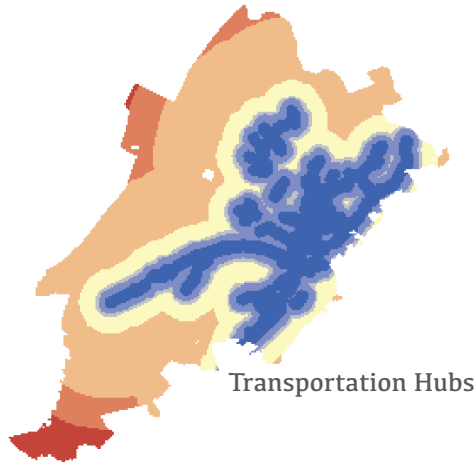


# Calculating Market Potential

| With Site Suitability & Trade Area Analyses

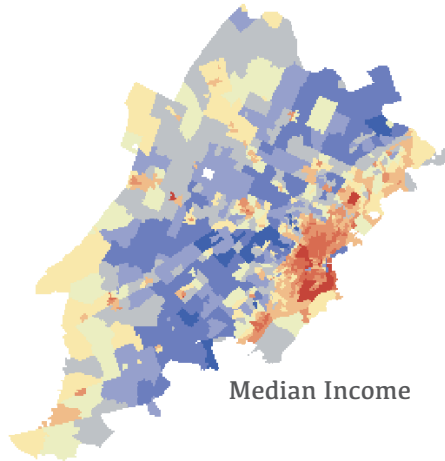
## ANALYSIS 1



Transportation Hubs

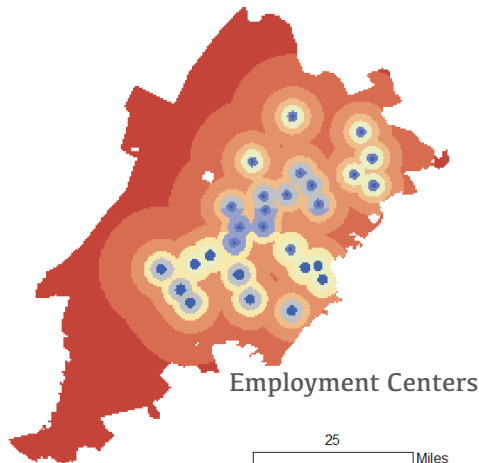
The target location for Post@Modern should be accessible, close to areas with customers who have disposable income, existing employment centers. This criteria captures aspects of both **supply and demand**.

The first decision factor combines highway and public transit to create transportation hubs. Factor two grades selects tracts with median incomes higher than average. Factor three assigns suitability value based on proximity to employment centers



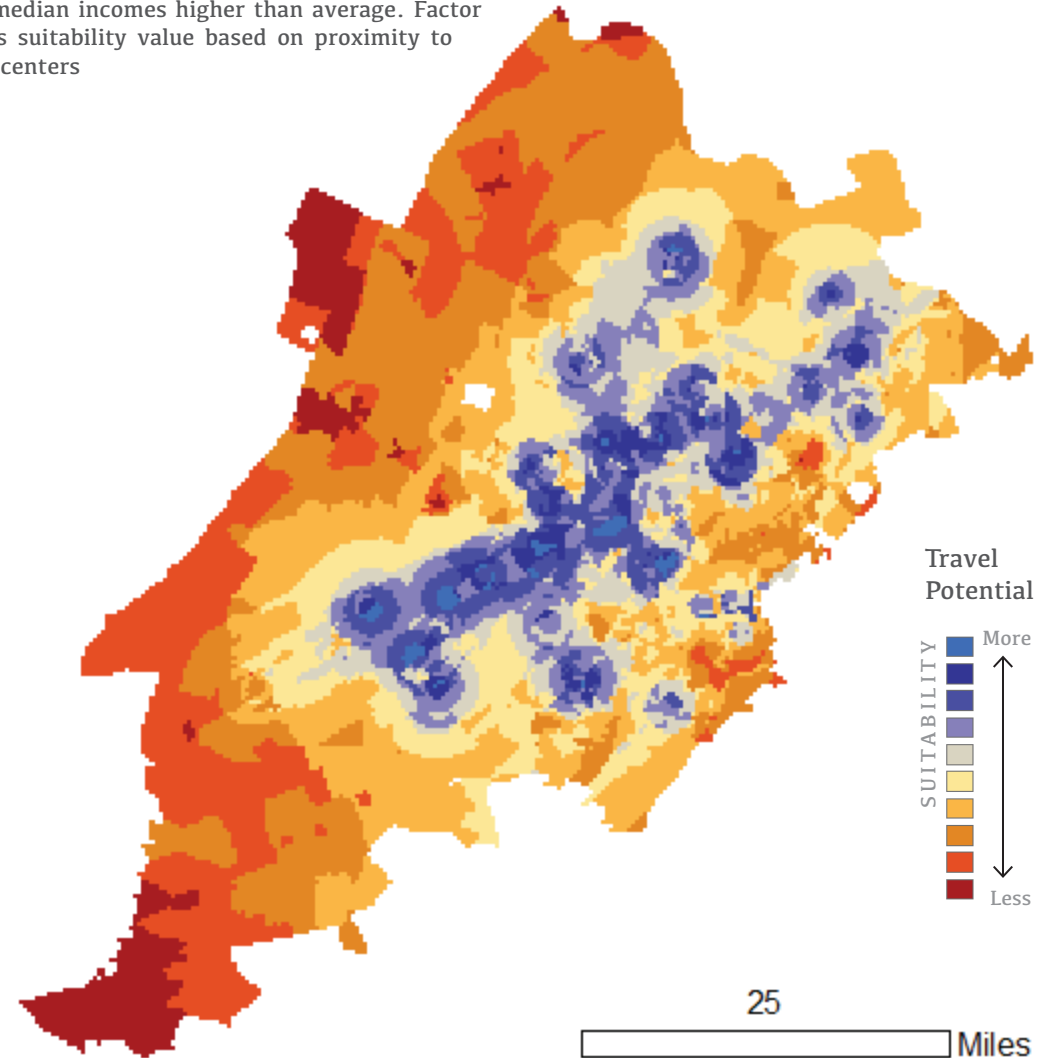
Median Income

Decision Factors



Employment Centers

25 Miles



Travel Potential



25

Miles



# ANALYSIS 1

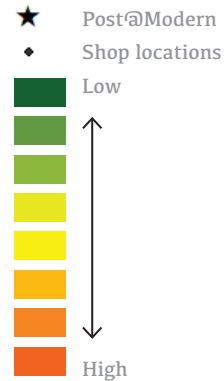
TRADE SHEDS:  
MEAN TRAVEL  
POTENTIAL

TRADE SHEDS:  
WEIGHTED POPULATION



10  
Miles

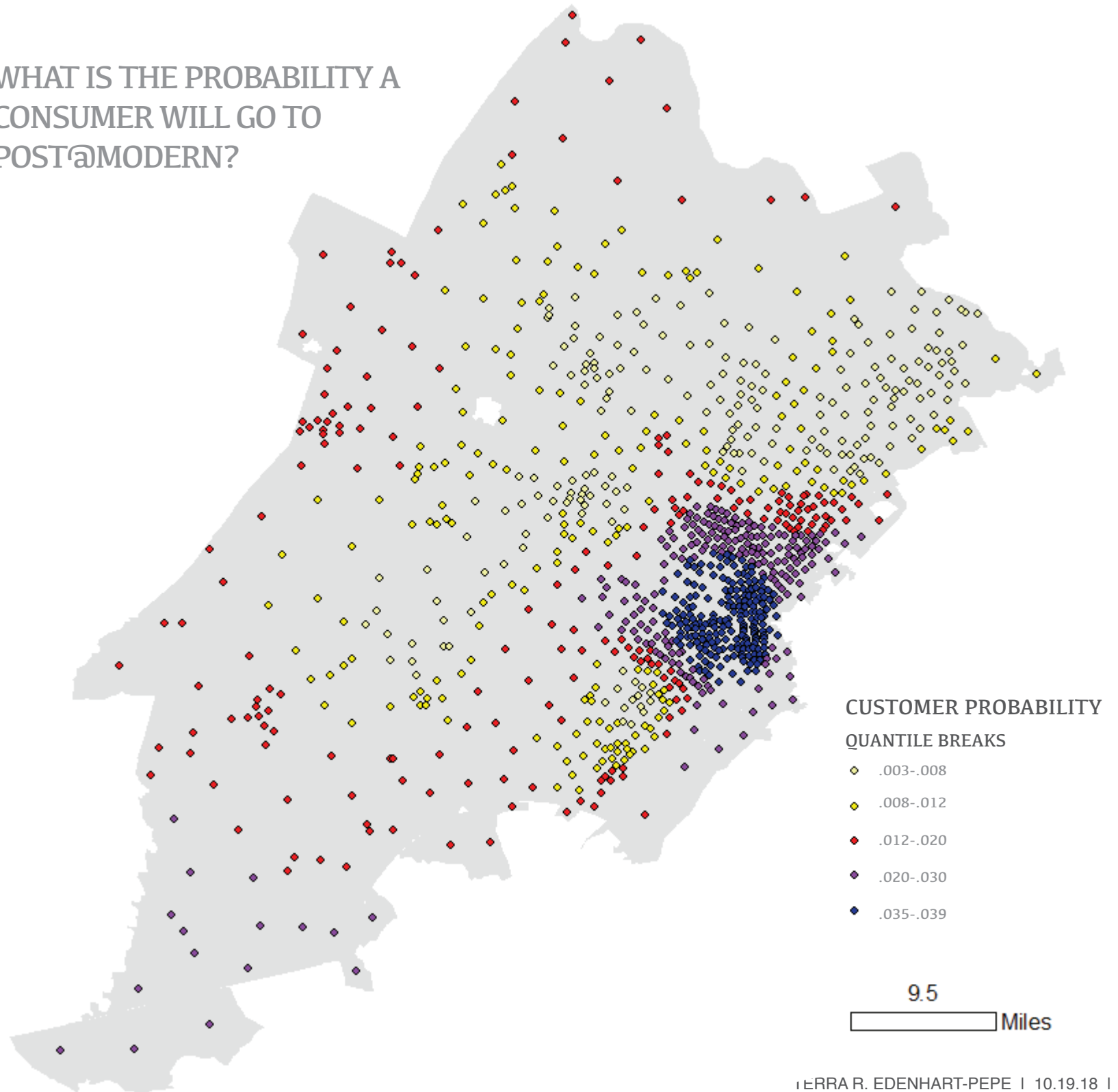
The scatter plot from Step 5 shows an apparent relationship between variables. There is a **positive correlation** (as median income increases, weighted population increases). Points are loosely clustered around the line of best fit, which expresses the positive direction and strength of this linear correlation. Many of the individual cases are far from the line, suggesting it is **not strong**.



TRADE SHED ID	POPULATION	HOUSE HOLDS	MEDIAN INCOME	MEAN TRAVEL POTENTIAL	WEIGHTED POPULATION
0	165047	58035	2475202	248.4470832	31536.76109
1	31108	12132	690321	65.8140268	4937.671051
2	27687	11492	399442	37.37142857	4661.236908
3	65116	24399	738930	75.11977892	6139.339005
4	112772	41648	1756513	167.3807124	19287.7981
5	291141	118551	3764093	478.2272767	54157.31376
6	42213	17137	832504	61.36282051	7184.663055
7	33200	12642	667629	56.23713969	5709.544006
8	141871	47507	2561130	153.5922408	14609.68984
9	27521	10756	598871	37.33333333	4807.374023
10	398210	144484	2680418	521.4474557	69686.41432
11	87462	32809	947999	159.218037	10039.633
12	12540	4952	217632	26.8883931	1863.182983
13	192687	72281	1684323	313.6656281	34009.04906
14	147778	58942	2065096	209.7712139	29480.59001
15	49591	20529	349616	73.22083873	8077.470085
16	67041	25986	720585	113.9904314	10081.24515
17	71353	31258	646202	120.1827556	13252.22198
18	22459	8296	322359	78.7419075	3173.673386
19	28672	11721	462394	52	5207.447021
20	286666	120674	1907643	491.3465546	51251.34202
21	65297	24283	1870945	134.7575093	13541.2348
22	83920	30948	1270632	113.0233391	16975.38927
23	75644	28151	1188700	142.7142686	11626.0751
24	55961	19371	971966	66.78447915	12795.30789
25	43207	16366	699614	55.02705628	9395.589966
26	88185	33585	1379666	253.9431648	9992.296841
27	5023	1921	212087	15.98450704	942.1600037
28	71305	27129	1123243	100.9406952	15332.10999
29	49461	19232	785815	52.45296481	12377.56696
30	33600	11548	398147	31.38703226	6492.506958
31	26935	10339	579145	42.64489763	5611.336975
32	72636	26160	1157797	137.0751989	10031.89301
33	18178	5733	258131	16.50151976	3421.247986
34	13568	4891	237122	14.52525253	2803.713013
35	71307	25365	1159664	104.0381687	13052.63473
36	82542	29420	1121463	74.42350614	15786.39606
37	12004	5164	171961	16.07359307	3191.070007
38	18148	7205	376493	37.86384016	2910.131012
39	123765	49495	1017633	141.9760806	25617.81028
40	25577	9066	508228	45.92597066	4597.292969
41	52509	19542	586536	53.49583333	12295.96817
42	46578	18548	683573	55.78766692	10494.36591
43	149715	50771	1146088	271.6381438	23933.81512
44	48042	17508	548417	55.40515873	10667.80997
45	60919	23420	672142	82.7453837	12284.793
46	67433	24922	873778	93.44875405	13577.52363
47	56367	20832	678103	51.43824591	13386.90405
48	28917	10270	644202	42.76228325	6131.621063
49	17406	6441	129122	14.51010101	3552.791931
50	81941	30496	1222137	203.5885042	9352.344032
51	60330	23003	755917	59.97122398	11594.09802

# ANALYSIS 2

WHAT IS THE PROBABILITY A  
CONSUMER WILL GO TO  
POST@MODERN?



## WHO IS GOING TO GO TO POST@MODERN?

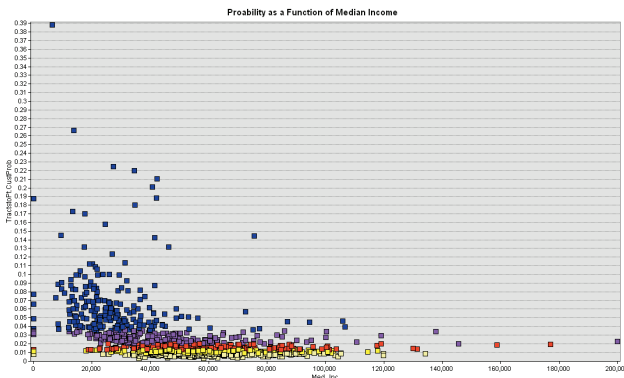
Selected above average probabilities ( Above 3%), which left 257 tracts out of 1024.

Summarized socioeconomic factors:

- Percent African American
- Percent Above 65 yr old
- Median income

The travel potential raster is a way to understand the potential customer share and type of customer that Post@Modern would attract. The scatterplot illustrates a **linear correlation** between probability of visitor-ship and median income in areas of lower probability. There is **not a correlation** in areas rated more likely to yeild consumers for Post@Modern. This could be because, areas close to the store location are urban in character and represent a greater diversity of potential clients.

The strength of this scatterplot suggest that this method is not the best one for identifying potential customers.



### SOCIOECONOMIC CENSUS INFORMATION AVERAGED BY TRACT

TRACT	MEDIAN INCOME	PERCENT AFRICAN AMERICAN	PERCENT ABOVE 65	TRACT	MEDIAN INCOME	PERCENT AFRICAN AMERICAN	PERCENT ABOVE 65	TRACT	MEDIAN INCOME	PERCENT AFRICAN AMERICAN	PERCENT ABOVE 65	TRACT	MEDIAN INCOME	PERCENT AFRICAN AMERICAN	PERCENT ABOVE 65
1	48886	13	5	78	28885	59	9	154	31923	53	1	2053	47813	24	8
2	8349	8	16	79	32380	62	8	155	12333	77	7	2054	85915	2	16
3	40625	15	16	80	28366	95	15	156	14524	21	7	205501	50337	16	20
4	27400	12	39	81	24455	95	17	157	22478	9	7	205502	100334	1	17
5	9620	30	3	82	29041	96	21	158	31862	3	12	205503	75174	3	28
6	41563	12	5	8301	24800	95	30	159	28871	3	11	2056	60408	1	13
7	34536	6	19	8302	24567	94	18	160	29621	3	11	4001	30185	17	8
8	42346	3	14	84	26341	97	18	161	19098	10	9	4002	37593	15	13
9	20725	9	10	85	22077	94	16	162	13833	25	8	400301	32448	33	9
10	72625	4	17	86	19612	73	11	163	15865	18	6	400302	34576	23	10
11	36564	10	10	87	21131	30	3	164	12314	50	6	400401	29041	23	11
12	42000	6	9	88	9320	13	1	165	16964	95	13	400402	30273	26	15
13	24508	72	14	89	6311	12	8	166	14250	96	11	4005	41429	12	11
14	26897	58	15	90	13792	19	1	167	16367	97	15	4017	44205	21	14
15	38026	28	13	91	17500	57	19	168	19770	96	14	4021	53225	80	11
16	50598	7	7	92	20093	93	7	16901	14558	95	15	4023	36483	87	11
17	48899	12	7	93	21503	98	14	16902	17051	98	16	4089	83317	0	14
18	36458	21	16	94	17743	95	17	170	34120	83	9	5001	39570	2	14
19	21766	95	10	95	21058	98	15	171	22043	95	14	500201	52463	0	10
20	19040	97	15	96	23171	97	15	172	20669	98	14	500205	47900	11	12
21	21875	94	14	97	36094	45	20	173	21731	97	15	5003	48534	0	13
22	30156	85	15	98	39849	60	13	174	15050	91	12	6005	8569	66	32
23	29806	8	17	99	105723	31	21	175	14294	37	7	6007	18714	48	5
24	34247	19	15	100	31415	61	18	17601	11909	11	5	6018	22417	59	9
25	26250	43	13	101	28811	90	16	17602	12076	20	5	6102	19083	0	26
26	0	0	0	102	20394	95	14	177	15687	24	5				
27	23750	23	12	103	24405	95	14	178	14793	21	8				
28	22759	8	18	104	21772	97	14	179	28021	12	12				
29	26744	1	22	105	12794	96	20	180	30866	1	17				
30	20394	49	12	106	15952	96	26	181	18571	3	24				
31	18156	97	15	107	15417	96	15	192	19375	22	6				
32	17711	89	12	108	17310	89	12	193	26563	12	14				
33	25978	56	11	109	13367	91	7	194	13929	40	3				
34	20500	46	26	110	19464	96	14	195	15097	11	6				
35	24722	21	9	111	22765	95	11	196	15710	21	6				
36	13860	60	18	112	24521	96	14	197	19877	39	5				
3701	26010	76	9	113	34353	98	18	198	20692	41	7				
3702	26550	35	17	114	28012	91	16	199	16780	47	7				
38	36591	1	23	115	39473	69	11	200	22786	75	14				
3901	26347	10	22	116	35000	27	8	201	20436	95	16				
3902	36472	0	22	117	53047	36	10	202	20709	94	18				
4001	25854	0	24	118	41044	94	14	203	23277	87	15				
4002	31045	1	23	119	28507	91	12	204	29814	96	9				
4101	20759	33	13	120	44954	64	15	205	16213	90	17				
4102	22819	11	14	121	32925	61	24	206	30083	18	13				
4201	32564	8	13	122	28861	37	34	207	42004	16	10				
4202	34313	5	14	123	0	0	0	208	44067	32	16				
43	0	0	0	124	0	0	0	209	41424	3	9				
44	28024	21	10	125	34814	16	23	210	41191	4	15				
45	36335	1	27	126	31838	25	12	211	45130	5	19				
46	8333	94	0	127	7500	64	11	212	37234	4	12				
47	44080	2	28	128	39643	7	0	213	39746	7	12				
48	30455	0	36	129	41000	4	6	214	40746	13	11				
49	0	0	0	130	35625	54	8	215	45464	4	12				
50	0	0	0	131	19023	93	10	235	71827	39	11				
51	28417	69	7	132	14375	94	17	236	65080	34	20				
52	0	0	0	133	29352	58	9	237	42917	67	19				
57	0	0	0	134	41536	16	16	238	31052	71	16				
58	0	0	0	135	31386	50	10	239	21500	62	16				
59	0	0	0	136	46250	8	11	240	29137	74	10				
60	31250	39	17	137	23806	94	12	241	12177	89	30				
61	33462	39	19	138	17480	92	14	242	26589	82	11				
62	28750	42	8	139	12703	86	19	243	27951	86	8				
63	21320	66	6	140	13458	90	12	244	28036	86	8				
64	27849	58	7	141	12165	86	17	245	25517	92	9				
65	28036	96	10	142	30862	21	9	246	20887	89	11				
66	18185	67	13	143	40293	3	12	280	28281	96	10				
67	22670	52	11	144	23720	31	12	281	36129	86	9				
68	0	0	0	145	12092	69	15	283	24725	81	7				
69	13569	93	4	146	26295	71	17	284	29143	80	6				
70	21821	98	8	147	16411	98	12	287	21944	35	3				
71	25790	96	10	148	10643	100	31	366	87027	5	17				
72	26955	96	10	149	21483	94	17	2043	56250	4	31				
73	25778	95	10	150	9643	43	9	2044	105903	0	16				
74	17604	90	13	151	13070	99	13	2045	94567	1	12				
75	0	0	0	152	18153	99	10	2046	137761	1	16				
76	75487	20	9	153	14826	92	11	204702	77390	3	16				
77	14628	43	4												

## SUMMARY

Both the site suitability and trade area analyses are...

- customer-oriented
- include a basic statistical summary
- describe the probable distribution of the potential customer base & shopping selection trade-offs

The **first analysis** suggests conditions which might compel a consumer to visit Post@Modern and generates a suitability scale. While, the **second analysis** assumes a value for the Decay Factor and describes an “attraction or gravity” scenario, to illustrate the tradeoff between convenience and quality.

*What would the analysis of...*

*...a Tractor Store look like?*

*A more specialized clientele would require a granular study of higher order goods, a higher weight (of 2), and with greater consideration of gross leasable area.*

*...A jewelry store?*

*Similarly, this type of store has a high weight as a high order goods shopping hub, capable of drawing customers from the region however less consideration may be given to*

*...A car dealership?*

*Dealerships may co-locate with other dealerships, conduct aggregate-level sales trajectories and individual-level conditional expectations (which, could be used to derive estimates of customer lifetime value).*

The ultimate outcome accuracy could be improved if compared to an actual outcome (some metric) that could help train a model and assess model accuracy.

**No.** I would not recommend that the developer built Post@Modern before conducting a more in-depth analysis. On the basis of this analysis, the maximum probability that people may visit Post@Modern 2 or 3 times a year is only approximately 30%.

The **next step** would be to undertake customer-base investigation to generate a predictive analysis. Further investigation could analyze the customer base and identify the geo-demographic characteristics of heavy buyers or determine which groups of products tend to be purchased together (i.e., a “market-basket” analysis).