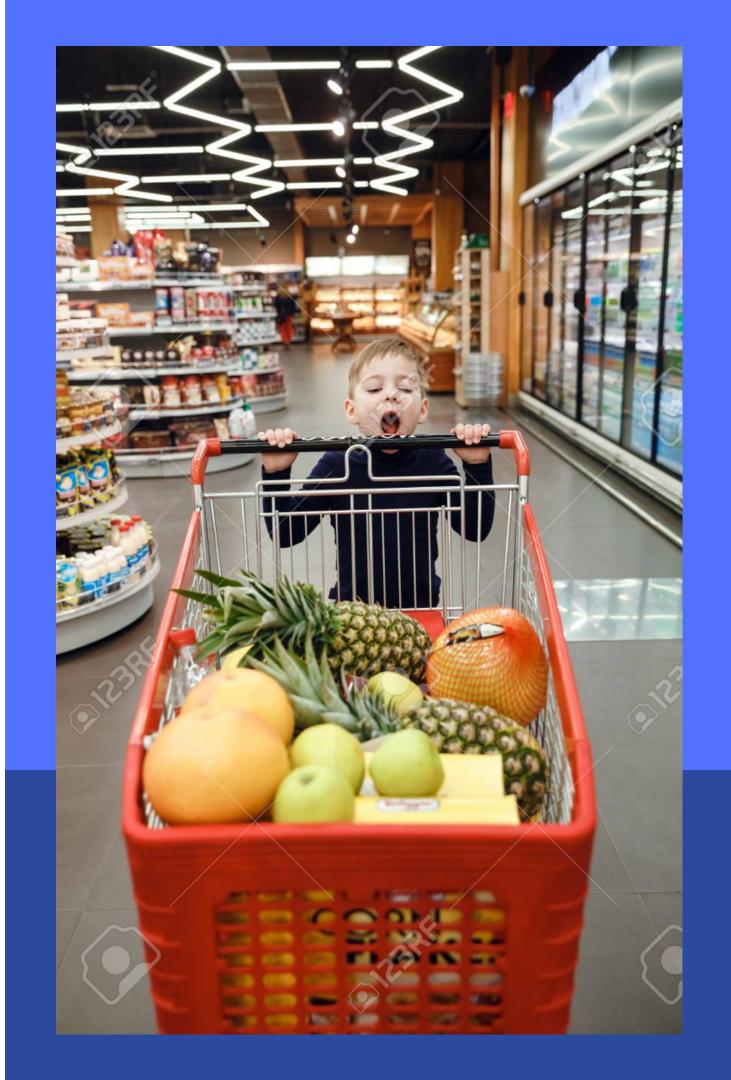
CUSTOMER ANALYSIS

AGENDA

1 DESIGNING CUSTOMER DATA PLATFORM

2 CUSTOMER SINGLEVIEW



DESIGNING CUSTOMER DATA PLATFORM

DATA SOURCE

SALES TRANSACTION

- 1.SALE TRANSACTION ID
- 2.TOTAL SALES
- 3.SKU
 - 3.1.UNIT
 - 3.2.BATH
 - 3.3.NAME
 - 3.4.ID
- 4.CUSTOMER ID
- 5.DISCOUNT
- 6.VAT
- 7.PROMOTION
 - 7.1.ID
 - **7.2.NAME**

- 8.DATE
- 9.PAYMENT METHOD
- 10.STORE ID
- 11.POS ID
- 12.PAYMENT METHOD

MEMBER DATA

- 1.NAME
- 2.SURNAME
- 3.BIRTHDAY
- 4.OCUPATION
- 5.SALARY RANGE

To explore customer behavior	To segment customer time purchase by product category	To approach product that customer might buy with	To approach campaign
Most frequent	Segmentation	Cross selling	Campaign scoring
Period snap	Meantime between	Product recommendation	Content recommendation
Last 3 months sale Last 6 months sale Last 12 months sale	Last 3 months sale Last 6 months sale Last 12 months sale Category	Category	Week 1 last purchase Week 1 transaction count Category

2

CUSTOMER SINGLEVIEW

CUSTOMER SINGLEVIEW

<pre>cust_code(unique)</pre>	total_sales	total_sales_last_3months	total_sales_last_6months	total_sales_last_12months	sku_penetrate
CUST000000181	2.44	2.440000	1	1.000000	0.000203
CUST0000000689	328.57	1.776054	334	1.805405	0.023501
CUST0000000998	5.95	1.487500	6	1.500000	0.000810
CUST0000001163	39.74	1.589600	34	1.360000	0.004862
CUST0000001194	2493.83	2.081661	1705	1.423205	0.081645

r	node_PROD_CODE10	mode_PROD_CODE20	mode_PROD_CODE30	mode_PROD_CODE40	avg. basket_size(ATV)	<pre>mode_basket_size(Category)</pre>
	1	1	22	2	0	0
	16	16	52	3	2	1
	3	3	52	3	0	0
	4	4	22	2	2	0
	103	96	11	2	2	0

<pre>mode_shop_day(weekend_weekday)</pre>	mode_shop_time	mode_basket_size_sen	extra_column
0	0	2.440000	2.440000
1	1	20.535625	20.535625
0	2	1.983333	1.983333
2	0	9.935000	9.935000
1	0	24.211943	25.977396

SINGLE VIEW OF CUSTOMER (SVOC)

	total_sales	NUMERIC
	total_sales_last_3months	NUMERIC
	total_sales_last_6months	NUMERIC
	total_sales_last_12months	NUMERIC
	sku_penetrate	NUMERIC
	mode_PROD_CODE10	CATEGORICAL
	mode_PROD_CODE20	CATEGORICAL
5110.5	mode_PROD_CODE30	CATEGORICAL
svoc	mode_PROD_CODE40	CATEGORICAL
	avg. basket_size(ATV)	NUMERIC
	mode_basket_size(Category)	CATEGORICAL
	mode_shop_day(weekend_week	CATEGORICAL
	mode_shop_time	CATEGORICAL
	mode_basket_size_sen	CATEGORICAL
	extra_column	NUMERIC
	Cluster	CATEGORICAL
		CATEGORICAL



CLUSTERING

by kmeans

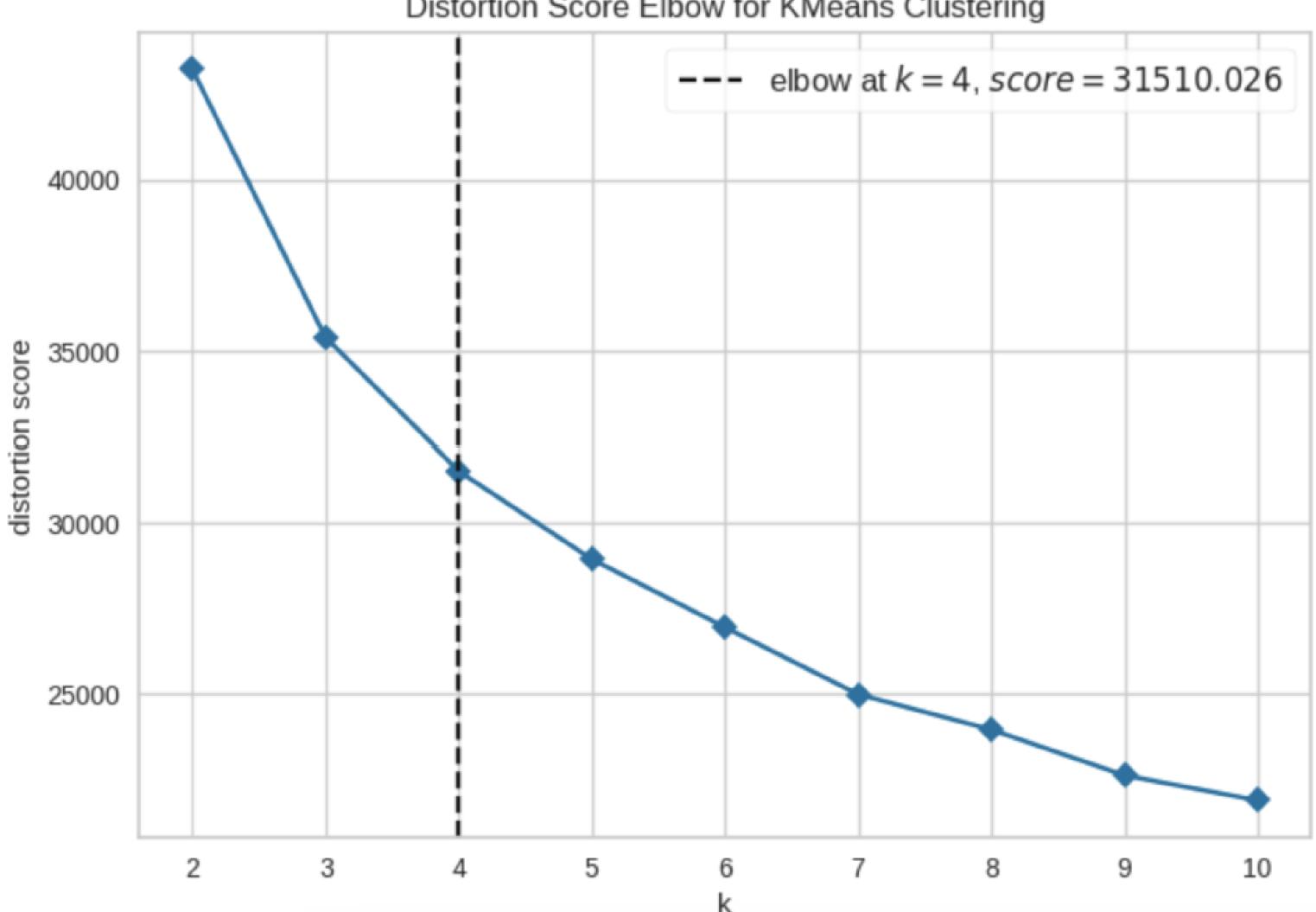
CROSS DIMENSION

A	В	С	D	E	F	G	Н	I	J
CUST_CODE	total_amount_dollar	average_dollar_sale:	total_qty	average_qty	sku_penetrate	number_tnx	number_visit	most_dept	most_division
181	2.44	2.44	1	1	0.0002025931929	1	1	22	2
689	328.57	1.776054054	334	1.805405405	0.02350081037	16	16	52	3
998	5.95	1.4875	6	1.5	0.0008103727715	3	3	52	3
1163	39.74	1.5896	34	1.36	0.004862236629	4	4	22	2
1194	2493.83	2.081661102	1705	1.423205342	0.08164505673	103	96	11	2
2257	1.99	1.99	1	1	0.0002025931929	1	1	73	5
2605	1.8	0.3	6	1	0.0002025931929	6	6	55	3
2637	124.63	1.466235294	126	1.482352941	0.01073743922	15	15	19	2
2638	15.59	3.8975	6	1.5	0.0008103727715	1	1	27	2
2813	145.02	1.495051546	118	1.216494845	0.01478930308	12	12	11	2

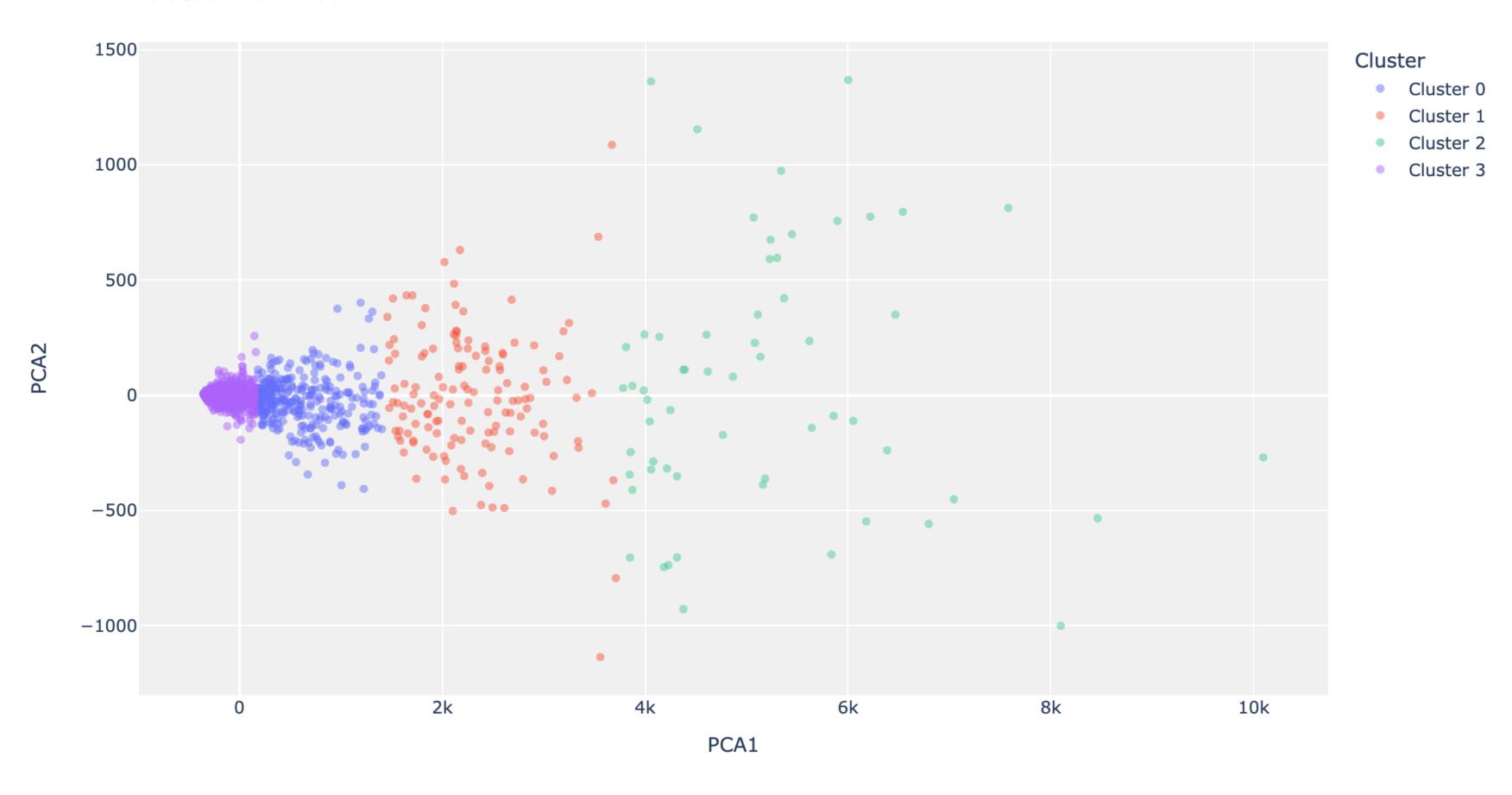
KNOW MOST DEPT > CAMPAIGN CROSS DEPT

E.g. Drive most dept to another dept to increase sales by association rules technique





2D Cluster PCA Plot



CUSTOMER CLUSTER

cus	st_code(unique)	total_sales	total_sales_last_3months	total_sales_last_6months	total_sales_last_12months	sku_penetrate
	CUST0000000181	2.44	2.440000	1	1.000000	0.000203
	CUST0000000689	328.57	1.776054	334	1.805405	0.023501
	CUST0000000998	5.95	1.487500	6	1.500000	0.000810
	CUST0000001163	39.74	1.589600	34	1.360000	0.004862
	CUST0000001194	2493.83	2.081661	1705	1.423205	0.081645

mode_PROD_CODE10	mode_PROD_CODE20	mode_PROD_CODE30	mode_PROD_CODE40	avg. basket_size(ATV)	<pre>mode_basket_size(Category)</pre>	1
1	1	22	2	0	0	
16	16	52	3	2	1	
3	3	52	3	0	0	
4	4	22	2	2	0	
103	96	11	2	2	0	

<pre>mode_shop_day(weekend_weekday)</pre>	mode_shop_time	mode_basket_size_sen	extra_column	Cluster
0	0	2.440000	2.440000	Cluster 3
1	1	20.535625	20.535625	Cluster 3
0	2	1.983333	1.983333	Cluster 3
2	0	9.935000	9.935000	Cluster 3
1	0	24.211943	25.977396	Cluster 1