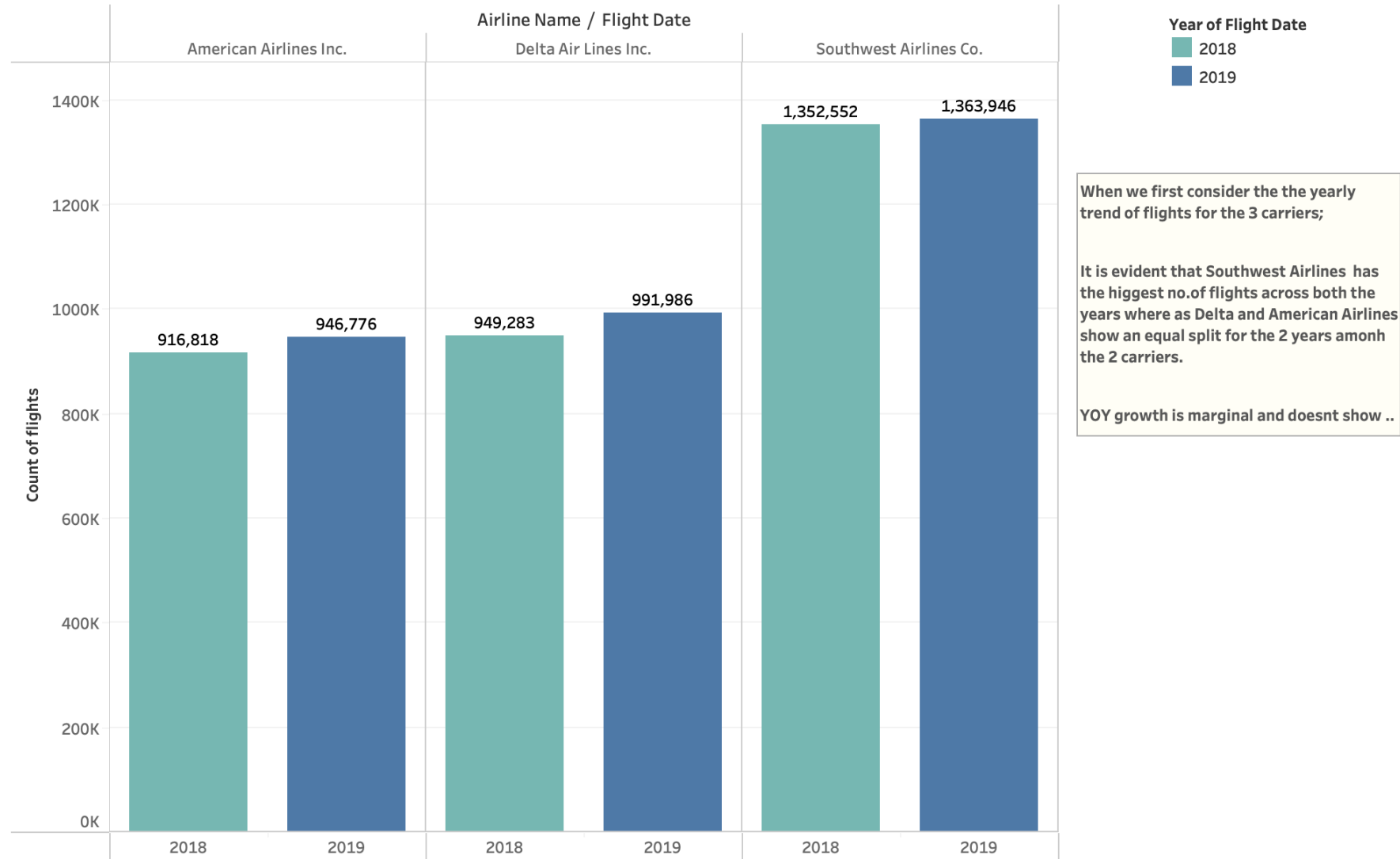


Flights Analysis (Tableau)

File created on: 2024-05-09 4:33:09 p.m. EDT

Analysis of the flight details of Southwest, Delta and American Airlines for 2018 & 2019

What is the yearly of no.of flights??	What is the monthly trend of no.of flights??	What are the top 10 airports with the most no.of flights??	What is the flight success % trend by month??	Who are the states highest and lowest avg. departure delays..	How is the average departure delay distributed across st..	What is the monthly t..
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Analysis of the flight details of Southwest, Delta and American Airlines for 2018 & 2019

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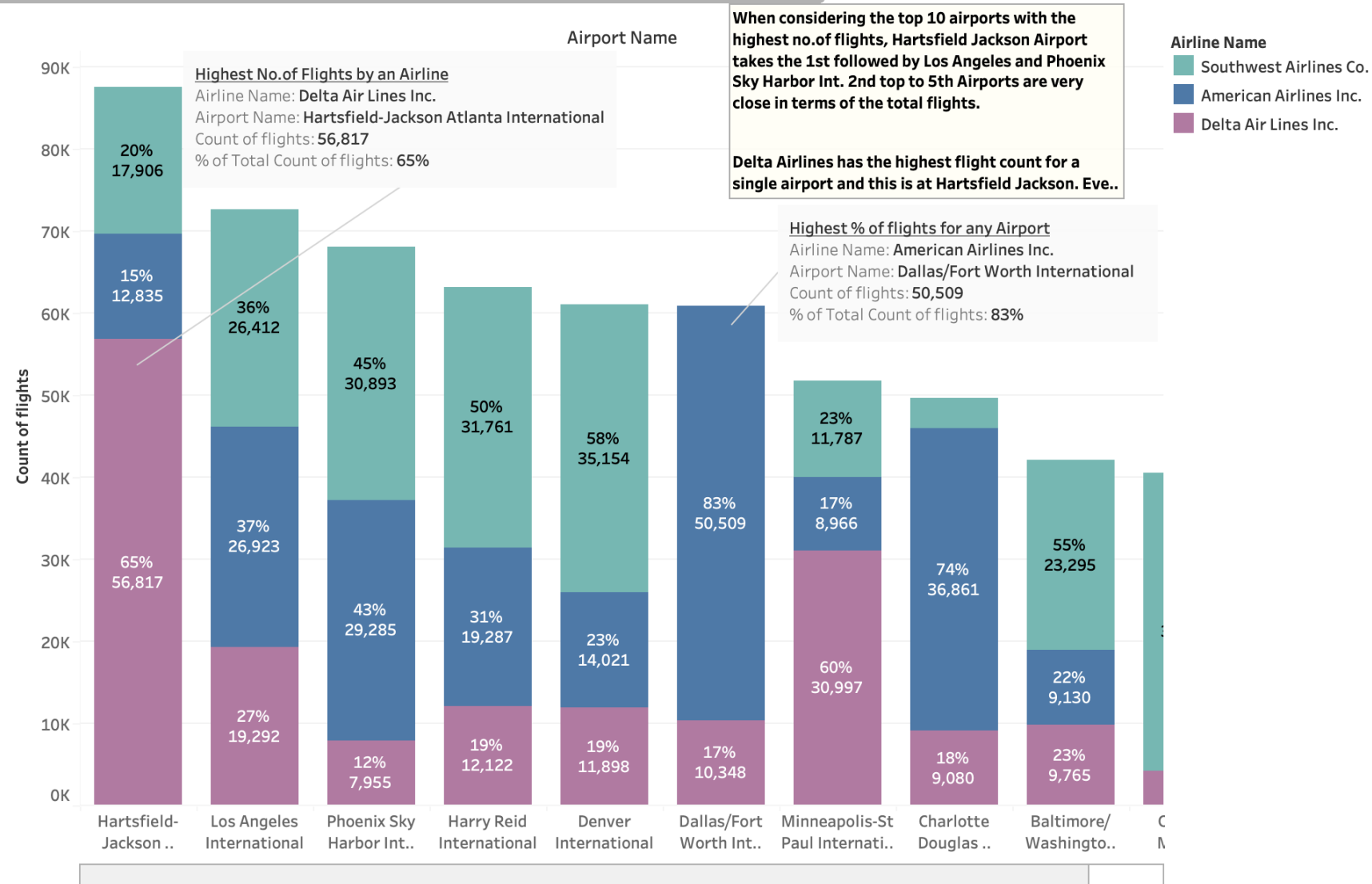
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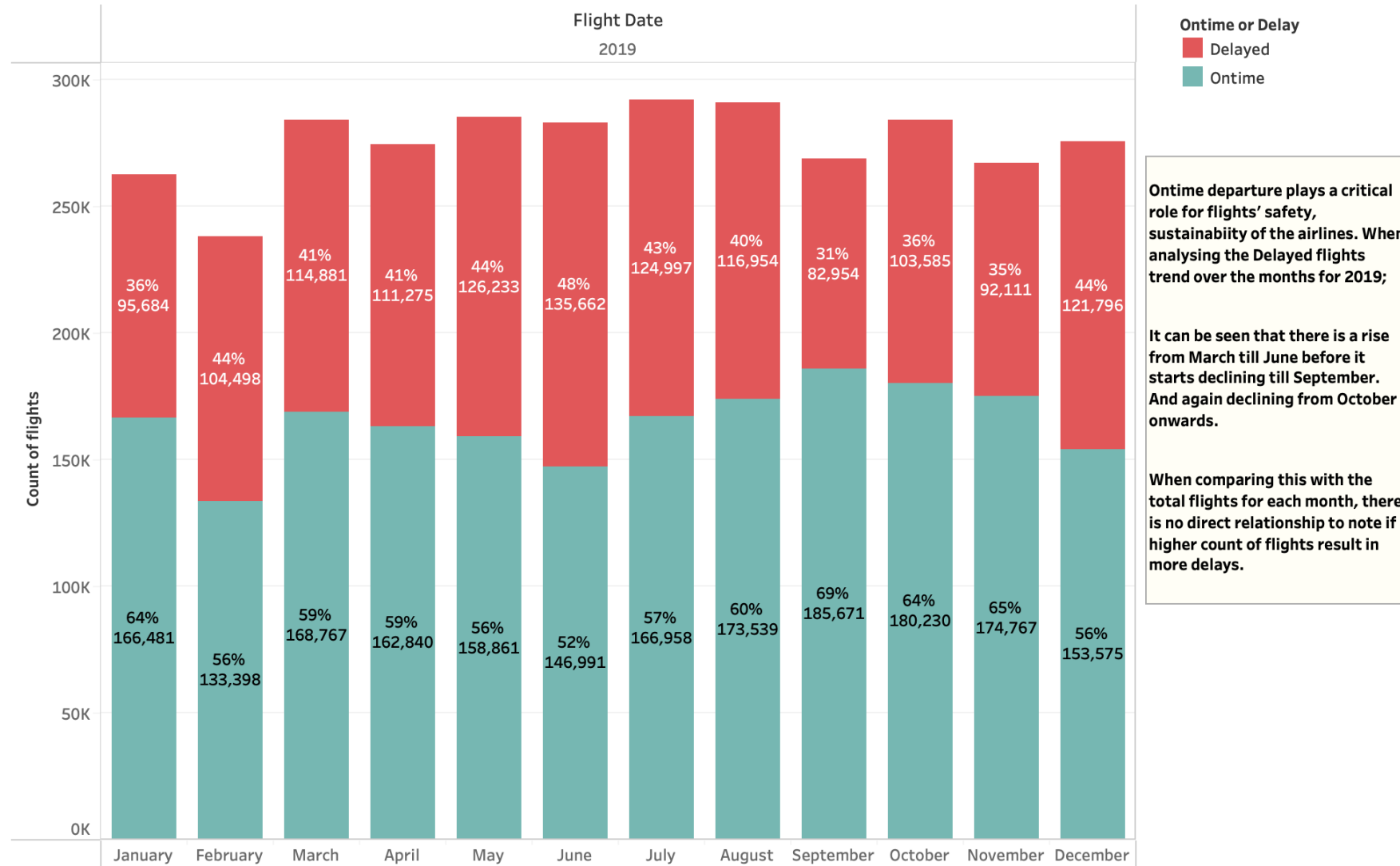
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How is the average departure delay distributed across st..

What is the monthly trend of cancelled flights and what are t..

What is the relationship between the avg. ..

State	Flight Date							
	2018				2019			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
North Dakota	77.11	81.65	103.92	36.39	91.00	42.46	23.92	36.38
West Virginia	35.63	74.25	55.43	98.06	87.75	55.50	14.06	23.07
Wyoming	34.27	70.38	46.10	85.54	84.66	51.86	74.03	52.40
South Dakota	84.56	64.81	35.43	44.78	61.34	39.46	80.00	57.38
Montana	55.13	50.46	38.18	50.69	55.18	40.67	46.93	52.26
Hawaii	52.03	53.32	59.89	53.51	52.62	46.73	53.29	42.25
New Jersey	39.49	51.70	59.84	38.85	47.99	62.78	62.56	46.92
Iowa	30.57	42.22	32.99	37.19	47.33	43.13	35.10	32.85
Massachusetts	33.30	37.17	43.33	35.28	47.18	41.34	42.94	40.22
Alaska	48.26	57.21	52.55	58.93	41.58	52.91	35.58	54.57
Maine	33.95	42.26	42.98	38.89	40.89	33.61	35.47	25.02
U.S. Virgin Islands	31.20	38.21	65.87	48.63	39.91	31.14	42.65	45.93
Minnesota	30.82	34.82	35.45	25.46	38.95	35.36	38.24	29.23
Washington	24.78	26.31	29.36	29.32	38.82	30.25	29.04	27.72
New York	36.34	40.71	47.50	33.93	38.80	46.93	53.03	35.89
South Carolina	37.66	40.70	37.07	31.96	38.45	40.52	41.44	27.04
Mississippi	33.07	38.80	63.91	39.34	36.64	37.17	40.90	36.91
Virginia	33.82	39.75	41.16	31.36	35.50	40.96	41.04	30.87
New Hampshire	30.97	26.57	35.89	29.23	35.12	31.78	33.05	25.68
Puerto Rico	27.36	31.51	43.20	34.21	34.72	40.88	37.10	32.86
Pennsylvania	29.67	35.70	41.67	31.63	34.58	41.32	42.78	32.50
Michigan	34.23	33.08	34.33	24.85	34.46	36.53	39.39	28.92
Illinois	25.07	33.04	33.82	26.98	34.16	35.75	36.10	26.09
Rhode Island	26.77	33.45	33.89	30.68	32.35	40.91	35.03	27.92
Kansas	40.86	32.55	38.51	24.46	31.91	43.18	31.40	31.62
Florida	29.25	36.54	42.23	30.66	31.46	40.18	41.91	27.83
Indiana	31.49	37.49	32.31	27.73	31.42	35.00	32.69	25.40

Avg. Dep Delay



11.55 103.92

Further analysing the performance of sates, his crossmap indicates a distribution of avg departure delays across both states and time periods of the year.

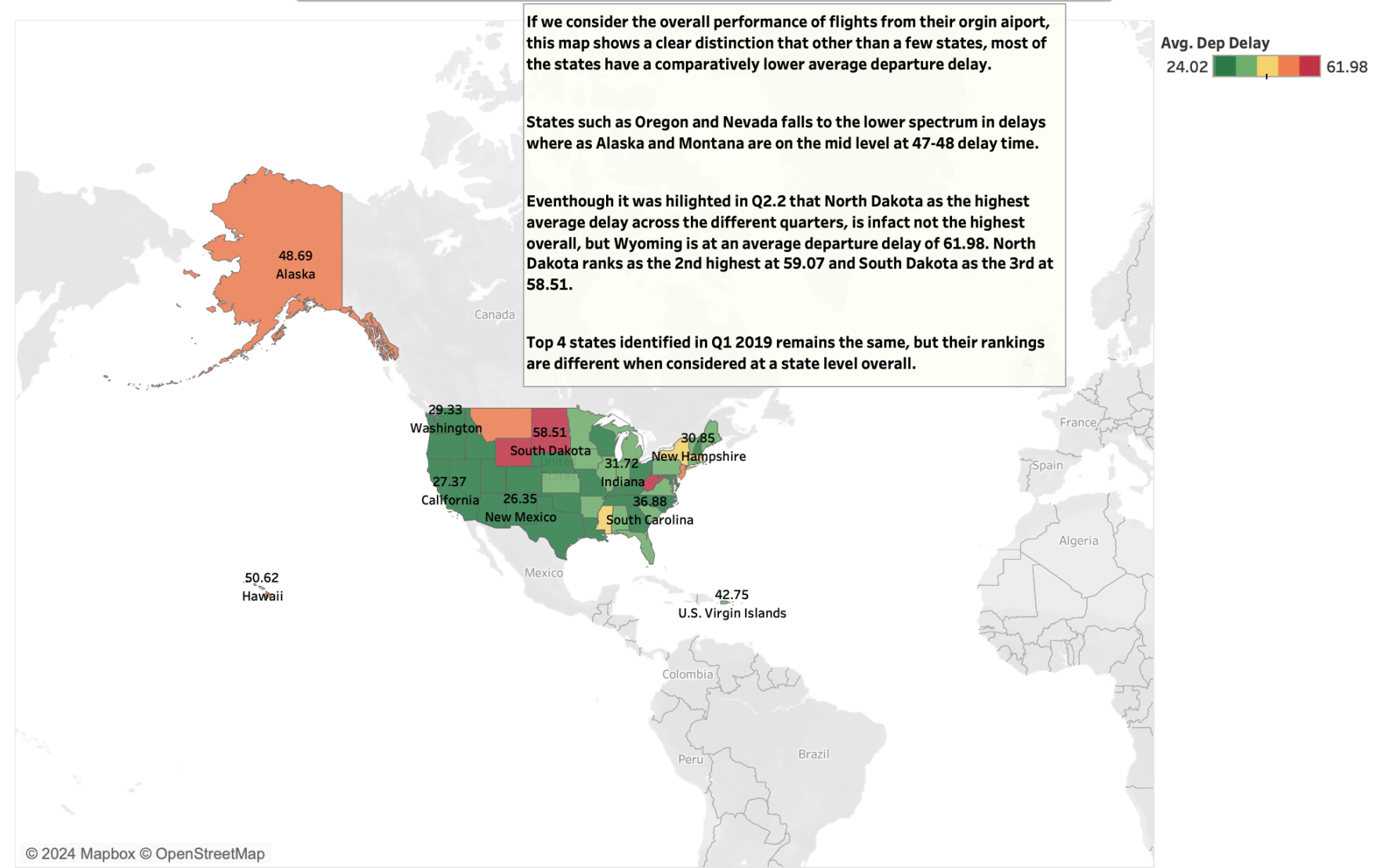
It can be seen that North Dakota has the highest average delay time and this was in 2018 Q3. Overall North Dakota has a higher average delay across 2018 Q1 to Q3 and also the highest in 2019 Q1.

North Dakota, West Virginia and Wyoming are the top 3 in terms of average departure delays in 2019 Q1.

As per the research, one of the main reasons for flight distruptions is due to the gap of pilots, air traffic controllers and mechanics causing not being able to meet the demand of the sold tickets.

Analysis of the flight details of Southwest, Delta and American Airlines for 2018 & 2019

What are the top 10 airports with the most ..	What is the flight success % trend by month??	Who are the states highest and lowest avg. departure delays..	How is the average departure delay distributed across st..	What is the monthly trend of cancelled flights and what are t..	What is the relationship between the avg. air time & av..	What is the YOY growth for no.of airplanes and dist..
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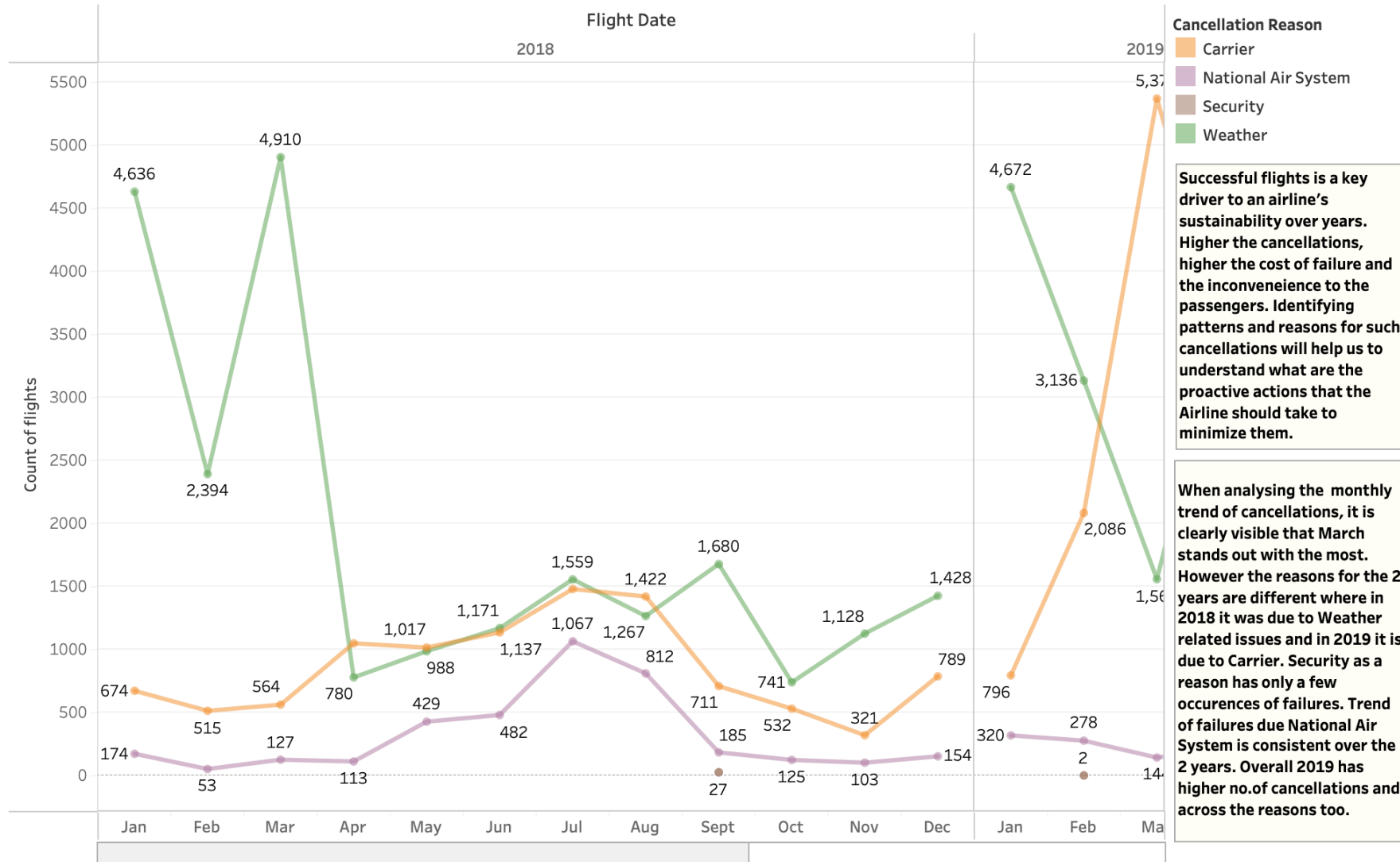
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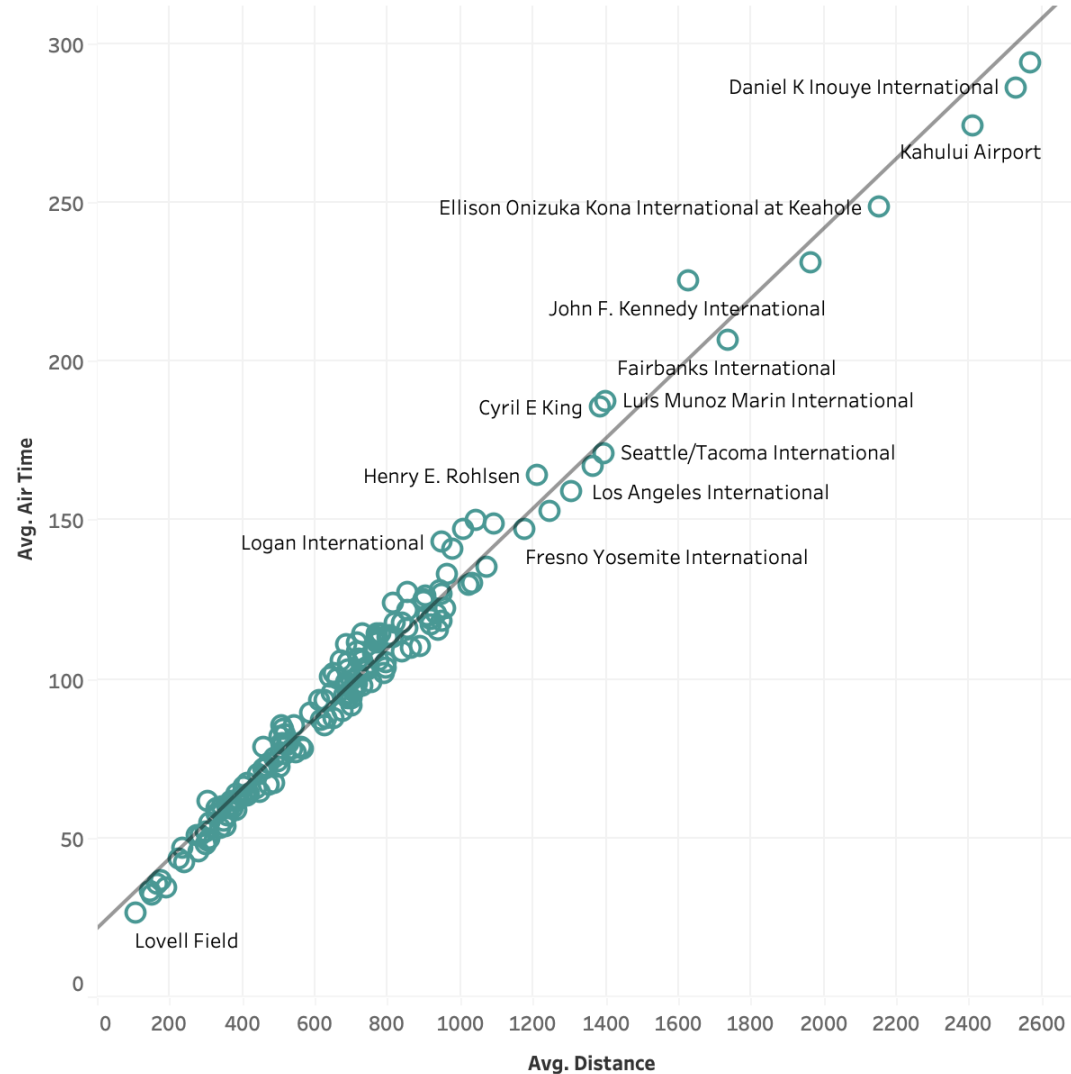
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What is the efficiency of the Airline by distance travelled/pl..

How are the states performing against the avg departure..



It is important to understand the relationship between distance travelled and the avg air time to gauge the fuel cost of the airlines.

This graph shows the relationship between the avg. air time with the avg. distance. There is a clear identification that higher the distance higher the avg air time is for all the airports. And this trend is true for all the airports.

Analysis of the flight details of Southwest, Delta and American Airlines for 2018 & 2019

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	Flight Date							
	No.of Airplanes		YOY No.of Airplanes Growth %		Total Distance Travelled		YOY Total Distance Travelled Growth %	
Airline Name	2018	2019	2018	2019	2018	2019	2018	2019
American Airlines Inc.	968	978		1.03%	933,094,276	938,328,443		0.56%
Delta Air Lines Inc.	900	940		4.44%	842,409,169	889,277,534		5.56%
Southwest Airlines Co.	750	753		0.40%	1,012,847,097	1,011,583,832		-0.12%

When analysing how the airlines have increased their fleet and the no.of flights ny 2019;

Delta Airlines who shows the highest YOY growth % for Airplanes and has a higher growth % for the total distance travelled in 2019 indicating that the investments done for a higher fleet has compensated with the distance travelled.

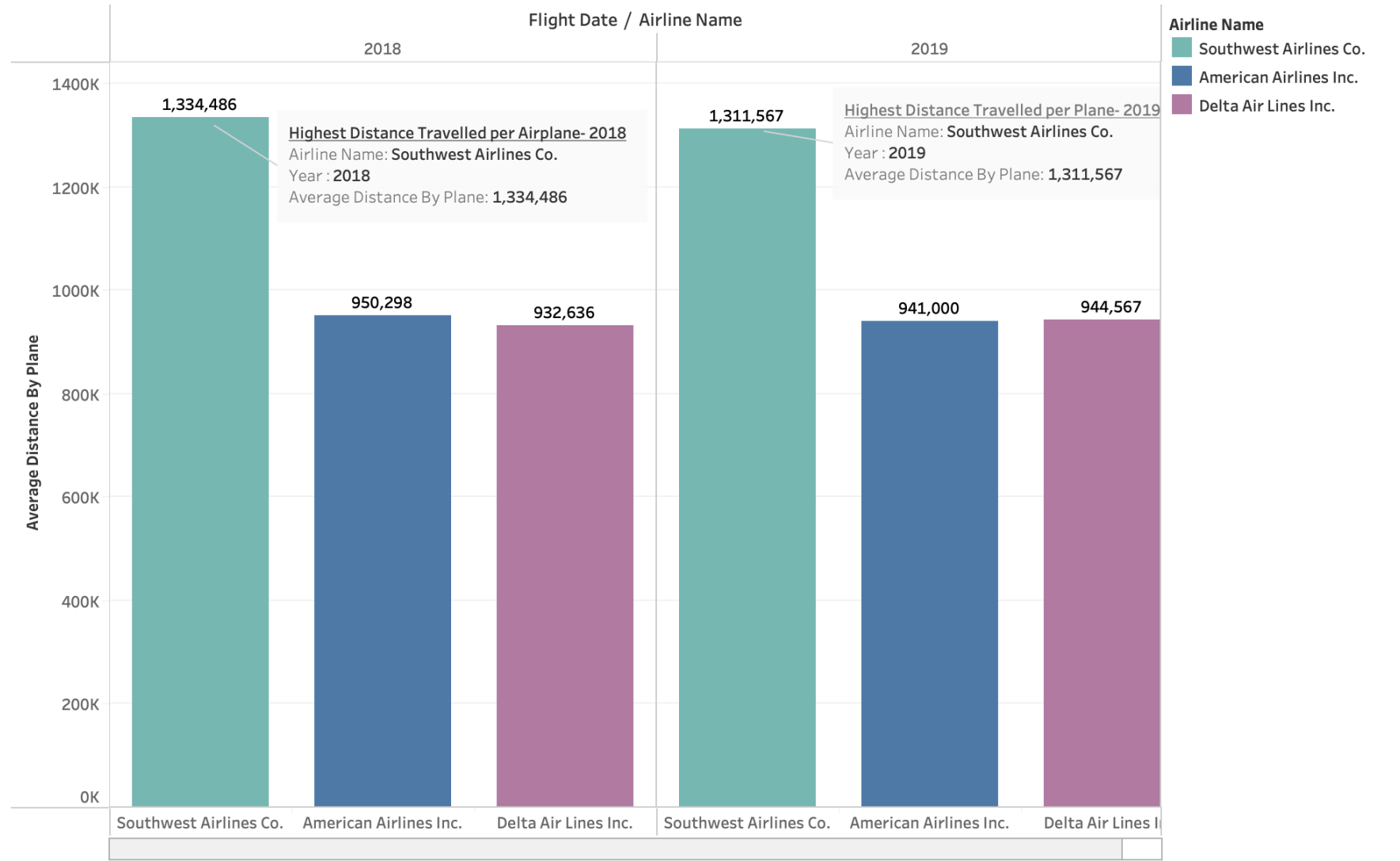
However Southwest Airlines shows a negative YOY growth for distance eventhough they have a 0.4% more airplanes in 2019 with 3 more airplanes than 2018. This implies that despite the higher number of flights in 2019 (Q1.1 finding), their distance of the trips, could be the driving factor for this drop.

American Airlines doesn't show an equal growth in distance travelled when compared to the the Airplanes number increased, however without further data, it is not possible to conclude whether there should be a proportionate growth in the 2 factors as well.

It could be that the older fleet may not be operating at the most optimal level hence the number of airplanes increased, but not necessarily the distance travelled will increase in the same pattern.

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