1. Data source

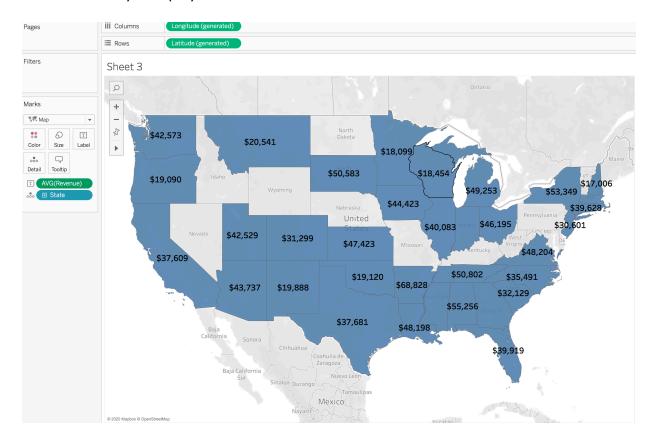
Table1: US Cities populations.csv

# P1-US-Cities-Popul 2015 Rank	## P1-US-Cities-Popul City	P1-US-Cities-Population.csv State	# P1-US-Cities-Population 2015 Estimate	# P1-US-Cities-Populati 2010 Census	Abc P1-US-Cities-Popul Change	Abc P1-US-Cities-Population.csv 2014 Land Area	Abc P1-US-Cities-Population.csv 2010 Population	Abc P1-US-Cities-Population.csv Location
1	New York	New York	8,550,405	8,175,133	0.0459	302.6 sq mi	27,012 per sq mi	40.6643°N 73.9385°W
2	Los Angeles	California	3,971,883	3,792,621	0.0473	468.7 sq mi	8,092 per sq mi	34.0194°N 118.4108
3	Chicago	Illinois	2,720,546	2,695,598	0.0093	227.6 sq mi	11,842 per sq mi	41.8376°N 87.6818°W
4	Houston	Texas	2,296,224	2,100,263	0.0933	599.6 sq mi	3,501 per sq mi	29.7805°N 95.3863°W
5	Philadelphia	Pennsylvania	1,567,442	1,526,006	0.0272	134.1 sq mi	11,379 per sq mi	40.0094°N 75.1333°W
6	Phoenix	Arizona	1,563,025	1,445,632	0.0812	516.7 sq mi	2,798 per sq mi	33.5722°N 112.0880
7	San Antonio	Texas	1,469,845	1,327,407	0.1073	460.9 sq mi	2,880 per sq mi	29.4724°N 98.5251°W
8	San Diego	California	1,394,928	1,307,402	0.0669	325.2 sq mi	4,020 per sq mi	32.8153°N 117.1350
9	Dallas	Texas	1,300,092	1,197,816	0.0854	340.5 sq mi	3,518 per sq mi	32.7757°N 96.7967°W
10	San Jose	California	1,026,908	945,942	0.0856	176.6 sq mi	5,359 per sq mi	37.2969°N 121.8193
11	Austin	Texas	931,830	790,390	0.1789	322.48 sq mi	2,653 per sq mi	30.3072°N 97.7560°W
12	Jacksonville	Florida	868,031	821,784	0.0563	747.0 sq mi	1,120 per sq mi	30.3370°N 81.6613°W
13	San Francisco	California	864,816	805,235	0.074	46.9 sq mi	17,179 per sq mi	37.7751°N 122.4193

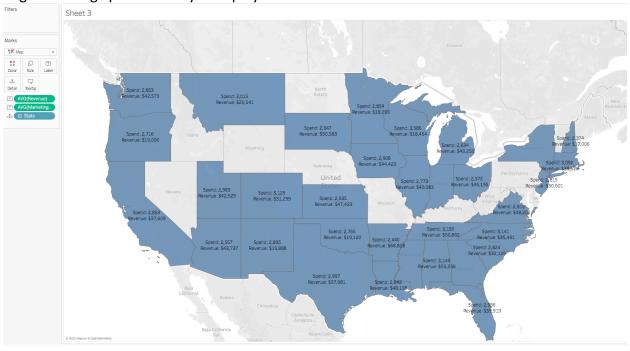
Table2: Startup Expansion.xlsx

# Sheet1 Store ID	Sheet1	Sheet1 State	Abc Sheet1 Sales Region	Abc Sheet1 New Expansion	# Sheet1 Marketing Spend	# Sheet1 Revenue
1	Peoria	Arizona	Region 2	Old	2,601	48,610
2	Midland	Texas	Region 2	Old	2,727	45,689
3	Spokane	Washington	Region 2	Old	2,768	49,554
4	Denton	Texas	Region 2	Old	2,759	38,284
5	Overland Park	Kansas	Region 2	Old	2,869	59,887
6	Yonkers	New York	Region 1	Old	3,080	53,827
7	Birmingham	Alabama	Region 1	Old	3,110	60,338
8	Antioch	California	Region 2	Old	2,593	19,569
9	Worcester	Massachusetts	Region 1	Old	2,675	59,840
10	Rochester	New York	Region 1	Old	2,984	64,906
11	Rialto	California	Region 2	Old	2,541	16,860
12	Santa Maria	California	Region 2	Old	2,651	21,988
13	Las Cruces	New Mexico	Region 2	Old	2,895	19,888

2.1. Revenue Per City Group By State



2.2. Avg Marketing Spend Per City Group by State

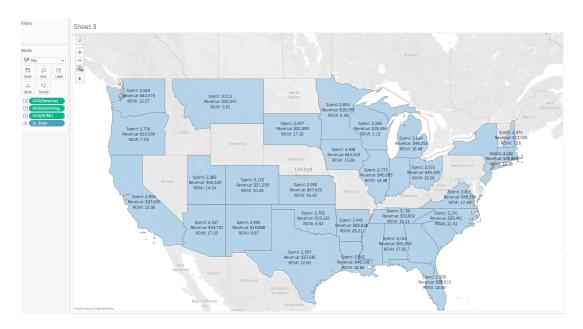


2.3. ROMI Per City Group by State

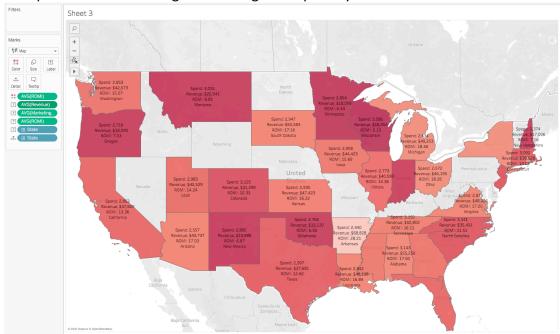
Create calculated filed Return On Marketing investment(ROMI) by:

[Revenue]/[Marketing Spend]

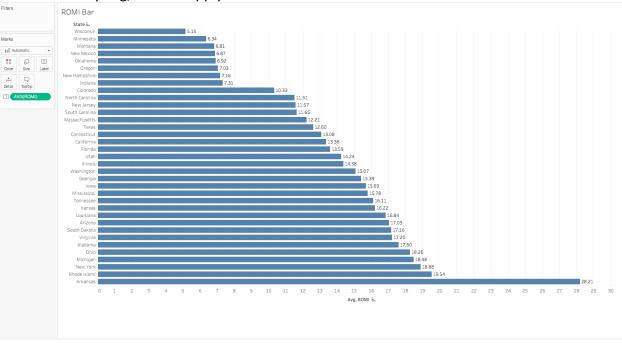
Add calculated filed ROMI into the map, and change the measure method into AVG



When paint states according to their Avg ROMI per city



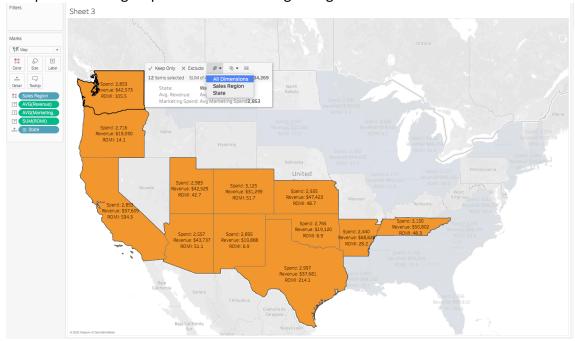
For easier analyzing, we can apply bar chart



3. Analyzing by Region

3.1. Group by clicking

Step1: Combine group members according to region



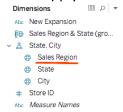
step2: Remove State from the map

We can see that the Avg ROMI for sales region2 is lower than the region1, which means that sales regions 2 has more potential for investment.

3.2. Method2 Group by creating geographic role from states

# Sheet1 Store ID	Sheet1 City	Number (decimal) Number (whole) Date & Time		Abc Sheet1 New Expansion	# Sheet1 Marke	eting Spend	# Sheet1 Revenue	=# Calculation ROMI	⋒⊕ Group Sales Region & St
1	Peoria			Old		2,601	48,610	18.6890	(Region 2, Arizona), (
2	Midland	Date ✓ String		Old		2,727	45,689	16.7543	(Region 2, Arizona), (
3	Spokane	Boolean		Old		2,768	49,554	17.9025	(Region 2, Arizona), (
4	Denton	✓ Default		Old		2,759	38,284	13.8760	(Region 2, Arizona), (
5	Overland Park	Geographic	Role ►	None		2,869	59,887	20.8738	(Region 2, Arizona), (
6	Yonkers	New York	Region 1	Airport Area Code (U.S.)		3,080	53,827	17.4763	Other
7	Birmingham	Alabama	Region 1	CBSA/MSA (U.S.)		3,110	60,338	19.4013	Other
8	Antioch	California	Region 2	City Congressional District (U.S	5.)	2,593	19,569	7.5469	(Region 2, Arizona), (
9	Worcester	Massachusetts	Region 1	Country/Region	.,	2,675	59,840	22.3701	Other
10	Rochester	New York	Region 1	County NUTS Europe		2,984	64,906	21.7513	Other
11	Rialto	California	Region 2	✓ State/Province		2,541	16,860	6.6352	(Region 2, Arizona), (
12	Santa Maria	California	Region 2	ZIP Code/Postcode		2,651	21,988	8.2942	(Region 2, Arizona), (
13	Las Cruces	New Mexico	Region 2	Create from	•	2,895	19,888	6.8698	(Region 2, Arizona), (
14	Jackson	Mississippi	Region 1	Old		3,466	54,701	15.7822	Other
15	Hillsboro	Oregon	Region 2	Old		2,686	18,471	6.8768	(Region 2, Arizona), (
16	Temecula	California	Region 2	Old		2,795	16,690	5.9714	(Region 2, Arizona), (
17	Tallahassee	Florida	Region 1	Old		2,737	47,729	17.4384	Other

Then apply then new dimension created



Add more information to the map:

