

Data Essentials

London Plus & Greater London Authority

Why use data in the first place?



Identify need



Refine and improve practices



Design new services

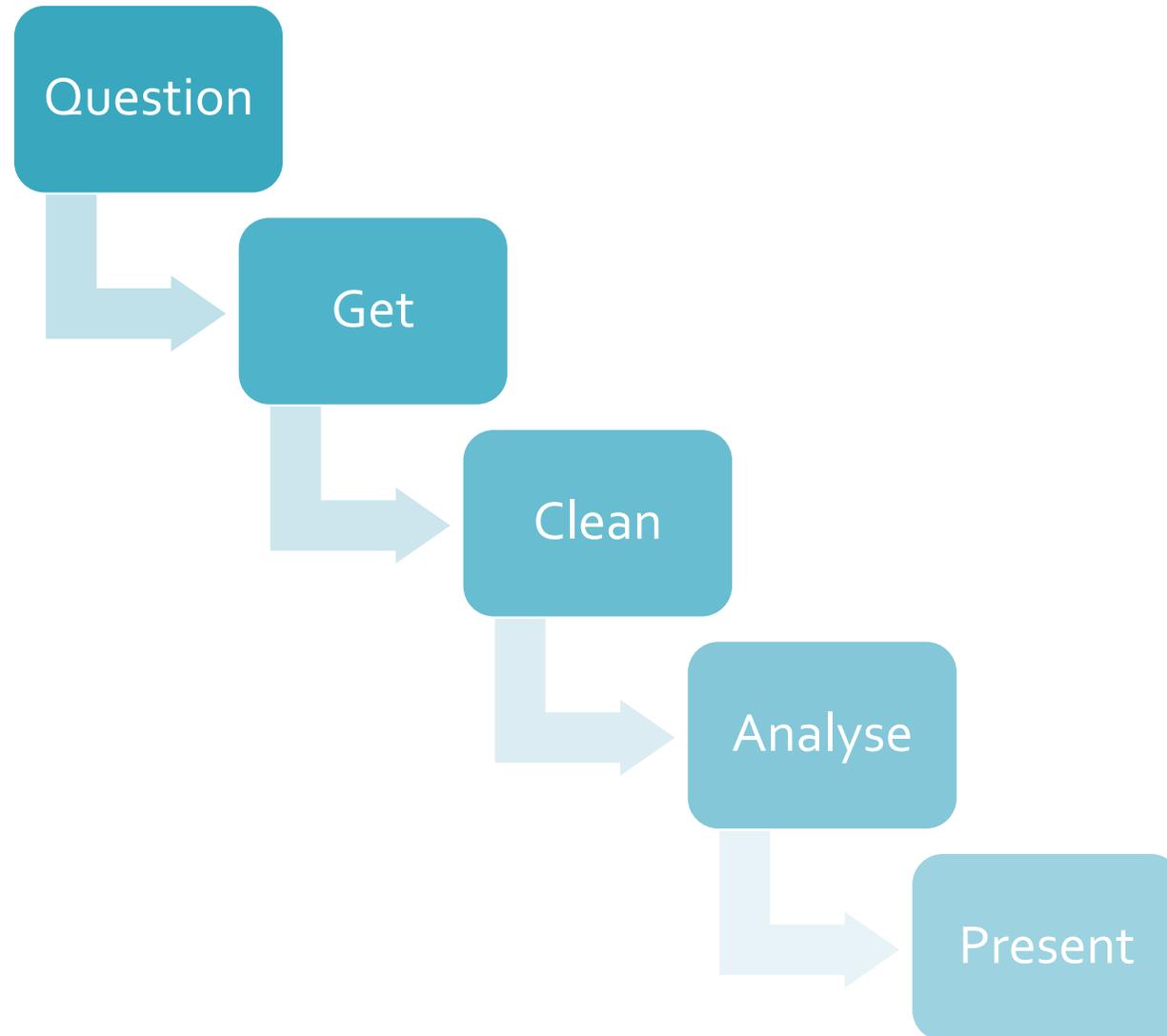


Convince funders of the value of your work



Influence policy

The data pipeline



Step 1 – Data Collection

- Case Study – You want to understand Social Exclusion in your local area.
- Discuss with the person next to you the type of data you would need to collect to understand Social Exclusion in your area.
- Feedback via Mentimeter - code 78 05 80

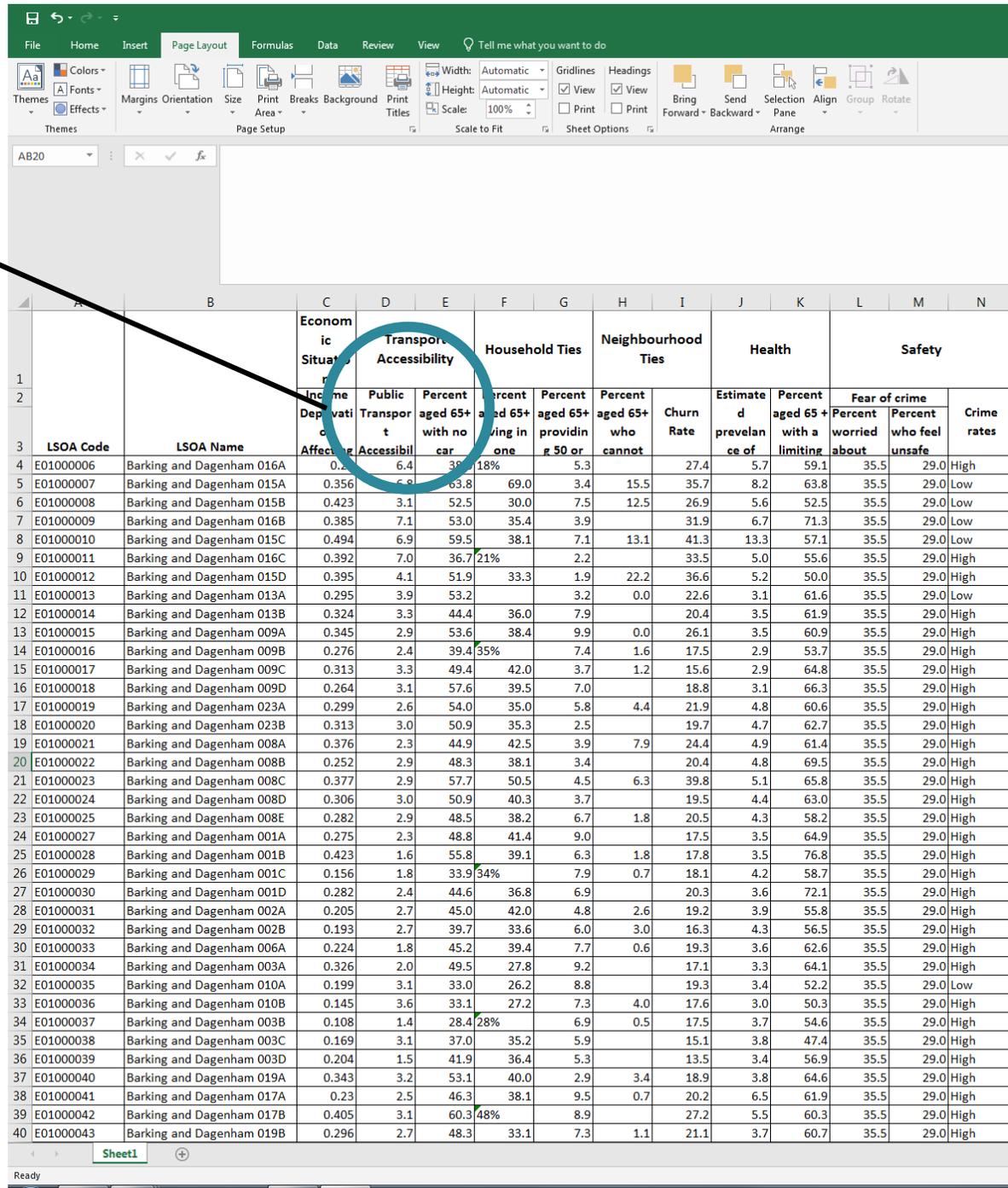
Data Collection – Top tips

- What data do you need and why?
- What do you already collect/is there open data that you can use?
- Clear and useful fields and decisions on how you are recording values

Step 2 – Data Analysis

- Looking at the dataset on Social Exclusion provided, highlight the key limitations of this dataset.
- What challenges would you face when analysing this data?
- Feedback via Mentimeter - code 78 05 80

1 – Know the numerical value of each category



The image shows a screenshot of a Microsoft Excel spreadsheet. The ribbon at the top includes 'Page Layout', 'Formulas', 'Data', 'Review', and 'View'. The 'Page Layout' ribbon is active, showing options for Themes, Colors, Effects, Margins, Orientation, Size, Print Area, Breaks, Background, Print Titles, Width, Height, Scale, Gridlines, Headings, and Arrange. The spreadsheet data is as follows:

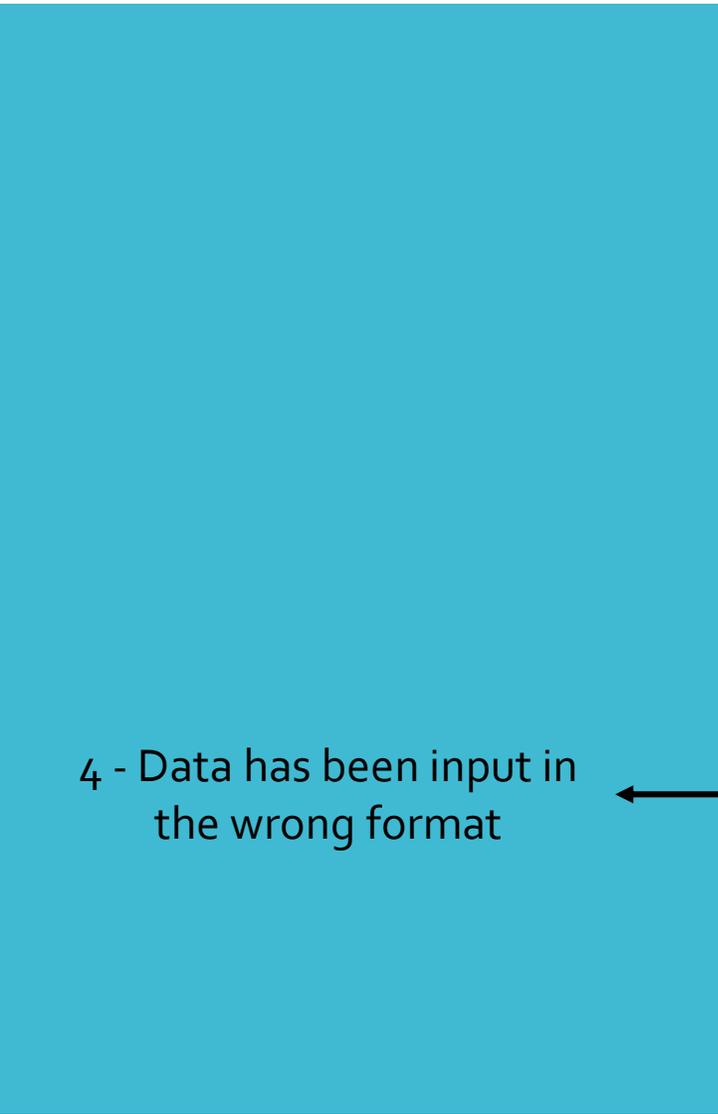
			Economic Situation	Transport Accessibility	Household Ties	Neighbourhood Ties	Health	Safety						
			Income Deprivation Affecting Children	Public Transport Accessibility	Percent aged 65+ with no car	Percent aged 65+ living in one	Percent aged 65+ providing 50 or more	Percent aged 65+ who cannot	Churn Rate	Estimated prevalence of	Percent aged 65+ with a limiting condition	Fear of crime worried about	Percent who feel unsafe	Crime rates
1	LSOA Code	LSOA Name												
2														
3														
4	E01000006	Barking and Dagenham 016A	0.22	6.4	38%	18%	5.3		27.4	5.7	59.1	35.5	29.0	High
5	E01000007	Barking and Dagenham 015A	0.356	6.9	63.8	69.0	3.4	15.5	35.7	8.2	63.8	35.5	29.0	Low
6	E01000008	Barking and Dagenham 015B	0.423	3.1	52.5	30.0	7.5	12.5	26.9	5.6	52.5	35.5	29.0	Low
7	E01000009	Barking and Dagenham 016B	0.385	7.1	53.0	35.4	3.9		31.9	6.7	71.3	35.5	29.0	Low
8	E01000010	Barking and Dagenham 015C	0.494	6.9	59.5	38.1	7.1	13.1	41.3	13.3	57.1	35.5	29.0	Low
9	E01000011	Barking and Dagenham 016C	0.392	7.0	36.7	21%	2.2		33.5	5.0	55.6	35.5	29.0	High
10	E01000012	Barking and Dagenham 015D	0.395	4.1	51.9	33.3	1.9	22.2	36.6	5.2	50.0	35.5	29.0	High
11	E01000013	Barking and Dagenham 013A	0.295	3.9	53.2		3.2	0.0	22.6	3.1	61.6	35.5	29.0	Low
12	E01000014	Barking and Dagenham 013B	0.324	3.3	44.4	36.0	7.9		20.4	3.5	61.9	35.5	29.0	High
13	E01000015	Barking and Dagenham 009A	0.345	2.9	53.6	38.4	9.9	0.0	26.1	3.5	60.9	35.5	29.0	High
14	E01000016	Barking and Dagenham 009B	0.276	2.4	39.4	35%	7.4	1.6	17.5	2.9	53.7	35.5	29.0	High
15	E01000017	Barking and Dagenham 009C	0.313	3.3	49.4	42.0	3.7	1.2	15.6	2.9	64.8	35.5	29.0	High
16	E01000018	Barking and Dagenham 009D	0.264	3.1	57.6	39.5	7.0		18.8	3.1	66.3	35.5	29.0	High
17	E01000019	Barking and Dagenham 023A	0.299	2.6	54.0	35.0	5.8	4.4	21.9	4.8	60.6	35.5	29.0	High
18	E01000020	Barking and Dagenham 023B	0.313	3.0	50.9	35.3	2.5		19.7	4.7	62.7	35.5	29.0	High
19	E01000021	Barking and Dagenham 008A	0.376	2.3	44.9	42.5	3.9	7.9	24.4	4.9	61.4	35.5	29.0	High
20	E01000022	Barking and Dagenham 008B	0.252	2.9	48.3	38.1	3.4		20.4	4.8	69.5	35.5	29.0	High
21	E01000023	Barking and Dagenham 008C	0.377	2.9	57.7	50.5	4.5	6.3	39.8	5.1	65.8	35.5	29.0	High
22	E01000024	Barking and Dagenham 008D	0.306	3.0	50.9	40.3	3.7		19.5	4.4	63.0	35.5	29.0	High
23	E01000025	Barking and Dagenham 008E	0.282	2.9	48.5	38.2	6.7	1.8	20.5	4.3	58.2	35.5	29.0	High
24	E01000027	Barking and Dagenham 001A	0.275	2.3	48.8	41.4	9.0		17.5	3.5	64.9	35.5	29.0	High
25	E01000028	Barking and Dagenham 001B	0.423	1.6	55.8	39.1	6.3	1.8	17.8	3.5	76.8	35.5	29.0	High
26	E01000029	Barking and Dagenham 001C	0.156	1.8	33.9	34%	7.9	0.7	18.1	4.2	58.7	35.5	29.0	High
27	E01000030	Barking and Dagenham 001D	0.282	2.4	44.6	36.8	6.9		20.3	3.6	72.1	35.5	29.0	High
28	E01000031	Barking and Dagenham 002A	0.205	2.7	45.0	42.0	4.8	2.6	19.2	3.9	55.8	35.5	29.0	High
29	E01000032	Barking and Dagenham 002B	0.193	2.7	39.7	33.6	6.0	3.0	16.3	4.3	56.5	35.5	29.0	High
30	E01000033	Barking and Dagenham 006A	0.224	1.8	45.2	39.4	7.7	0.6	19.3	3.6	62.6	35.5	29.0	High
31	E01000034	Barking and Dagenham 003A	0.326	2.0	49.5	27.8	9.2		17.1	3.3	64.1	35.5	29.0	High
32	E01000035	Barking and Dagenham 010A	0.199	3.1	33.0	26.2	8.8		19.3	3.4	52.2	35.5	29.0	Low
33	E01000036	Barking and Dagenham 010B	0.145	3.6	33.1	27.2	7.3	4.0	17.6	3.0	50.3	35.5	29.0	High
34	E01000037	Barking and Dagenham 003B	0.108	1.4	28.4	28%	6.9	0.5	17.5	3.7	54.6	35.5	29.0	High
35	E01000038	Barking and Dagenham 003C	0.169	3.1	37.0	35.2	5.9		15.1	3.8	47.4	35.5	29.0	High
36	E01000039	Barking and Dagenham 003D	0.204	1.5	41.9	36.4	5.3		13.5	3.4	56.9	35.5	29.0	High
37	E01000040	Barking and Dagenham 019A	0.343	3.2	53.1	40.0	2.9	3.4	18.9	3.8	64.6	35.5	29.0	High
38	E01000041	Barking and Dagenham 017A	0.23	2.5	46.3	38.1	9.5	0.7	20.2	6.5	61.9	35.5	29.0	High
39	E01000042	Barking and Dagenham 017B	0.405	3.1	60.3	48%	8.9		27.2	5.5	60.3	35.5	29.0	High
40	E01000043	Barking and Dagenham 019B	0.296	2.7	48.3	33.1	7.3	1.1	21.1	3.7	60.7	35.5	29.0	High

2 - Missing data

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
			Economic Situation	Transport Accessibility	Household Ties	Household Ties	Neighbourhood Ties	Neighbourhood Ties	Health	Health	Safety	Safety	Safety	Safety
			Income Deprivation	Public Transport	Percent aged 65+ with no car	Percent aged 65+ living in one	Percent aged 65+ providing 50 or more	Percent aged 65+ who cannot	Churn Rate	Estimated prevalence of	Percent aged 65+ with a limiting condition	Fear of crime worried about	Percent who feel unsafe	Crime rates
	LSOA Code	LSOA Name	Affecting	Accessibil										
4	E01000006	Barking and Dagenham 016A	0.21	6.4	38.6	18%	5%		27.4	5.7	59.1	35.5	29.0	High
5	E01000007	Barking and Dagenham 015A	0.356	6.8	63.8	6%	5%	15.5	35.7	8.2	63.8	35.5	29.0	Low
6	E01000008	Barking and Dagenham 015B	0.423	3.1	52.5	30.0	7%	12.5	26.9	5.6	52.5	35.5	29.0	Low
7	E01000009	Barking and Dagenham 016B	0.385	7.1	53.0	35.4	5%		31.9	6.7	71.3	35.5	29.0	Low
8	E01000010	Barking and Dagenham 015C	0.494	6.9	59.5	38.1	7%	13.1	41.3	13.3	57.1	35.5	29.0	Low
9	E01000011	Barking and Dagenham 016C	0.392	7.0	36.7	21%	2%		33.5	5.0	55.6	35.5	29.0	High
10	E01000012	Barking and Dagenham 015D	0.395	4.1	51.9	33.3	1%	22.2	36.6	5.2	50.0	35.5	29.0	High
11	E01000013	Barking and Dagenham 013A	0.295	3.9	53.2		3%	0.0	22.6	3.1	61.6	35.5	29.0	Low
12	E01000014	Barking and Dagenham 013B	0.324	3.3	44.4	36.0	7%		20.4	3.5	61.9	35.5	29.0	High
13	E01000015	Barking and Dagenham 009A	0.345	2.9	53.6	38.4	9%	0.0	26.1	3.5	60.9	35.5	29.0	High
14	E01000016	Barking and Dagenham 009B	0.276	2.4	39.4	35%	7%	1.6	17.5	2.9	53.7	35.5	29.0	High
15	E01000017	Barking and Dagenham 009C	0.313	3.3	49.4	42.0	3%	1.2	15.6	2.9	64.8	35.5	29.0	High
16	E01000018	Barking and Dagenham 009D	0.264	3.1	57.6	39.5	7%		18.8	3.1	66.3	35.5	29.0	High
17	E01000019	Barking and Dagenham 023A	0.299	2.6	54.0	35.0	5%	4.4	21.9	4.8	60.6	35.5	29.0	High
18	E01000020	Barking and Dagenham 023B	0.313	3.0	50.9	35.3	2%		19.7	4.7	62.7	35.5	29.0	High
19	E01000021	Barking and Dagenham 008A	0.376	2.3	44.9	42.5	5%	7.9	24.4	4.9	61.4	35.5	29.0	High
20	E01000022	Barking and Dagenham 008B	0.252	2.9	48.3	38.1	3%		20.4	4.8	69.5	35.5	29.0	High
21	E01000023	Barking and Dagenham 008C	0.377	2.9	57.7	50.5	4%	6.3	39.8	5.1	65.8	35.5	29.0	High
22	E01000024	Barking and Dagenham 008D	0.306	3.0	50.9	40.3	3%		19.5	4.4	63.0	35.5	29.0	High
23	E01000025	Barking and Dagenham 008E	0.282	2.9	48.5	38.2	6%	1.8	20.5	4.3	58.2	35.5	29.0	High
24	E01000027	Barking and Dagenham 001A	0.275	2.3	48.8	41.4	9%		17.5	3.5	64.9	35.5	29.0	High
25	E01000028	Barking and Dagenham 001B	0.423	1.6	55.8	39.1	6%	1.8	17.8	3.5	76.8	35.5	29.0	High
26	E01000029	Barking and Dagenham 001C	0.156	1.8	33.9	34%	7%	0.7	18.1	4.2	58.7	35.5	29.0	High
27	E01000030	Barking and Dagenham 001D	0.282	2.4	44.6	36.8	6%		20.3	3.6	72.1	35.5	29.0	High
28	E01000031	Barking and Dagenham 002A	0.205	2.7	45.0	42.0	4%	2.6	19.2	3.9	55.8	35.5	29.0	High
29	E01000032	Barking and Dagenham 002B	0.193	2.7	39.7	33.6	6%	3.0	16.3	4.3	56.5	35.5	29.0	High
30	E01000033	Barking and Dagenham 006A	0.224	1.8	45.2	39.4	7%	0.6	19.3	3.6	62.6	35.5	29.0	High
31	E01000034	Barking and Dagenham 003A	0.326	2.0	49.5	27.8	9%		17.1	3.3	64.1	35.5	29.0	High
32	E01000035	Barking and Dagenham 010A	0.199	3.1	33.0	26.2	8%		19.3	3.4	52.2	35.5	29.0	Low
33	E01000036	Barking and Dagenham 010B	0.145	3.6	33.1	27.2	7%	4.0	17.6	3.0	50.3	35.5	29.0	High
34	E01000037	Barking and Dagenham 003B	0.108	1.4	28.4	28%	6%	0.5	17.5	3.7	54.6	35.5	29.0	High
35	E01000038	Barking and Dagenham 003C	0.169	3.1	37.0	35.2	5%		15.1	3.8	47.4	35.5	29.0	High
36	E01000039	Barking and Dagenham 003D	0.204	1.5	41.9	36.4	5%		13.5	3.4	56.9	35.5	29.0	High
37	E01000040	Barking and Dagenham 019A	0.343	3.2	53.1	40.0	2%	3.4	18.9	3.8	64.6	35.5	29.0	High
38	E01000041	Barking and Dagenham 017A	0.23	2.5	46.3	38.1	5%	0.7	20.2	6.5	61.9	35.5	29.0	High
39	E01000042	Barking and Dagenham 017B	0.405	3.1	60.3	48%	8%		27.2	5.5	60.3	35.5	29.0	High
40	E01000043	Barking and Dagenham 019B	0.296	2.7	48.3	33.1	7%	1.1	21.1	3.7	60.7	35.5	29.0	High

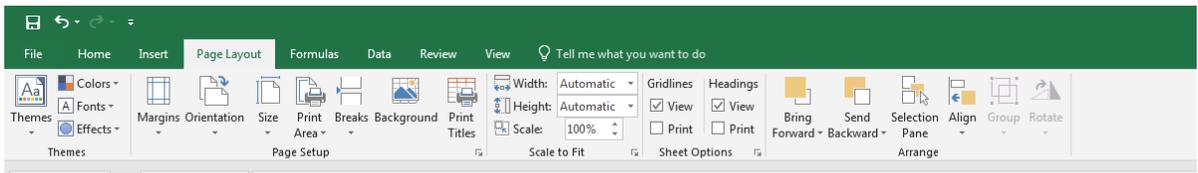
3 - All figures are the same which suggests this data is borough wide rather than for individual LSOAs

	A	B	C	D	E	F	G	H	I	J	K	Safety		N	
												Percent worried about	Percent who feel unsafe		
1			Economic Situation	Transport Accessibility		Household Ties		Neighbourhood Ties		Health					
2			Income Deprivation Affecting	Public Transport Accessibility	Percent aged 65+ with no car	Percent aged 65+ living in one	Percent aged 65+ providing 50 or more	Percent aged 65+ who cannot	Churn Rate	Estimated prevalence of	Percent aged 65 with a limiting	Percent worried about	Percent who feel unsafe	Crime rates	
3	LSOA Code	LSOA Name													
4	E01000006	Barking and Dagenham 016A	0.21	6.4	38.6	18%	5.3		27.4	5.7	59	35.5	29.0	gh	
5	E01000007	Barking and Dagenham 015A	0.356	6.8	63.8	69.0	3.4	15.5	35.7	8.2	63	35.5	29.0	vw	
6	E01000008	Barking and Dagenham 015B	0.423	3.1	52.5	30.0	7.5	12.5	26.9	5.6	52	35.5	29.0	vw	
7	E01000009	Barking and Dagenham 016B	0.385	7.1	53.0	35.4	3.9		31.9	6.7	71	35.5	29.0	vw	
8	E01000010	Barking and Dagenham 015C	0.494	6.9	59.5	38.1	7.1	13.1	41.3	13.3	57	35.5	29.0	vw	
9	E01000011	Barking and Dagenham 016C	0.392	7.0	36.7	21%	2.2		33.5	5.0	55	35.5	29.0	gh	
10	E01000012	Barking and Dagenham 015D	0.395	4.1	51.9	33.3	1.9	22.2	36.6	5.2	50	35.5	29.0	gh	
11	E01000013	Barking and Dagenham 013A	0.295	3.9	53.2		3.2	0.0	22.6	3.1	61	35.5	29.0	vw	
12	E01000014	Barking and Dagenham 013B	0.324	3.3	44.4	36.0	7.9		20.4	3.5	61	35.5	29.0	gh	
13	E01000015	Barking and Dagenham 009A	0.345	2.9	53.6	38.4	9.9	0.0	26.1	3.5	60	35.5	29.0	gh	
14	E01000016	Barking and Dagenham 009B	0.276	2.4	39.4	35%	7.4	1.6	17.5	2.9	53	35.5	29.0	gh	
15	E01000017	Barking and Dagenham 009C	0.313	3.3	49.4	42.0	3.7	1.2	15.6	2.9	64	35.5	29.0	gh	
16	E01000018	Barking and Dagenham 009D	0.264	3.1	57.6	39.5	7.0		18.8	3.1	66	35.5	29.0	gh	
17	E01000019	Barking and Dagenham 023A	0.299	2.6	54.0	35.0	5.8	4.4	21.9	4.8	60	35.5	29.0	gh	
18	E01000020	Barking and Dagenham 023B	0.313	3.0	50.9	35.3	2.5		19.7	4.7	62	35.5	29.0	gh	
19	E01000021	Barking and Dagenham 008A	0.376	2.3	44.9	42.5	3.9	7.9	24.4	4.9	61	35.5	29.0	gh	
20	E01000022	Barking and Dagenham 008B	0.252	2.9	48.3	38.1	3.4		20.4	4.8	69	35.5	29.0	gh	
21	E01000023	Barking and Dagenham 008C	0.377	2.9	57.7	50.5	4.5	6.3	39.8	5.1	65	35.5	29.0	gh	
22	E01000024	Barking and Dagenham 008D	0.306	3.0	50.9	40.3	3.7		19.5	4.4	63	35.5	29.0	gh	
23	E01000025	Barking and Dagenham 008E	0.282	2.9	48.5	38.2	6.7	1.8	20.5	4.3	58	35.5	29.0	gh	
24	E01000027	Barking and Dagenham 001A	0.275	2.3	48.8	41.4	9.0		17.5	3.5	64	35.5	29.0	gh	
25	E01000028	Barking and Dagenham 001B	0.423	1.6	55.8	39.1	6.3	1.8	17.8	3.5	76	35.5	29.0	gh	
26	E01000029	Barking and Dagenham 001C	0.156	1.8	33.9	34%	7.9	0.7	18.1	4.2	58	35.5	29.0	gh	
27	E01000030	Barking and Dagenham 001D	0.282	2.4	44.6	36.8	6.9		20.3	3.6	72	35.5	29.0	gh	
28	E01000031	Barking and Dagenham 002A	0.205	2.7	45.0	42.0	4.8	2.6	19.2	3.9	55	35.5	29.0	gh	
29	E01000032	Barking and Dagenham 002B	0.193	2.7	39.7	33.6	6.0	3.0	16.3	4.3	56	35.5	29.0	gh	
30	E01000033	Barking and Dagenham 006A	0.224	1.8	45.2	39.4	7.7	0.6	19.3	3.6	62	35.5	29.0	gh	
31	E01000034	Barking and Dagenham 003A	0.326	2.0	49.5	27.8	9.2		17.1	3.3	64	35.5	29.0	gh	
32	E01000035	Barking and Dagenham 010A	0.199	3.1	33.0	26.2	8.8		19.3	3.4	52	35.5	29.0	vw	
33	E01000036	Barking and Dagenham 010B	0.145	3.6	33.1	27.2	7.3	4.0	17.6	3.0	50	35.5	29.0	gh	
34	E01000037	Barking and Dagenham 003B	0.108	1.4	28.4	28%	6.9	0.5	17.5	3.7	54	35.5	29.0	gh	
35	E01000038	Barking and Dagenham 003C	0.169	3.1	37.0	35.2	5.9		15.1	3.8	47	35.5	29.0	gh	
36	E01000039	Barking and Dagenham 003D	0.204	1.5	41.9	36.4	5.3		13.5	3.4	56	35.5	29.0	gh	
37	E01000040	Barking and Dagenham 019A	0.343	3.2	53.1	40.0	2.9	3.4	18.9	3.8	64	35.5	29.0	gh	
38	E01000041	Barking and Dagenham 017A	0.23	2.5	46.3	38.1	9.5	0.7	20.2	6.5	61	35.5	29.0	gh	
39	E01000042	Barking and Dagenham 017B	0.405	3.1	60.3	48%	8.9		27.2	5.5	60	35.5	29.0	gh	
40	E01000043	Barking and Dagenham 019B	0.296	2.7	48.3	33.1	7.3	1.1	21.1	3.7	60	35.5	29.0	gh	



4 - Data has been input in the wrong format

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1			Economic Situation	Transport Accessibility		Household Ties		Neighbourhood Ties		Health		Safety		
2			Income Deprivation Affecting	Public Transport Accessibility	Percent aged 65+ with no car	Percent aged 65+ living in one room or more	Percent aged 65+ providing care for someone	Percent aged 65+ who cannot drive	Churn Rate	Estimated prevalence of limiting long standing conditions	Percent aged 65+ worried about their health	Percent worried about their health	Percent who feel unsafe	Crime rates
3	LSOA Code	LSOA Name	Affecting	Accessibility	with no car	living in one room or more	providing care for someone	who cannot drive		Estimate d prevalence of limiting	Percent aged 65+ worried about	Percent worried about	Percent who feel unsafe	Crime rates
4	E01000006	Barking and Dagenham 016A	0.21	6.4	38	18%	5.3		27.4	5.7	59.1	35.5	29.0	High
5	E01000007	Barking and Dagenham 015A	0.356	6.8	63	69.0	3.4	15.5	35.7	8.2	63.8	35.5	29.0	Low
6	E01000008	Barking and Dagenham 015B	0.423	3.1	52	30.0	7.5	12.5	26.9	5.6	52.5	35.5	29.0	Low
7	E01000009	Barking and Dagenham 016B	0.385	7.1	53	35.4	3.9		31.9	6.7	71.3	35.5	29.0	Low
8	E01000010	Barking and Dagenham 015C	0.494	6.9	59	38.1	7.1	13.1	41.3	13.3	57.1	35.5	29.0	Low
9	E01000011	Barking and Dagenham 016C	0.392	7.0	36	21%	2.2		33.5	5.0	55.6	35.5	29.0	High
10	E01000012	Barking and Dagenham 015D	0.395	4.1	51	33.3	1.9	22.2	36.6	5.2	50.0	35.5	29.0	High
11	E01000013	Barking and Dagenham 013A	0.295	3.9	53		3.2	0.0	22.6	3.1	61.6	35.5	29.0	Low
12	E01000014	Barking and Dagenham 013B	0.324	3.3	44	36.0	7.9		20.4	3.5	61.9	35.5	29.0	High
13	E01000015	Barking and Dagenham 009A	0.345	2.9	53	38.4	9.9	0.0	26.1	3.5	60.9	35.5	29.0	High
14	E01000016	Barking and Dagenham 009B	0.276	2.4	39	35%	7.4	1.6	17.5	2.9	53.7	35.5	29.0	High
15	E01000017	Barking and Dagenham 009C	0.313	3.3	49	42.0	3.7	1.2	15.6	2.9	64.8	35.5	29.0	High
16	E01000018	Barking and Dagenham 009D	0.264	3.1	57	39.5	7.0		18.8	3.1	66.3	35.5	29.0	High
17	E01000019	Barking and Dagenham 023A	0.299	2.6	54	35.0	5.8	4.4	21.9	4.8	60.6	35.5	29.0	High
18	E01000020	Barking and Dagenham 023B	0.313	3.0	50	35.3	2.5		19.7	4.7	62.7	35.5	29.0	High
19	E01000021	Barking and Dagenham 008A	0.376	2.3	44	42.5	3.9	7.9	24.4	4.9	61.4	35.5	29.0	High
20	E01000022	Barking and Dagenham 008B	0.252	2.9	48	38.1	3.4		20.4	4.8	69.5	35.5	29.0	High
21	E01000023	Barking and Dagenham 008C	0.377	2.9	37	50.5	4.5	6.3	39.8	5.1	65.8	35.5	29.0	High
22	E01000024	Barking and Dagenham 008D	0.306	3.0	50	40.3	3.7		19.5	4.4	63.0	35.5	29.0	High
23	E01000025	Barking and Dagenham 008E	0.282	2.9	48	38.2	6.7	1.8	20.5	4.3	58.2	35.5	29.0	High
24	E01000027	Barking and Dagenham 001A	0.275	2.3	48	41.4	9.0		17.5	3.5	64.9	35.5	29.0	High
25	E01000028	Barking and Dagenham 001B	0.423	1.6	55	39.1	6.3	1.8	17.8	3.5	76.8	35.5	29.0	High
26	E01000029	Barking and Dagenham 001C	0.156	1.8	33	34%	7.9	0.7	18.1	4.2	58.7	35.5	29.0	High
27	E01000030	Barking and Dagenham 001D	0.282	2.4	44	36.8	6.9		20.3	3.6	72.1	35.5	29.0	High
28	E01000031	Barking and Dagenham 002A	0.205	2.7	45	42.0	4.8	2.6	19.2	3.9	55.8	35.5	29.0	High
29	E01000032	Barking and Dagenham 002B	0.193	2.7	39	33.6	6.0	3.0	16.3	4.3	56.5	35.5	29.0	High
30	E01000033	Barking and Dagenham 006A	0.224	1.8	45	39.4	7.7	0.6	19.3	3.6	62.6	35.5	29.0	High
31	E01000034	Barking and Dagenham 003A	0.326	2.0	49	27.8	9.2		17.1	3.3	64.1	35.5	29.0	High
32	E01000035	Barking and Dagenham 010A	0.199	3.1	33	26.2	8.8		19.3	3.4	52.2	35.5	29.0	Low
33	E01000036	Barking and Dagenham 010B	0.145	3.6	33	27.2	7.3	4.0	17.6	3.0	50.3	35.5	29.0	High
34	E01000037	Barking and Dagenham 003B	0.108	1.4	28	28%	6.9	0.5	17.5	3.7	54.6	35.5	29.0	High
35	E01000038	Barking and Dagenham 003C	0.169	3.1	37	35.2	5.9		15.1	3.8	47.4	35.5	29.0	High
36	E01000039	Barking and Dagenham 003D	0.204	1.5	41	36.4	5.3		13.5	3.4	56.9	35.5	29.0	High
37	E01000040	Barking and Dagenham 019A	0.343	3.2	53	40.0	2.9	3.4	18.9	3.8	64.6	35.5	29.0	High
38	E01000041	Barking and Dagenham 017A	0.23	2.5	46	38.1	9.5	0.7	20.2	6.5	61.9	35.5	29.0	High
39	E01000042	Barking and Dagenham 017B	0.405	3.1	60	48%	8.9		27.2	5.5	60.3	35.5	29.0	High
40	E01000043	Barking and Dagenham 019B	0.296	2.7	48	33.1	7.3	1.1	21.1	3.7	60.7	35.5	29.0	High



	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1			Economic Situation	Transport Accessibility	Household Ties	Neighbourhood Ties	Health	Safety						
2			Income Deprivation Affecting	Public Transport Accessibility	Percent aged 65+ with no car	Percent aged 65+ living in one	Percent aged 65+ providing 50 or	Percent aged 65+ who cannot	Churn Rate	Estimated prevalence of	Percent aged 65+ with a limiting	Fear of crime worried about	Percent who feel unsafe	Crime rates
3	LSOA Code	LSOA Name	Affecting	Accessibility	with no car	one	g 50 or	cannot						
4	E01000006	Barking and Dagenham 016A	0.21	6.4	38.6	18%	5.3		27.4	5.7	59.1	35.5	25	High
5	E01000007	Barking and Dagenham 015A	0.356	6.8	63.8	69.0	3.4	15.5	35.7	8.2	63.8	35.5	25	Low
6	E01000008	Barking and Dagenham 015B	0.423	3.1	52.5	30.0	7.5	12.5	26.9	5.6	52.5	35.5	25	Low
7	E01000009	Barking and Dagenham 016B	0.385	7.1	53.0	35.4	3.9		31.9	6.7	71.3	35.5	25	Low
8	E01000010	Barking and Dagenham 015C	0.494	6.9	59.5	38.1	7.1	13.1	41.3	13.3	57.1	35.5	25	Low
9	E01000011	Barking and Dagenham 016C	0.392	7.0	36.7	21%	2.2		33.5	5.0	55.6	35.5	25	High
10	E01000012	Barking and Dagenham 015D	0.395	4.1	51.9	33.3	1.9	22.2	36.6	5.2	50.0	35.5	25	High
11	E01000013	Barking and Dagenham 013A	0.295	3.9	53.2		3.2	0.0	22.6	3.1	61.6	35.5	25	Low
12	E01000014	Barking and Dagenham 013B	0.324	3.3	44.4	36.0	7.9		20.4	3.5	61.9	35.5	25	High
13	E01000015	Barking and Dagenham 009A	0.345	2.9	53.6	38.4	9.9	0.0	26.1	3.5	60.9	35.5	25	High
14	E01000016	Barking and Dagenham 009B	0.276	2.4	39.4	35%	7.4	1.6	17.5	2.9	53.7	35.5	25	High
15	E01000017	Barking and Dagenham 009C	0.313	3.3	49.4	42.0	3.7	1.2	15.6	2.9	64.8	35.5	25	High
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18	E01000020	Barking and Dagenham 023B	0.313	3.0	50.9	35.3	2.5		19.7	4.7	62.7	35.5	25	High
19	E01000021	Barking and Dagenham 008A	0.376	2.3	44.9	42.5	3.9	7.9	24.4	4.9	61.4	35.5	25	High
20	E01000022	Barking and Dagenham 008B	0.252	2.9	48.3	38.1	3.4		20.4	4.8	69.5	35.5	25	High
21	E01000023	Barking and Dagenham 008C	0.377	2.9	57.7	50.5	4.5	6.3	39.8	5.1	65.8	35.5	25	High
22	E01000024	Barking and Dagenham 008D	0.306	3.0	50.9	40.3	3.7		19.5	4.4	63.0	35.5	25	High
23	E01000025	Barking and Dagenham 008E	0.282	2.9	48.5	38.2	6.7	1.8	20.5	4.3	58.2	35.5	25	High
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25	E01000028	Barking and Dagenham 001B	0.423	1.6	55.8	39.1	6.3	1.8	17.8	3.5	76.8	35.5	25	High
26	E01000029	Barking and Dagenham 001C	0.156	1.8	33.9	34%	7.9	0.7	18.1	4.2	58.7	35.5	25	High
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28	E01000031	Barking and Dagenham 002A	0.205	2.7	45.0	42.0	4.8	2.6	19.2	3.9	55.8	35.5	25	High
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30	E01000033	Barking and Dagenham 006A	0.224	1.8	45.2	39.4	7.7	0.6	19.3	3.6	62.6	35.5	25	High
31	E01000034	Barking and Dagenham 003A	0.326	2.0	49.5	27.8	9.2		17.1	3.3	64.1	35.5	25	High
32	E01000035	Barking and Dagenham 010A	0.199	3.1	33.0	26.2	8.8		19.3	3.4	52.2	35.5	25	Low
33	E01000036	Barking and Dagenham 010B	0.145	3.6	33.1	27.2	7.3	4.0	17.6	3.0	50.3	35.5	25	High
34	E01000037	Barking and Dagenham 003B	0.108	1.4	28.4	28%	6.9	0.5	17.5	3.7	54.6	35.5	25	High
35	E01000038	Barking and Dagenham 003C	0.169	3.1	37.0	35.2	5.9		15.1	3.8	47.4	35.5	25	High
36	E01000039	Barking and Dagenham 003D	0.204	1.5	41.9	36.4	5.3		13.5	3.4	56.9	35.5	25	High
37	E01000040	Barking and Dagenham 019A	0.343	3.2	53.1	40.0	2.9	3.4	18.9	3.8	64.6	35.5	25	High
38	E01000041	Barking and Dagenham 017A	0.23	2.5	46.3	38.1	9.5	0.7	20.2	6.5	61.9	35.5	25	High
39	E01000042	Barking and Dagenham 017B	0.405	3.1	60.3	48%	8.9		27.2	5.5	60.3	35.5	25	High
40	E01000043	Barking and Dagenham 019B	0.296	2.7	48.3	33.1	7.3	1.1	21.1	3.7	60.7	35.5	25	High

5 - Data needs to be converted into numbers



Data Analysis – Top tips

- Get to know your data
- Understand the limitations of your data and the caveats which come with your findings.
- Sample size

Data Analysis – Top tips



Calculating the mean/ average



Standard deviation and confidence intervals



Correlation between variables



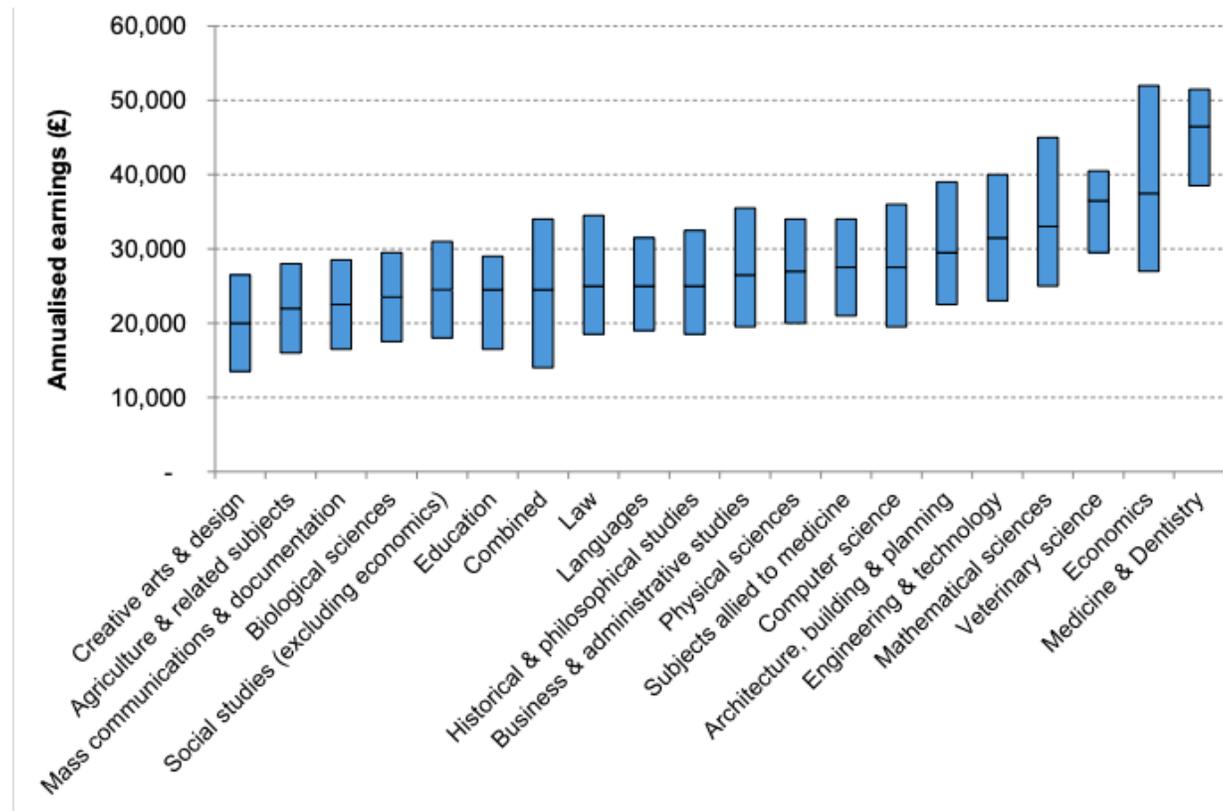
Regression modelling



Sub-population analysis

Data Analysis – Top tips

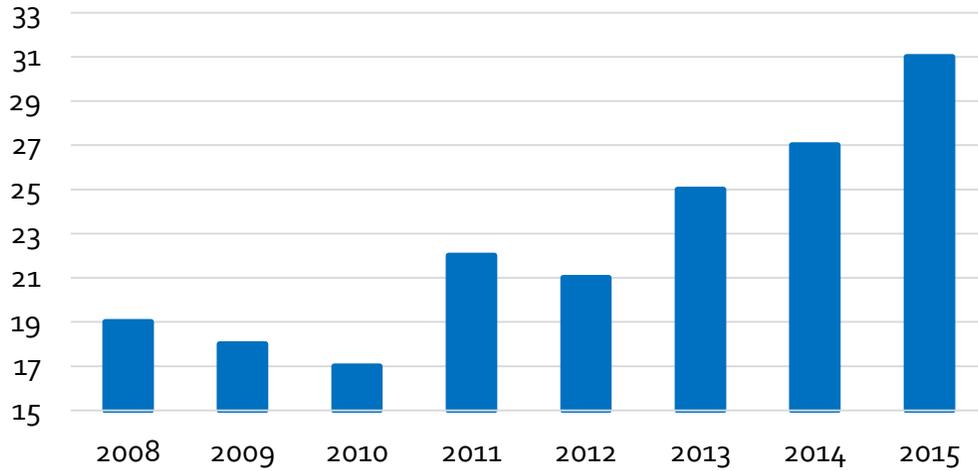
- The DfE conducted research into graduate earnings by subject studied at university
- Students who studied medicine and dentistry, or economics, earned most after graduation
- What's missing from this analysis?



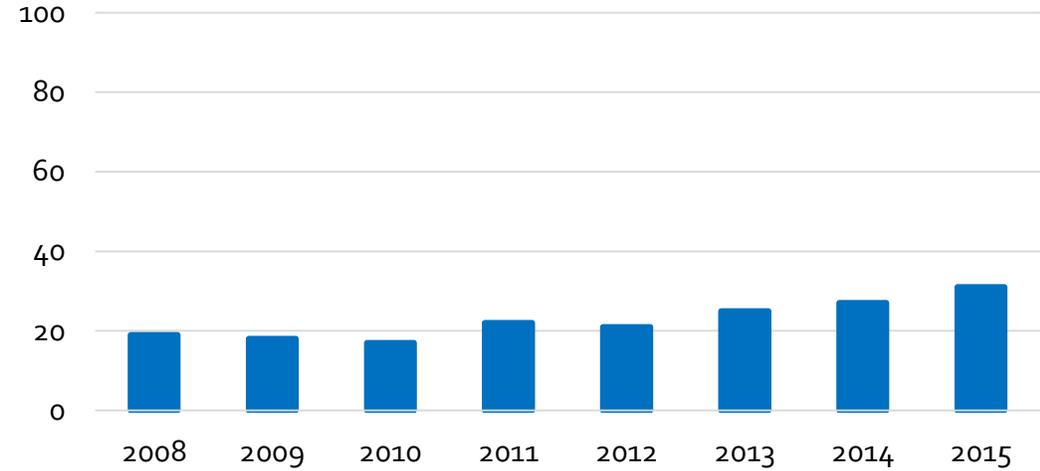
Step 3 – Data Visualisation

- Looking at the following data visualisations, what are the problems with each?

Proportion of employees earning below LLW in Croydon



Proportion of employees earning below LLW in Croydon



Step 3 – Data Visualisation

Omitting the baseline



Manipulating the Y axis

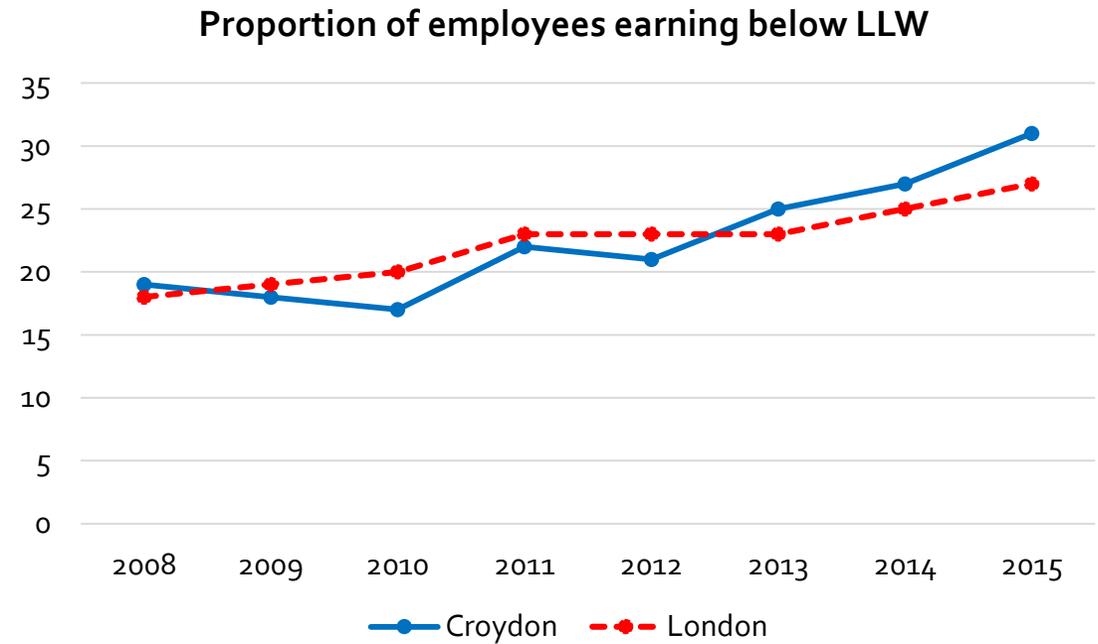


Step 3 – Data Visualisation

Y axis proportionate to data

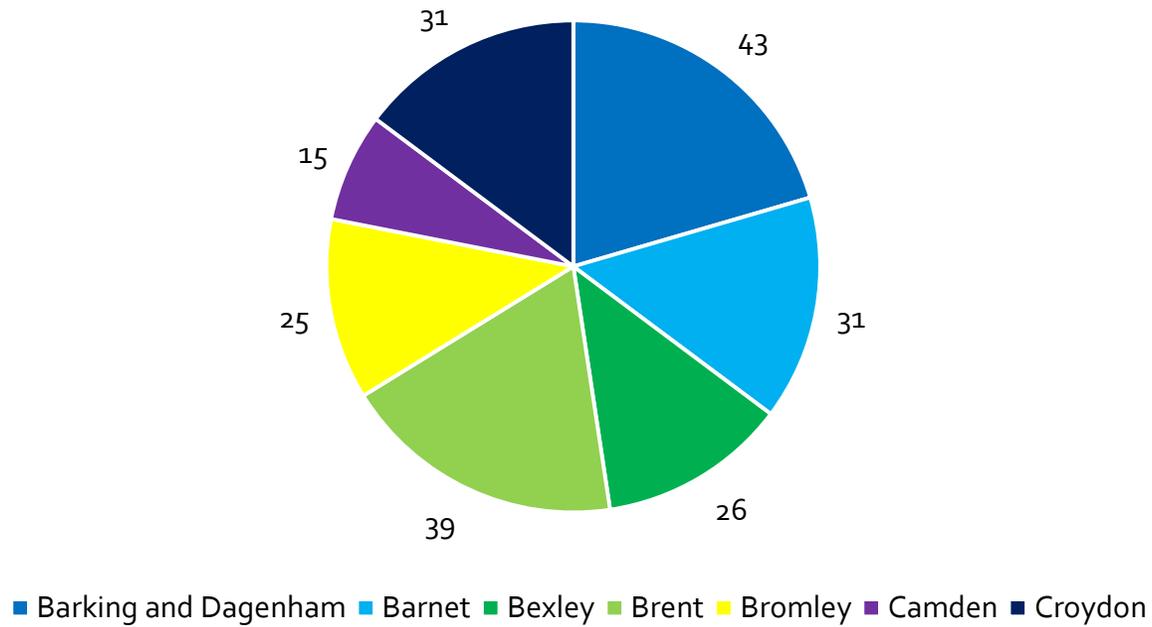


Adding comparison lines

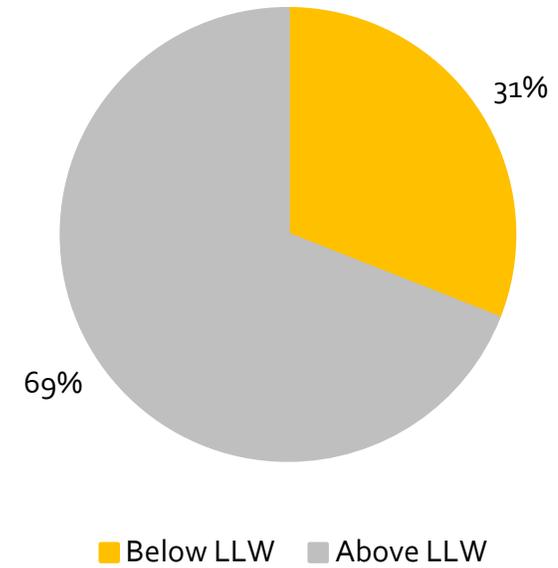


Step 3 – Data Visualisation

Proportion of employees earning below LLW

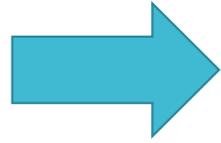
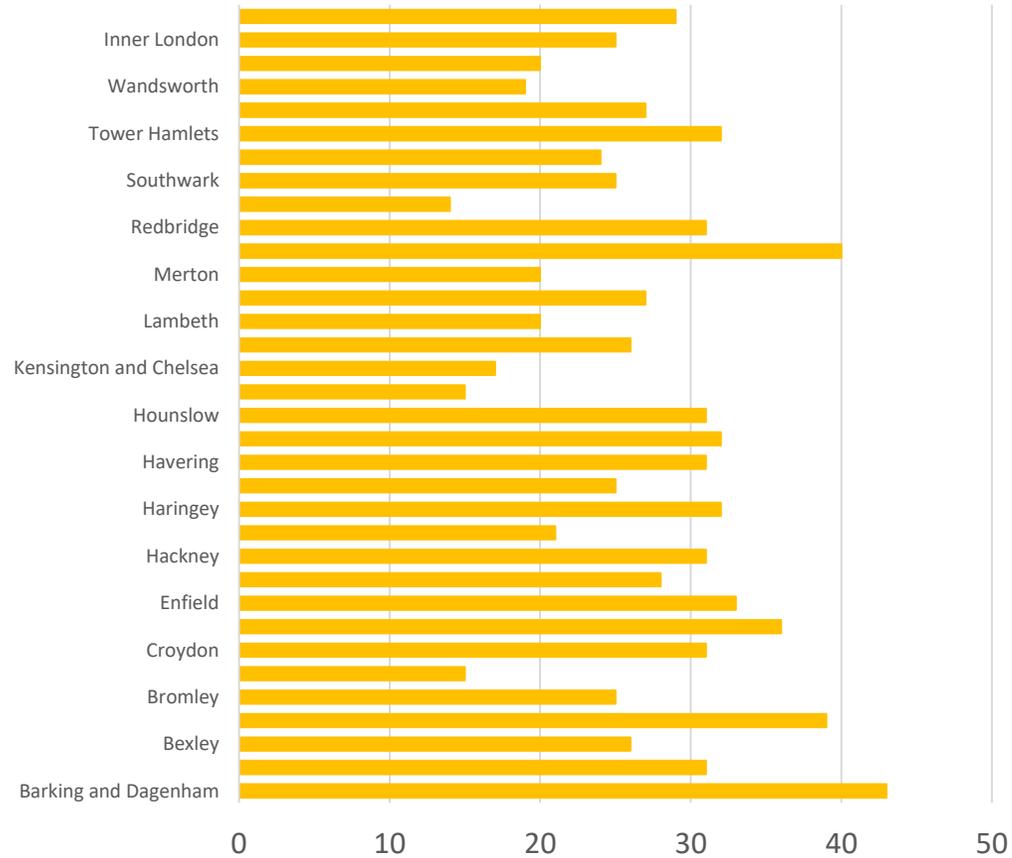


Croydon

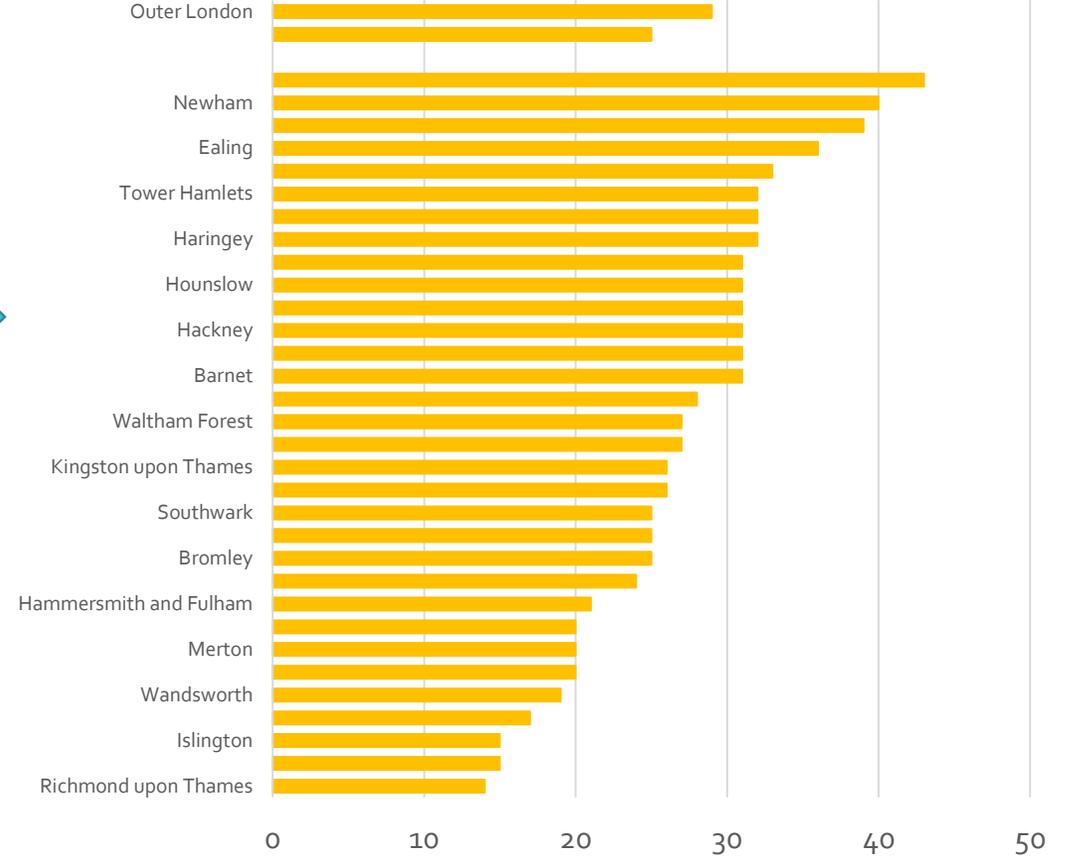


Step 3 – Data Visualisation

Percentage of respondents earning less than the London Living Wage by Borough

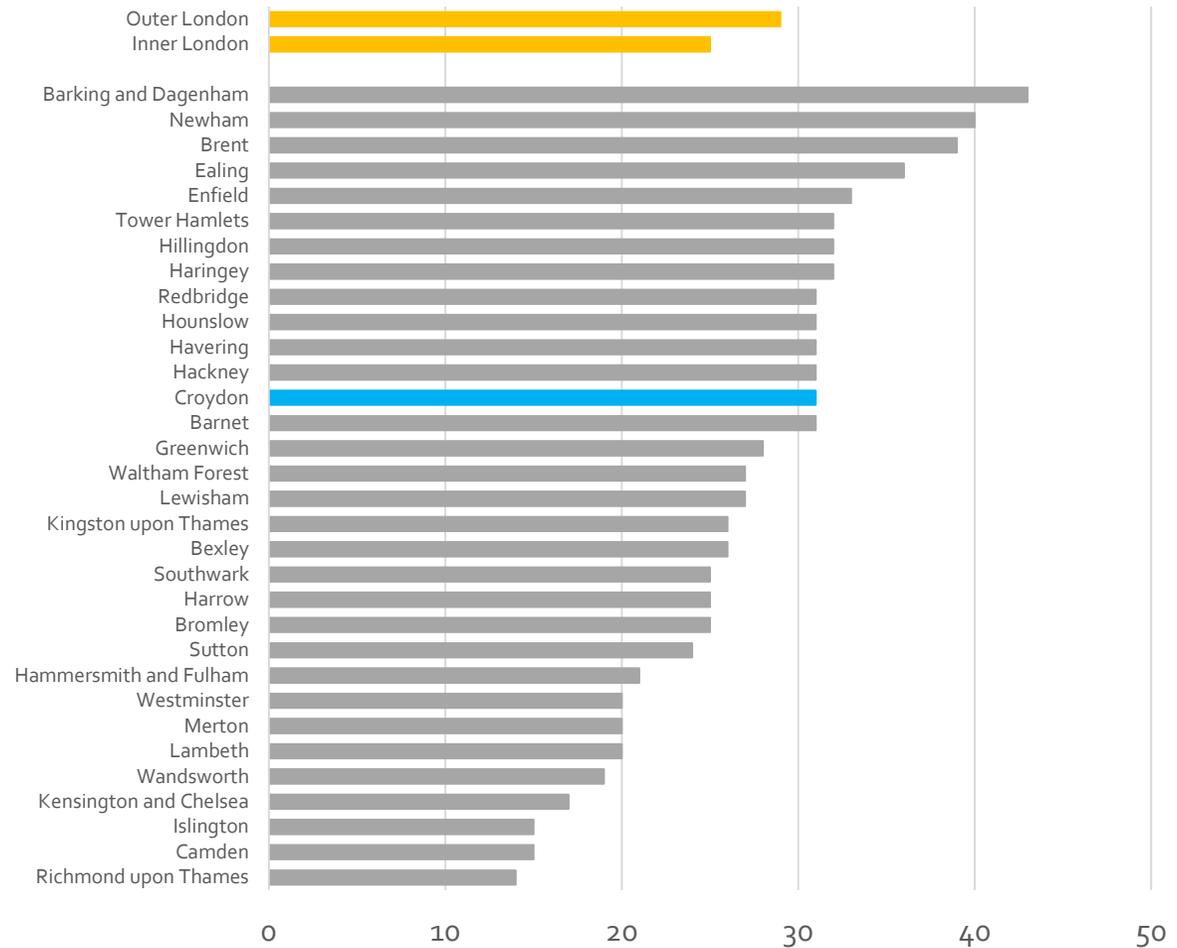


Percentage of respondents earning less than the London Living Wage by Borough



Source: Annual Population Survey 2015

Percentage of respondents earning less than the London Living Wage by Borough



Source: Annual Population Survey 2015

Step 3 –Data Visualisation

To replicate this with different datasets, [use this excel template](#) from the London datastore. Data can be input at the ward or Borough level.



Source: Annual Population Survey 2015

Data Visualisation – Top tips

- Clear and concise messaging – need people to be able to look at the data visualisation and understand what it means.
- Use appropriate chart for presenting data.
- Use colour with intention

Thankyou!

Contacts

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- Natasha – natasha@glv.org.uk