public Sector)

Therefore the Customer Segmentation is accurate at the postcode level and aggregating to OA was just part of the methodology.

Methodology Table							
Type	Segment	OAs	LBHF	Description	Total OAs	% OAs	Further Comments
Global connections	1	8	Well Off Older Global Professionals	Managers and professionals, high value flats and some terraced housing, owners/ private renters, 1 or 2 person households in 3-4 rooms, singles, q mobile, above average 45+, born abroad e.g. USA, low Black, males working long hours, self employed, managers or professionals (inc women), internet connection. South Fulham/ Brook Green	74	12	
	2	25					
	3	40					
	4	1					
Cultural Leadership	5	1	Well Off Families in High Value Homes	Managers and professionals, high value houses, White British, home and car owners, stable, 2 parent families. South Fulham/ Ravenscourt	25	4	
	6	8					
	7	15					
Corporate Chieftains	9	1					
Just Moving In	29	7	Families in Manual Occupations	Older families or older people, less qualified, admin and manual, moderate value houses, stable, car owners South Fulham/ Ravenscourt	7	1	
Settled Minorities	112	5	Poorer Minority Families	Poorer families, ethnic minorities, poorer terraced housing, stable, sales or manual occupations, relatively deprived. College Park	24	4	Similar to Cluster B. Includes Old Oak and Wormholt Estates. Includes RTB properties
Settled Minorities	113	2					
Settled Minorities	115	16					
White Van Culture	190	1					
Counter Cultural Mix	116	35	Older People Inner City Urban - Low Incomes	Single pensioners, lone parents, public renting, purpose-built flats, no car, poorer health, stable, manual occupations, low qualifications. Parts of Fulham/ Hammersmith	35	6	
Counter Cultural Mix	117	21	Mixed Inner City Urban - Modest means	Singles, Asian or Born Other EU or elsewhere, purpose-built flats, 1 or 2 rooms, no car, students, high occupancy, middle age. Shepherds Bush/ West Kensington	22	3	
Town Gown Transition	137	1					

Counter Cultural Mix	118	87	High Occupancy - Inner City Urban (Students)	Average tenure and age structure, q stable, converted flats, both singles and married people. Hammersmith /Shepherds Bush	87	14	
Counter Cultural Mix	119	12	Single Mobile Renters Inner City Urban	Ethnic minorities, private renting, mobile, low qualifications, low value properties, lone parents, manual occupations, 18-44s Shepherds Bush	12	2	Some overlaps with Cluster F
City Adventurers	120	122	Prosperous Mobile Single Young Professionals	Young professionals, fairly affluent, private renting in converted flats, non family, mobile young adults. Fulham but a scatter in Hammersmith and Shepherds Bush	139	23	Similar to Cluster G
City Adventurers	121	16					
City Adventurers	122	1					
New Urban Colonists	124	72	Prosperous Settled Young Professionals	Professionals terraced housing, couples with or without children rather than singles, owner occupiers, relatively stable, mid range property values. Fulham but some in Brook Green and Shepherds Bush	79	13	Similar to Cluster D
	125	7					
Metro Multiculture	145	41	Deprived Families in Public Housing	Ethnic minorities, children, public renting, high occupancy, unemployment, low car ownership, single parents, purpose-built flats, low qualifications, manual occupations. Shepherds Bush and other areas with public sector estates	96	16	Similar to Cluster A
Metro Multiculture	146	22					
Metro Multiculture	147	16					
Metro Multiculture	148	10					
Tower Block Living	154	3					
Dignified Dependency	157	2					
White Van Culture	187	1					
Bedsit Beneficiaries	144	1					
Old People in Flats	195	2	Older people in sheltered housing	Elderly, one person pensioner households, public rented flats, poor health, White.	5	1	Part of Clem Attlee, Sycamore House,

Old People in Flats	196	1		Sheltered housing, q stable.			Oswald Stoll, Rowberry Close, Meadowbank Close. Includes one area of private housing at Eternit Walk
Cared-for Pensioners	202	1					
Childfree Serenity	208	1					

DETAILED DESCRIPTIONS OF CUSTOMER SEGMENTS

Group	Demography	Education	Work	Money	Home	Lifestyle	Location	Channel preference
Well Off Older Global Professionals	1 or 2 person households, singles, quite mobile, above average 45+, born abroad e.g. USA, low Black,	Over half with degree level qualifications	Managers and professionals males working long hours, self employed, managers or professionals (inc women), high ABs. Above average working at home	High income, phone banking but also like to visit bank. High store cards	High value flats and some terraced housing, owners or private renters. 3-4 rooms	Internet connection, moderate usage. Reads broadsheets, reads books	South Fulham/ Brook Green	Web Phone
Well Off Families in High Value Homes	White British, stable, 2 parent families. Above average 5-19s and older people, especially 45-64s. Low Black	Half have degree level qualifications	Managers and professionals Above average working at home	High household income High store cards	High value houses home and car owners. This group lives in the largest properties	Reads broadsheets, reads books. Moderate internet usage	South Fulham/ Ravenscourt	Web Phone
Families in Manual Occupations	Older families or older people, stable. Above average 45+ and children. Also above average couples no children. Low Black	less qualified	Admin and manual	Highest propensity to shop by phone. Q high prepaid mobile	moderate value houses, larger than average. Car owners	Moderate internet usage	South Fulham/ Ravenscourt	Web Phone
Poorer Minority Families	Poorer families, ethnic minorities, stable, sales or manual occupations, relatively deprived. Above average 0-19s	Moderately low qualifications	Sales or manual occupations,	Group has highest rate of child benefit. Low internet grocery purchase	Poorer terraced housing. Quite high own with mortgage	Above average paying bills at PO	College Park	Visit

					and public renters			
Older People Inner City Urban - Low Incomes	Single pensioners, lone parents, poorer health, stable, Above average 60+	Low qualifications; a quarter have none	Manual occupations	Above average pay bills at PO	Public renting purpose-built flats, low car ownership	Lower than average computer use	Parts of Fulham/ Hammersmith	Visit
High Occupancy - Inner City Urban (Students)	High proportion singles, Asian or Born Other EU or elsewhere, students, middle age.	On the low side of the Borough average	Above average self employed		Purpose-built flats, 1 or 2 rooms, low car ownership, high occupancy		Shepherds Bush/ West Kensington	Web Phone
Mixed Inner City Urban - Modest means	Average age structure, q stable, both singles and married people. Relatively high Black. High 25-44s, single people and single parents.	Qualifications a little below Borough average	Above average self employed		Average tenure but high converted flats		Hammersmith /Shepherds Bush	Visit
Single Mobile Renters Inner City Urban	Ethnic minorities, mobile, lone parents, 18-44s	Moderately low qualifications	manual occupations		private renting, low value properties,		Shepherds Bush	Web Phone
Prosperous Mobile Single Young Professionals	Fairly affluent, non family, mobile young adults.	Over half with degree level qualifications	Young professionals or lower managerial. Group with highest FT working females.	Internet and phone banking	Private renting in converted flats	Reads books Internet users	Fulham but a scatter in Hammersmith and Shepherds Bush	Web Phone

Prosperous Settled Young Professionals	Fairly affluent couples with or without children rather than singles, relatively stable,	Qualifications a little above Borough average	Professionals or lower managerial	Phone banking. Propensity to shop by internet or phone	terraced housing owner occupiers mid range property values	Reads books High internet connection	Fulham but some in Brook Green and Shepherds Bush	Web Phone
Deprived Families in Public Housing	Ethnic minorities, high children and young adults, single parents,	low qualifications; one third have none	unemployment, manual occupations	Above average pay bills at PO	public renting, high occupancy low car ownership purpose-built flats	Low internet connection, low computer ownership. Heavy TV viewing	Shepherds Bush and other areas with public sector estates	Visit
Older people in sheltered housing	Elderly, one person pensioner households, poor health, White. quite stable.	Low qualifications; nearly half have none		Above average pay bills at PO. Low internet grocery purchase	Public rented flats Sheltered housing. Low car ownership	Low internet connection low computer ownership Heavy TV viewing		Visit

8. Appendix - Variables and Sampling behind Mosaic Public Sector

This section contains publicity material from Experian, the commercial company that sells Mosaic Public Sector, and from which the H&F Customer Segmentation is adapted.

Currently 54% of the data used to build Mosaic Public Sector is sourced from the 2001 Census. The remaining 46% is derived from Experian's Consumer Dynamics Database, which provides coverage of 46 million residents and 25 million households. It includes the edited Electoral Roll, Experian lifestyle information and credit activity, alongside the Post Office Address File, Shareholders Register, Land Registry House Price, Council Tax and DVLA information. All of this information is updated annually. As the Census data gets older, the weightings of the variables are reduced, and emphasis is placed on the more recent data to ensure that the classification maintains its accuracy.

A total of 400 data variables have been used to build Mosaic. These have been selected as inputs to the classification on the basis of their volume, quality, consistency and sustainability.

To be input into the classification, the data must meet one or more of the following criteria:

- Allows identification and description of consumer segments that are not necessarily distinguished solely by the use of Census data.
- Ensures accuracy of the Mosaic code by either household address or postcode.
- Updated annually to ensure change is monitored.
- Improves discrimination and allows for the identification of a wide range of consumer behaviours.

Qualitative research has also been undertaken covering the whole of the UK to validate the accuracy of Mosaic Public Sector on the ground. A number of the UK's leading experts in the fields of psychology, human geography and economics have interpreted the classification. This research links to a number of authoritative sources of market research, including BMRB's Target Group Index (TGI), The British Crime Survey, MORI's Financial Research, The Expenditure and Food Survey (EFS), Forrester's Technographics and Internet User Monitor, the English and Welsh Index of Multiple Deprivation, National Pupil Database, and Hospital Episode Statistics.

Mosaic Public Sector has been built using a unique four-stage approach:

1. Detailed analysis of social trends in the UK through Experian's 40 full-time staff of economists, sociologists and market researchers.
2. Identification of the most appropriate data sources as inputs - these must be universal, relevant, sustainable and compliant with data protection legislation. All the input variables go through a selection process where they are tested for discrimination, robustness and their correlation to other variables.
3. A sophisticated, proprietary approach to clustering, unique to Experian. Once the final list of variables is selected, a set of input weights is applied as part of the clustering process. The result is a list of variables that have differing importance to the clustering methodology; depending on how well they discriminate at differing levels of geography.
4. Extensive fieldwork and market research to assist in the validation and interpretation of the segmentation.

This 'bottom-up' approach enables Experian to maximise the effectiveness of each input variable depending on its relative importance to the classification, and its ability to discriminate. It allows for the optimisation of data and creates a classification that is truly best of breed. Independent tests have shown Mosaic to be the most discriminatory and descriptive segmentation system in the UK.

The classification has been devised under the direction of Professor Richard Webber, the world's leading authority on consumer segmentation, and originator of the two most widely used commercial segmentations. In order to validate Mosaic Public Sector, 1,100 structured sample points around the country were surveyed and photographed. This included 30 minutes of observational research at each location, across 118 postal areas out of 120 in the UK.

9. A Review of Two Commercial Segmentation Tools

Assessing residents channel preference, promotional orientation, media preferences and lifestyle is not possible using only 2001 Census data and therefore it is necessary to use commercial sources that have data on individuals personal finances, technological take-up and media preferences.

Segmentations are available that combine both 2001 census data with commercial lifestyle data. The two leading products in the UK are from CACI and Experian. Both companies are Office National Statistics (ONS) approved suppliers see weblink: www.statistics.gov.uk/census2001/pdfs/app_supp_guide.pdf

It is recommended that the Customer First Access Strategy uses the product which is available from Experian called Mosaic Public Sector rather than the CACI product called ACORN.

There are a number of factors to consider when comparing Mosaic Public Sector and ACORN:

- Discrimination
- Information applicable to service delivery channels
- Data inputs
- Cost
- Advantages for Public Sector use

There are two reasons for this recommendation. Mosaic Public Sector has a level of segmentation that is a better discriminator and the information on channel and media preferences is clearer in the literature accompanying Mosaic Public Sector than is the case with ACORN. However In terms of data inputs, cost and advantages for Public Sector use there is no significant difference between ACORN and Mosaic Public Sector.

Discrimination

ACORN and Mosaic Public Sector are most widely available where their lowest level of segmentation, i.e. most detailed level segmentation is called Types. For both products there are a similar number of 'Types' represented in the Borough (ACORN has 8 and Mosaic Public Sector has 7). In both cases the segment with the largest proportion of the Borough population is approximately a quarter (ACORN has 28%, Mosaic Public Sector has 27%). Through knowledge gained from the 2001 Census Deprivation report it is known that it is possible to segment the Borough more finely into 10 segments where the largest proportion of the population was 17%. Both CACI and Experian were asked if they had a 'finer' segmentation that could be used and CACI said they did not have a product but Experian replied that 'Mosaic Public Sector Segments' was available. Mosaic Public Sector Segments further breaks down the Types into sub types and the result is that 18 Sub Type segments are represented in the Borough and the largest proportion of the population in one sub type is 17%. This is the decisive factor and on what the recommendation to purchase from Experian rather than CACI is based.

Information applicable to service delivery channels

Considering only Mosaic Public Sector Segments information applicable to service delivery channels includes:

- County Court Judgements
- Directors/Shareholding
- Credit/Credit card statistics
- Personal Computer?
- Pay bills at Post Office
- Newspaper Broadsheet or tabloid

Data inputs

The commercial data inputs between Mosaic Public Sector and ACORN are similar enough for this not to be an issue. Though interestingly one distinction is that whilst both Mosaic Public Sector and ACORN have over 400 variables, 54% of Mosaic Public Sector's variables are from the 2001 Census compared to 30% of ACORN's variables.

Of the approx. 400 variables '54 per cent of the data used to build Mosaic Public Sector is sourced from the 2001 Census. The remaining 46 per cent is derived from our Consumer Segmentation Database, which provides coverage of all of the UK's 46 million adult residents and 23 million households. It includes the edited Electoral Roll, Experian Lifestyle Survey information, and Consumer Credit Activity, alongside the Post Office Address File, Shareholders Register, House Price and Council Tax information and ONS local area statistics.' (Mosaic Public Sector brochure)

Also included within Mosaic Public Sector are 'links to a number of authoritative sources of media and market research, which build on our understanding of UK consumers. These include BMRB's Target Group Index (TGI), the British Crime Survey, MORI's Financial Research, Family Expenditure Survey (FES), Forrester's Technographics and Internet User Monitor, and Experian Lifestyle data.' (Mosaic Public Sector brochure)

'Over 400 variables were used to build ACORN and describe the different ACORN types. Of these variables, 30% were sourced from the 2001 Census. The remainder were derived from CACI's consumer lifestyle databases, which cover all of the UK's 46 million adults and 23 million households.' (ACORN User Guide)

Cost

The costs do differ (Mosaic Public Sector is more expensive see table) but with the large budget of the project cost is not a limiting factor. It is important to note that the Experian contract is for a three year initial period and the cost is £4,300 per annum.

Licence fee	ACORN from CACI (£ per annum)	Mosaic Public Sector from Experian (£ per annum)
within one department	2,000	3,000
within two departments	2,500	3,700
within many departments (corporate)	3,000	4,300

Advantages for Public Sector use

Another consideration is which of the two products is more appropriate for use within the Public Sector. Through research on the Internet and talking to contacts at both Experian and CACI neither segmentation product seems to be more appropriate for use within the public sector. CACI may have recognised the market potential within the local government and had local government clients for a few years before Experian got in on the act but both have interesting case studies.

MOSAIC UK Group	MOSAIC UK Type	MOSAIC UK Segment	MOSAIC Segment description	LBHF Code	LBHF name	OAs/Postcodes
A Symbols of Success	01 Global Connections	1	1 More Families, More Terraced	1	Well Off Older Global Professionals	8
A Symbols of Success	01 Global Connections	2	2 More Agriculture, More Detached	1	Well Off Older Global Professionals	25
A Symbols of Success	01 Global Connections	3	3 Higher Status, Higher Occupations	1	Well Off Older Global Professionals	40
A Symbols of Success	01 Global Connections	4	4 Lower Status, More Non-British Ethnicity's	1	Well Off Older Global Professionals	1
A Symbols of Success	02 Cultural Leadership	5	1 Lower Status, Lower Occupations	2	Well Off Families in High Value Homes	1
A Symbols of Success	02 Cultural Leadership	6	2 Older, More Second Homes	2	Well Off Families in High Value Homes	8
A Symbols of Success	02 Cultural Leadership	7	3 More Accessible, More Terraced	2	Well Off Families in High Value Homes	15
A Symbols of Success	03 Corporate Chieftains	9	1 Higher Status, Higher House Value	2	Well Off Families in High Value Homes	1
B Happy Families	08 Just Moving In	29	1	3	Families in Manual Occupations	7
C Suburban Comfort	20 Asian Enterprise	79	2 More Renters, More Singles	4	Poorer Minority Families	2
D Ties of Community	27 Settled Minorities	112	1 Higher Status, Higher Occupations	4	Poorer Minority Families	5
D Ties of Community	27 Settled Minorities	113	2 More Owners, More Terraced	4	Poorer Minority Families	2
D Ties of Community	27 Settled Minorities	114	3 More Non-British Ethnicity's, More Students	4	Poorer Minority Families	9
D Ties of Community	27 Settled Minorities	115	4 Lower Status, Higher Unemployment	4	Poorer Minority Families	16
H Blue Collar Enterprise	46 White Van Culture	190	5 More Non-British Ethnicity's, More Singles	4	Poorer Minority Families	1
E Urban Intelligence	28 Counter Cultural Mix	116	1 Older, Lower Occupations	5	Older People Inner City Urban - Low Incomes	35
H Blue Collar Enterprise	45 Older Right to Buy	183	3 More Non-British Ethnicity's, More Accessible	5	Older People Inner City Urban - Low Incomes	1
J Grey Perspectives	51 Sepia Memories	205	1 More Families, Higher House Value	5	Older People Inner City Urban - Low Incomes	5
J Grey Perspectives	51 Sepia Memories	206	2 Lower Occupations, Higher Unemployment	5	Older People Inner City Urban - Low Incomes	2
J Grey Perspectives	51 Sepia Memories	207	3 Higher Status, More Non-British Ethnicity's	5	Older People Inner City Urban - Low Incomes	1
J Grey Perspectives	52 Childfree Serenity	209	2 More Non-British Ethnicity's, More Singles	5	Older People Inner City Urban - Low Incomes	1
J Grey Perspectives	52 Childfree Serenity	210	3 Higher Status, More Families	5	Older People Inner City Urban - Low Incomes	1
E Urban Intelligence	28 Counter Cultural Mix	117	2 Higher Unemployment, More Students	6	High Occupancy - Inner City Urban (Students)	21
E Urban Intelligence	33 Town Gown Transition	137	2 More Singles, More Renters	6	High Occupancy - Inner City Urban (Students)	1
E Urban Intelligence	33 Town Gown Transition	136	1 Older, More Families	6	High Occupancy - Inner City Urban (Students)	3
E Urban Intelligence	33 Town Gown Transition	138	3 Higher Occupations, More Flats	6	High Occupancy - Inner City Urban (Students)	1
E Urban Intelligence	28 Counter Cultural Mix	118	3 Younger, Higher Occupations	7	Mixed Inner City Urban - Modest means	87
E Urban Intelligence	28 Counter Cultural Mix	119	4 Lower House Value, More Renters	8	Single Mobile Renters Inner City Urban	12
E Urban Intelligence	29 City Adventurers	120	1 Higher House Value, More Terraced	9	Prosperous Mobile Single Young Professionals	122
E Urban Intelligence	29 City Adventurers	121	2 More Renters, More Second Homes	9	Prosperous Mobile Single Young Professionals	16
E Urban Intelligence	29 City Adventurers	122	3 Older, Lower Status	9	Prosperous Mobile Single Young Professionals	1
E Urban Intelligence	29 City Adventurers	123	4 Younger, More Students	9	Prosperous Mobile Single Young Professionals	3
E Urban Intelligence	30 New Urban Colonists	124	1 More Renters, More Accessible	10	Prosperous Settled Young Professionals	72
E Urban Intelligence	30 New Urban Colonists	125	2 Lower Status, More Non-British Ethnicity's	10	Prosperous Settled Young Professionals	7
E Urban Intelligence	30 New Urban Colonists	127	4 More Families, More Owners	10	Prosperous Settled Young Professionals	1
F Welfare Borderline	36 Metro Multiculture	145	1 Higher Occupations, More Singles	11	Deprived Families in Public Housing	41
F Welfare Borderline	36 Metro Multiculture	146	2 Lower Status, More Families	11	Deprived Families in Public Housing	22
F Welfare Borderline	36 Metro Multiculture	147	3 Higher Status, More Renters	11	Deprived Families in Public Housing	16
F Welfare Borderline	36 Metro Multiculture	148	4 Lower Occupations, Lower House Value	11	Deprived Families in Public Housing	10
F Welfare Borderline	38 Tower Block Living	154	2 Younger, More Non-British Ethnicity's	11	Deprived Families in Public Housing	3
F Welfare Borderline	39 Dignified Dependency	155	1 Higher Status, More Agriculture	11	Deprived Families in Public Housing	3
F Welfare Borderline	39 Dignified Dependency	157	3 Higher Occupations, More Non-British Ethnicity's	11	Deprived Families in Public Housing	2
G Municipal Dependency	42 Low Horizons	167	2 More Flats, Younger	11	Deprived Families in Public Housing	1
H Blue Collar Enterprise	46 White Van Culture	187	2 More Owners, More Students	11	Deprived Families in Public Housing	1
H Blue Collar Enterprise	46 White Van Culture	188	3 Younger, Higher Occupations	11	Deprived Families in Public Housing	1
F Welfare Borderline	35 Bedsit Beneficiaries	144	3 Lower Occupations, Higher Unemployment	11	Deprived Families in Public Housing	1
I Twilight Subsistence	48 Old People in Flats	195	1 Higher House Value, Higher Occupations	12	Older people in sheltered housing	2
I Twilight Subsistence	48 Old People in Flats	196	2 More Non-British Ethnicity's, More Owners	12	Older people in sheltered housing	1
I Twilight Subsistence	49 Low Income Elderly	197	1 Higher Occupations, More Families	12	Older people in sheltered housing	1
I Twilight Subsistence	50 Cared for Pensioners	202	2 More Non-British Ethnicity's, More Students	12	Older people in sheltered housing	1
J Grey Perspectives	52 Childfree Serenity	208	1 More Owners, More Flats	12	Older people in sheltered housing	1