





Data Led Decision Making



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Presentation outline

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- Why use data to drive decisions?
- Challenges of data in multifacetted problems
- Communicating data for decision making

"Data are just summaries of thousands of stories – tell a few of those stories to help make the data meaningful."

Chip and Dan Heath











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				South-Facing	271 (26.8	6)										
				Dual-Aspect	301 (29.7)	6)										
				Total Population	n 2,5	89										
				Net Area (Apart	tments) 64,935.13	m*										
				Required Lettel	ble Area 62,401	m ^a										
				Excess Lettable	Ama 2 534 13	m*										
				Carbon Modul	les Ontion Comparison											
						•										
				S auffreiß		- :	G	н	1	J	K	L	M	N	0	Р
Idea 21	Idea 22	Idea 23	Idea 24	Idea :	Alle Alle and an an an an an an an an	rtment	2B Apartment	3B Apartment	North Facing	South Facing	Dual-Aspect	Total Population	Net Internal Area	Lettable Area	House Lettable Area R	equire
				Module W	And they are they they they they	240	288	7.	2 96	232	208	1816	50407.7974	46249.7974	4158	438
		11	111	Idea	1 Idea 2 Idea 4	408	480	12	152	472	448	3048	78251.86426	78251.86426	0	737
			135000	- idea	9 Idea 10 Idea 11 13 Idea 14 Idea 15	224	256	6	72	248	288	1640	47447.41609	45151.41609	2296	397
100 and		· · · · · · · · ·	d mental	Idea Idea	16 Idea 18 Idea 20 21 Idea 22 Idea 23	264	304	7.	2 120	288	216	1920	54038.32723	50328.32723	3710	465
				Idea	24 Idea 27 Idea 28	272	304	8	152	296	200	1976	55364.80315	51496.80315	3868	477
	7 1000	/0050.0055/	11150.0515	120	***	256	280	7.	2 152	224	104	1824	51498.40961	46229.40961	5269	441
	8 Idea 9	65958.95406	60536.936	592	88	208	232	6	80	240	240	1520	438/0.8241/	41082.82417	2/88	365
	9 Idea 10	05445.5035	58638.43081	528	88	168	216	5	50	208	120	1352	40183.39517	35124.39517	5059	326
	10 Idea 11	/3/11./4425	6/852.04104	680	104	232	2/2	/.	2 104	232	128	1/44	4/934.95/4	43004.9574	4930	420
	11 Idea 13	60218 00712	£2028_04727	649	112	224	249	6		216	200	1624	44220 82020	40048 82020	10430	205
	12 Idea 14	94256 9211	79222 65654	776	112	224	240	0	144	210	200	1024	52240 07592	50/95 07592	2745	373
	13 Idea 15	90249 97691	94215 11297	990	120	204	252	0	144	212	152	2240	59600 02956	55599 02856	2/45	5/1
	15 Idea 18	70153 56982	64282 03933	658	111	231	250	6	5 59	201	224	1653	45312 03026	41742 03026	3570	401
	16 Idea 20	86078.90773	79543,78235	863	156	300	318	8	69	201	237	2155	56804,98382	53708,98382	3096	525
	17 Idea 21	91623,70324	84787.31808	868	147	293	341	8	7 84	248	258	2193	57933.5843	54907.5843	3026	531
	18 Idea 22	90897.93874	84692.37781	915	164	304	346	10	61	229	261	2315	60461.26862	57512.26862	2949	561
	19 Idea 23	69280.80932	64467.04242	653	77	252	250	7	13	161	288	1701	46223.30064	44713.30064	1510	405
	20 Idea 24	16392.64	10744	0	0	0	0		0 0	0	0	0	10744	0	10744	
	21 Idea 27	60585.28928	56182.27682	579	89	197	239	5	106	305	257	1470	38137.88475	36697.88475	1440	355
	22 Idea 28	101114.2813	95229.56851	989	147	352	395	9	5 85	282	304	2511	66117.74131	66117.74131	0	606
								-						I	Charles on	

64.9%

1.013

28.78%

1,013

395 (39%)



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Curating output data



Optimisation: Total Units: Southern Views: North Facing Aptmnts: Dual Aspect Aptmnts: Maximise Units 926 15% (139 units) 10% (90 units) 30% (267 units) Max. South Views 745 30% (216 units) 23% (165 units) 34% (245 units) Max. South Views Min North Facing 749 30% (222 units) 2% (15 units) 41% (302 units)

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Data for Business Strategies

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Brief

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- 2000+ plots of land
- How many units can be unlocked?
- How many sites are cost viable?
- How does this change in 30 years?





Methodology

Sites ...

2000+ X

Iterations ... X

Studies...

Current Day Case (all sites) 3 x 30yr Cases (1040 sites)

Options ...

10+ million





Outcome

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Site Type	e		Site	Study	Height (m)	UI Units	SiteSolve Units	Unit Difference	Value	Total Cost	Return	No. Flags	MI Watford	125
Multiple se	elections	/	537	16	22.00	43	12	-31	£20.99M	£18.33M	£2.67M	8	Wattord	Brentwo
i latapie se	100010115		537	17	22.00	43	18	-25	£40.51M	£32.07M	£8.44M	9	1	
			538	14	18.40	180	100	-80	£30.54M	£29.36M	£1.18M	4	000 S 8 90	
District			538	15	18.40	180	96	-84	£122.09M	£80.93M	£41.16M	4		
			538	16	18.40	180	96	-84	£157.15M	£84.46M	£72.69M	4		
All	`		538	17	18.40	180	96	-84	£206.51M	£83.32M	£123.19M	4		Gra
			539	15	15.00	2	45	43	£45.08M	£38.59M	£6.49M	6	Mar Parks	THE REAL PROPERTY.
Chudu			539	16	15.00	2	45	43	£58.02M	£39.42M	£18.60M	6		Carlo and and
Study			539	17	15.00	2	45	43	£76.36M	£38.55M	£37.80M	6		
		/	540	15	9.70	14	27	13	£26.46M	£19.95M	£6.51M	6		MZO MZO
			540	16	9.70	14	27	13	£34.05M	£20.36M	£13.69M	6	Carl Section Ly Co	
			540	17	9.70	14	27	13	£44.81M	£19.51M	£25.30M	6	Bing Earlinstar Geographics SIO. 9 2020	M26 Terms
Unit Diffe	Unit Difference		542	15	19.00	41	45	4	£49.04M	£44.64M	£4.40M	6		
			542	16	19.00	41	50	9	£69.51M	£50.97M	£18.54M	7		
-6353	4939		542	17	19.00	41	55	14	£102.93M	£56.15M	£46.78M	6		
-		4	543	15	15.70	13	12	-1	£13.15M	£11.55M	£1.59M	6		
•		•	543	16	15.70	13	12	-1	£18.64M	£13.22M	£5.41M	6		
(1000	543	17	15.70	13	12	-1	£24.52M	£12.78M	£11.74M	6		
Return			544	14	25.30	84	147	63	£44.34M	£38.77M	£5.57M	7		
£0.01	£18.064.6	sc	544	15	25.30	84	140	56	£176.71M	£107.28M	£69.42M	7		
20.01	210,001,0	210,004,00	544	16	25.30	84	119	35	£202.96M	£96.10M	£106.86M	7		
		-	544	17	25.30	84	175	91	£364.22M	£142.94M	£221.28M	7		
			545	16	18.80	2	30	28	£51.73M	£26.12M	£25.61M	9 1		
No. Apart	tments		E 4 E	17	10.00	2	20	10	C40.04M	COO 0014	COO 5014	^		
								<u>Totals</u>						
-				/60094			82/1/5		£1,400,399.38M		590,572	.58M		
•		•	Density	Matrix U	nits (UI)	SiteSo	olve Units		Value		Cost			

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Outcome

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Study: 14 Current Value Optimisation		Site Type Research	Sites ☆ ▽ ⊡ …	<u>Flag</u>	<u>S</u>		
Headlines			10-10-	0	17.12% of the site has a slope between 10 and 30 degrees	T)	
SiteSolve Units 936	Density Matrix Units (UI)	THE R.	AB Newh	0	5.87% of the site has a sloper greater than 30 degrees Contaminated land risk: Environmental		
Key Area Data		A13		ŏ	Event or Landfill Existing Access	JF	
Lettable Area	Max Height ♥	1203	and a start	0	High noise level		
64769m2 FootPrint:Site Area	29.40 Net:Gross (incl. GF)		Thames Wharf	0	Percentage of site in Floodzone 2 is 34.41%		
26.5%	65.60	Crief (2019) Distribution Airous	DS, 9 2019 HERE, 9 2019 Microsoft Corporation	0	Percentage of site in Floodzone 3a is 15.29%		
Parking		Financial		0	Percentage of site with overhead HV power lines is 21.4%		
Spaces Required	Parking Estimate	Cost	Value	0	Site is adjacent to 144.11m of track		Plan View
93	2418m2	£275.52M	£373.52M	0	Space for onsite open space required		
Apartment Mix		of which CIL Cost		0	The difference between the total number of units from SiteSolve to UI is -516		
Private	Affordable	£9.72M					
64.64%	35.36%						
50%	19% 23%						
50%	58%	retui £98.0	RN DOM				
●1B ●2B ●3B ●4B						View fr	om XXXXXXX
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Data for Social Strategies

- 500+ plots of SHLAA land
- What is the development potential of these sites?
- Where could new homes be built which receive the benefits of a 20-minute neighbourhood?
- Where more investment is required to achieve 20 minutes principles?





20-Minute Neighbourhoods

Identified 20 minute neighbourhood amenities



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Study Conclusions



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227 **COST VIABLE SITES** ~61,000 UNITS

78 IN A 20-MINUTE NEIGHBOURHOOD ~29,000 UNITS

THE LISTED AMENITIES WITHIN 800M

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SITES HAVE ACCESS TO NONE OF THE OF

Project: Mass Land Viability Study

Borough		Site	ID	Units	GEA	Total Value	Build Cost	Total Return		200
	_	17300467	0	2030	216,206.41	868,698,500.00	540,516,020.00	328,182,480.00		- en
All	\sim	17300163	0	1904	197,556.13	811,752,800.00	493,890,323.52	317,862,476.48		
		17300163	2	1840	188,680.36	779,884,000.00	471,700,892.25	308,183,107.75	- Ar	RAM
Study ID		17190115	0	1458	162,071.23	698,418,000.00	405,178,081.01	293,239,918.99		XXXX
,		17300364	0	1716	181,773.33	732,938,700.00	454,433,318.74	278,505,381.26		
All	\sim	17300467	2	1707	185,525.10	730,992,900.00	463,812,751.15	267,180,148.85	<u> </u>	
		17190115	2	1305	144,633.84	624,425,850.00	361,584,601.14	262,841,248.86		
Table Dates		17190218	0	1155	120,360.48	553,914,750.00	300,901,206.88	253,013,543.12		° ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° °
lotal Retu	irn	17190211	2	1216	132,892.59	582,930,400.00	332,231,482.00	250,698,918.00	T THE	° ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° °
0.01	467,755,721	17190211	0	1232	137,613.74	589,480,800.00	344,034,351.28	245,446,448.72	代書	8 20
		17300367	2	1452	148,221.50	614,676,150.00	370,553,762.47	244,122,387.53	Bing	
		17300364	2	1430	149,895.35	608,016,500.00	374,738,383.85	233,278,116.15	15 MINUTE	CITY
		17190004	0	1056	115,412.89	502,568,400.00	288,532,217.85	214,036,182.15		
		17190114	2	974	104,348.21	467,447,400.00	260,870,523.11	206,576,876.89	Pharmacie	es
		17190218	2	937	97,881.92	449,248,650.00	244,704,807.66	204,543,842.34		
	ocked	17190004	2	924	97,330.50	443,656,200.00	243,326,261.19	200,329,938.81	1	8
		17190114	0	1008	113,106.42	479,826,000.00	282,766,052.60	197,059,947.40		_
	(15 56%)	17300363	0	1260	137,940.30	535,509,000.00	344,850,739.24	190,658,260.76	-	-
	(15.56%)	17300367	0	1282	142,391.18	545,463,400.00	355,977,945.81	189,485,454.19	Post Office	as (
		17300363	2	1032	106,521.40	443,349,150.00	266,303,504.90	177,045,645.10		
		17120170	2	944	99,486.58	401,764,000.00	248,716,448.68	153,047,551.32	0	7
		17300183	2	1032	115.032.19	439.226,400.00	287,580,479.98	151.645.920.02		
er of Sites unloc		<						>	•	
434						TOTALS				Banks
			80		96501	27.048M	38.338M	11.290M	-	4
		Nuo	ober of Sit	0.F	Total Units	Build Cost	Total Value	Total Return		-
		Null	inder of Sit	6.5	forar onits	Sand Cost	Total Value	iotai notaini		•
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Educational Institutes

Medical Facilities

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teSolve RAMBOLL

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Study Conclusions



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COULD HAVE ACCESS TO ALL AMENITIES IF EDUCATION BUILT



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Study Conclusions



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SITES MISSING WITHOUT EDUCATION ACCESS WITHING 800M

29 COULD HAVE ACCESS TO ALL AMENITIES IF EDUCATION BUILT IN IDENTIFIED CLUSTERS





Data for Carbon Strategies

NEWS

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Climate Change: MPs say building demolitions must be reduced

By Roger Harrabin BBC energy and environment analyst ③ 26 May | ■ Comments





MPs want mandatory wholelife carbon assessments

26 May 2022 14:09 • Dan Whelan • Comments (2)

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"If the UK continues to drag its feet on embodied carbon, it will not meet net zero or its carbon budgets," warned the House of Commons Environmental Audit Committee.

🗯 GOV.UK

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Closed consultation

Non-domestic Private Rented Sector minimum energy efficiency standards: EPC B implementation

✓ Topics

From: Department for Business, Energy & Industrial Strategy Published 17 March 2021

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Applies to England and Wales



De-carbonisation Workflow

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Supporting Decisions

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Closing the loop





Conclusion(s)

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- Leverage data for decisions
- Understand the limitations of the data
- Don't always take it at face value.
- Keep learning

"Errors using inadequate data are much less than those using no data at all."

Charles Babbage







18.00.00



Thank you!

Emily Scoones

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