HOW TO READ

ENVISION
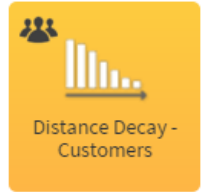
Distance Decay—Customers

Distance Decay is a geographical term which describes the effect of distance on spatial interactions. This report helps determine whether creating a new custom Trade Area is warranted for conducting customer analysis.

Helps answer the questions

1. How many of my customers live within 5 kilometres of my store location?   2. What size should my trade area be for this location, based on where my customers live?   3. How far do my customers travel to get to my store (library, office)?

Distance Decay - Customers

ENVIRONICS ANALYTICS

Distance Decay - Customers

Location: V1Y-1 | Customer: Kelowna_Customers_Spent: Record Count

Distance (km)	Absolute Count	Absolute %	Cumulative Count	Cumulative %	Base Absolute Count	Base Cumulative Count	% Pen
0 - 1	3	0.11	3	0.11	263	263	1.14
1 - 2	35	1.28	38	1.39	1,679	1,942	2.08
2 - 3	61	2.23	99	3.63	988	2,930	6.17
3 - 4	231	8.46	330	12.08	3,483	6,413	6.63
4 - 5	423	15.49	753	27.57	7,137	13,550	5.93
5 - 6	562	20.58	1,315	48.15	9,020	22,570	6.23
6 - 7	685	25.08	2,000	73.23	10,106	32,676	6.78
7 - 8	479	17.54	2,479	90.77	7,190	39,866	6.66
8 - 9	153	5.60	2,632	96.37	3,212	43,078	4.76
9 - 10	99	3.63	2,731	100.00	2,063	45,140	4.80
10 - 11	0	0.00	2,731	100.00	2,576	47,717	0.00
11 - 12	0	0.00	2,731	100.00	2,337	50,053	0.00
12 - 13	0	0.00	2,731	100.00	665	50,718	0.00
∿∿							
43 - 44	0	0.00	2,731	100.00	0	55,326	0.00
44 - 45	0	0.00	2,731	100.00	0	55,326	0.00
45 - 46	0	0.00	2,731	100.00	0	55,326	0.00
46 - 47	0	0.00	2,731	100.00	0	55,326	0.00
47 - 48	0	0.00	2,731	100.00	0	55,326	0.00
48 - 49	0	0.00	2,731	100.00	0	55,326	0.00
49 - 50	0	0.00	2,731	100.00	0	55,326	0.00
50+	2,731	100.00	2,731	100.00	55,326	55,326	4.94

Looking at the table at the top of the dashboard, each row of numbers represents a distance band from the selected location. The default values equal 1 km or 1 minute distance bands. The default can be adjusted in the Workspace Settings pane.

This example shows 1 km distance bands from a Kelowna store location and a Kelowna customer file. The box highlights that there are 685 customers living between 6 to 7 km from our location - 25.08% of the total customer list. Cumulatively, we have 2,000 customers living from 0 to 7 km - 73.23% of the total customer list.

There are 10,106 households in the 6 to 7 km band from our location in the benchmark (city of Kelowna). There are 32,676 households living between 0 to 7 km from our location.

685 customers out of a possible 10,106 households represent 6.78% penetration in the 6 to 7 km band in the market.

Distance (km) - the size of the band. Can be kilometres or minutes

Absolute Count - the count of customers within each distance band

Absolute % - the percentage of customers within each distance band

Cumulative Count - the count of customers in the current distance band PLUS the previous bands

Cumulative % - the percent of customers in the current distance band PLUS the previous bands

Base Absolute Count - the count of the selected base (households or pop) within each distance band

Base Cumulative Count - the count of selected base (households or pop) in the current distance band PLUS the previous bands

% Pen - the market penetration of the customers in an individual distance band

HOW TO READ

Distance (km) Decay Graph
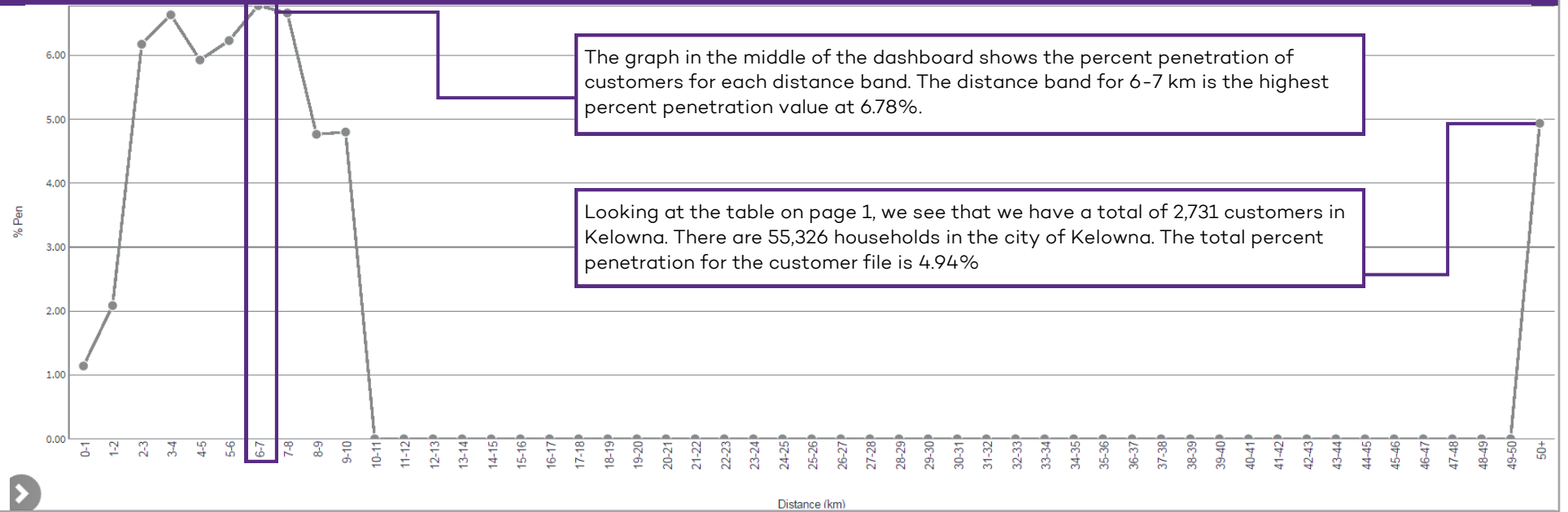
The graph in the middle of the dashboard shows the percent penetration of customers for each distance band. The distance band for 6-7 km is the highest percent penetration value at 6.78%.

Looking at the table on page 1, we see that we have a total of 2,731 customers in Kelowna. There are 55,326 households in the city of Kelowna. The total percent penetration for the customer file is 4.94%

Cumulative Percent of Customers
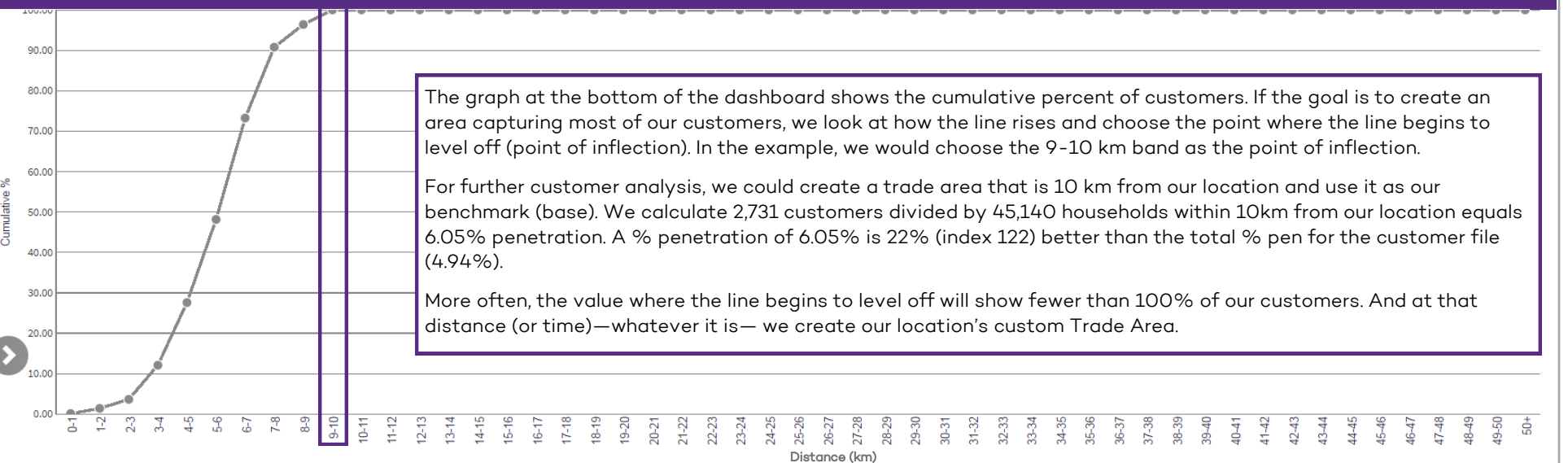
The graph at the bottom of the dashboard shows the cumulative percent of customers. If the goal is to create an area capturing most of our customers, we look at how the line rises and choose the point where the line begins to level off (point of inflection). In the example, we would choose the 9-10 km band as the point of inflection.

For further customer analysis, we could create a trade area that is 10 km from our location and use it as our benchmark (base). We calculate 2,731 customers divided by 45,140 households within 10km from our location equals 6.05% penetration. A % penetration of 6.05% is 22% (index 122) better than the total % pen for the customer file (4.94%).

More often, the value where the line begins to level off will show fewer than 100% of our customers. And at that distance (or time)—whatever it is— we create our location's custom Trade Area.