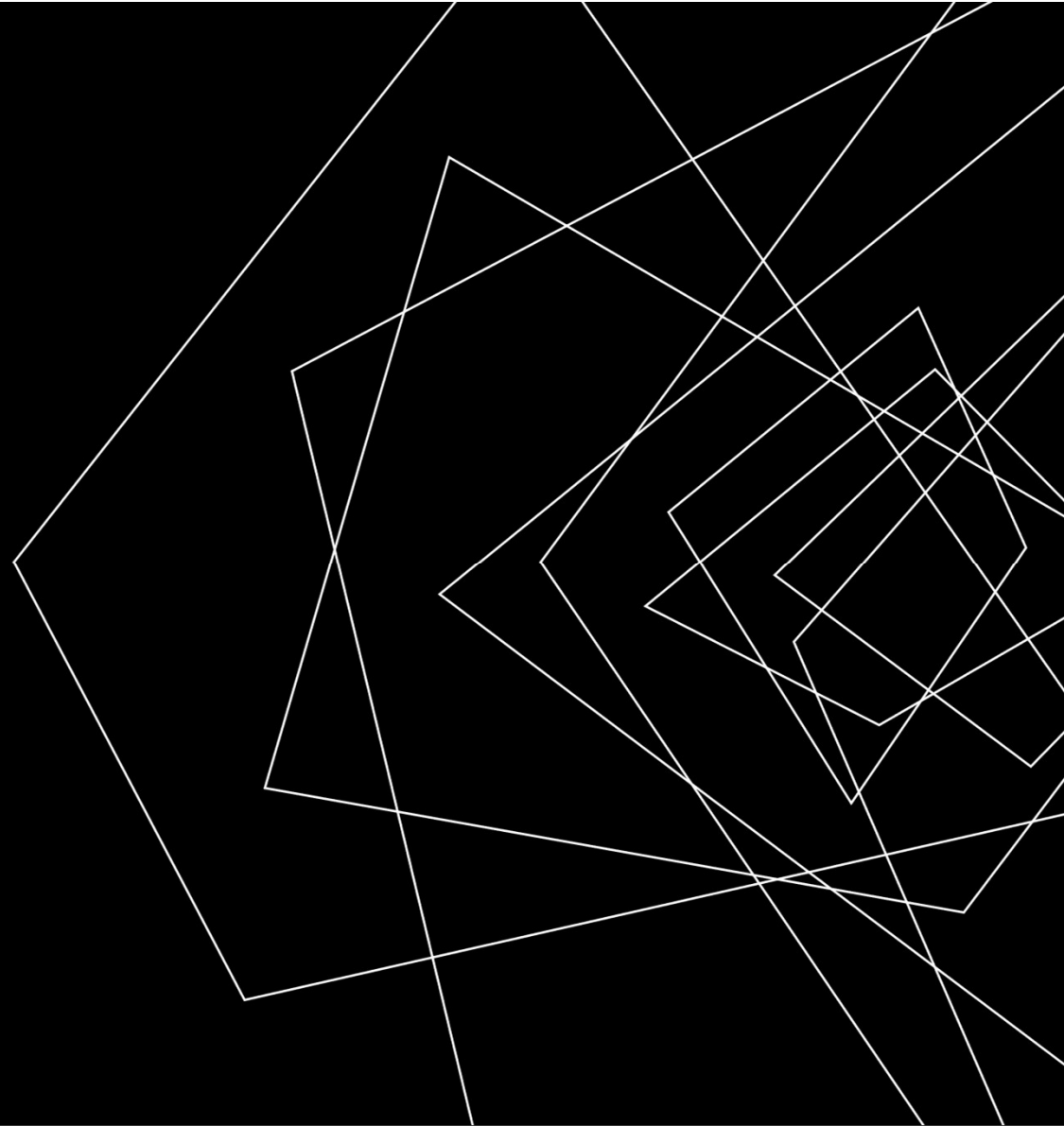


METRO BIKE SHARE

Q1 2022 Analysis

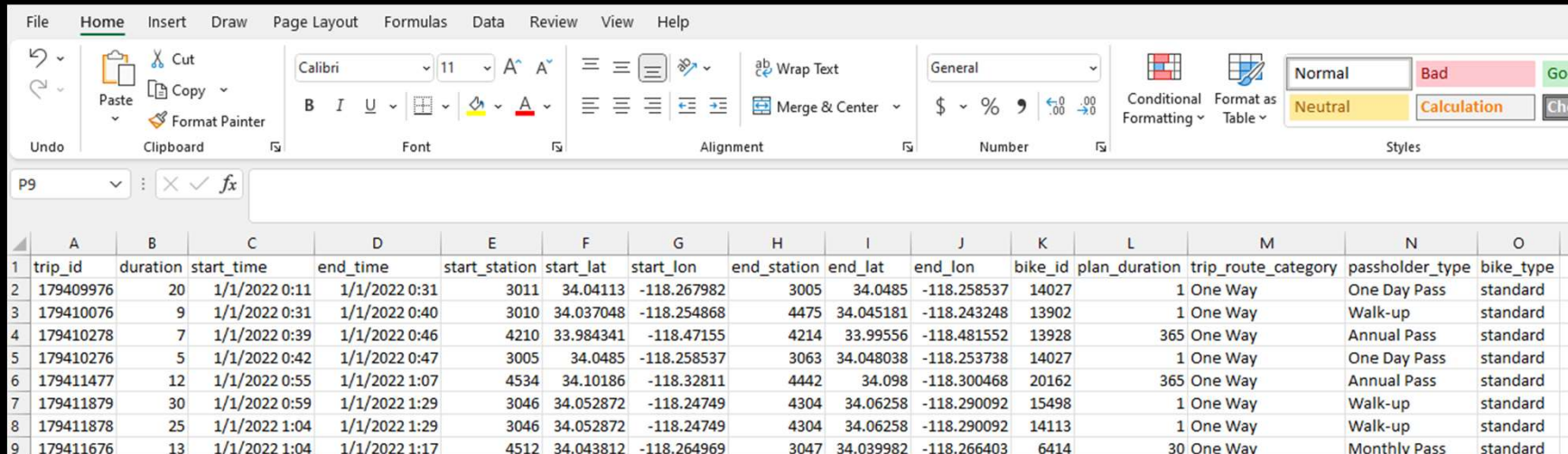
ABOUT THE PROGRAM

The Metro Bike Share system makes bikes available 24/7, 365 days a year in Downtown LA, Central LA, Hollywood, North Hollywood and on the Westside. Metro Bike Share offers convenient round-the-clock access to a fleet of bicycles for short trips. Metro Bike Share is one of LA Metro's multiple public transportation options for Angelenos and visitors to get around.



THE DATA

<https://bikeshare.metro.net/about/data/>



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
	trip_id	duration	start_time	end_time	start_station	start_lat	start_lon	end_station	end_lat	end_lon	bike_id	plan_duration	trip_route_category	passholder_type	bike_type
1	179409976	20	1/1/2022 0:11	1/1/2022 0:31	3011	34.04113	-118.267982	3005	34.0485	-118.258537	14027	1	One Way	One Day Pass	standard
3	179410076	9	1/1/2022 0:31	1/1/2022 0:40	3010	34.037048	-118.254868	4475	34.045181	-118.243248	13902	1	One Way	Walk-up	standard
4	179410278	7	1/1/2022 0:39	1/1/2022 0:46	4210	33.984341	-118.47155	4214	33.99556	-118.481552	13928	365	One Way	Annual Pass	standard
5	179410276	5	1/1/2022 0:42	1/1/2022 0:47	3005	34.0485	-118.258537	3063	34.048038	-118.253738	14027	1	One Way	One Day Pass	standard
6	179411477	12	1/1/2022 0:55	1/1/2022 1:07	4534	34.10186	-118.32811	4442	34.098	-118.300468	20162	365	One Way	Annual Pass	standard
7	179411879	30	1/1/2022 0:59	1/1/2022 1:29	3046	34.052872	-118.24749	4304	34.06258	-118.290092	15498	1	One Way	Walk-up	standard
8	179411878	25	1/1/2022 1:04	1/1/2022 1:29	3046	34.052872	-118.24749	4304	34.06258	-118.290092	14113	1	One Way	Walk-up	standard
9	179411676	13	1/1/2022 1:04	1/1/2022 1:17	4512	34.043812	-118.264969	3047	34.039982	-118.266403	6414	30	One Way	Monthly Pass	standard

Some formulas used for cleaning:

- Text to Columns (separate out date / times)
- FLOOR (put times into 1-hour buckets)
- TEXT (assign day of the week based on date)
- XLOOKUP (add in station names based on id)

HYPOTHESIS

For the users that hold either an 'Annual Pass' or 'Monthly Pass', we might discover that there is a concentration of users starting their rides on weekdays and between the hours of 7-10 am & 3-6 pm. If these users are more likely than not commuter users and we see a concentration of these users starting at stations within a close radius of each other, should we recommend to the marketing team to focus their efforts for the these passes near the top 12 starting stations to drive more revenue?

HEAT MAPS

No. of rides by time / day

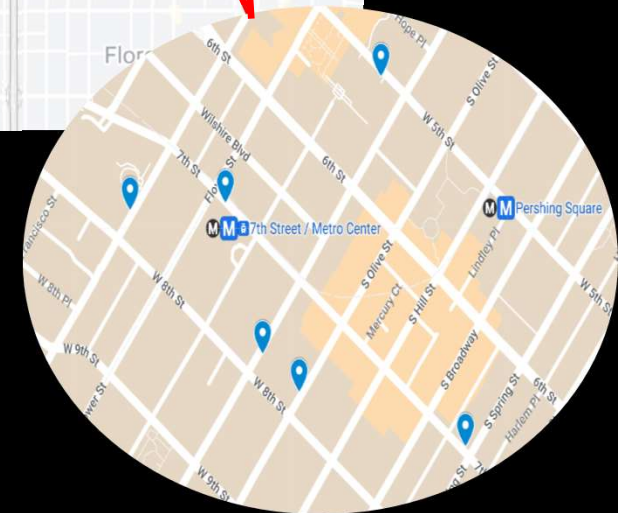
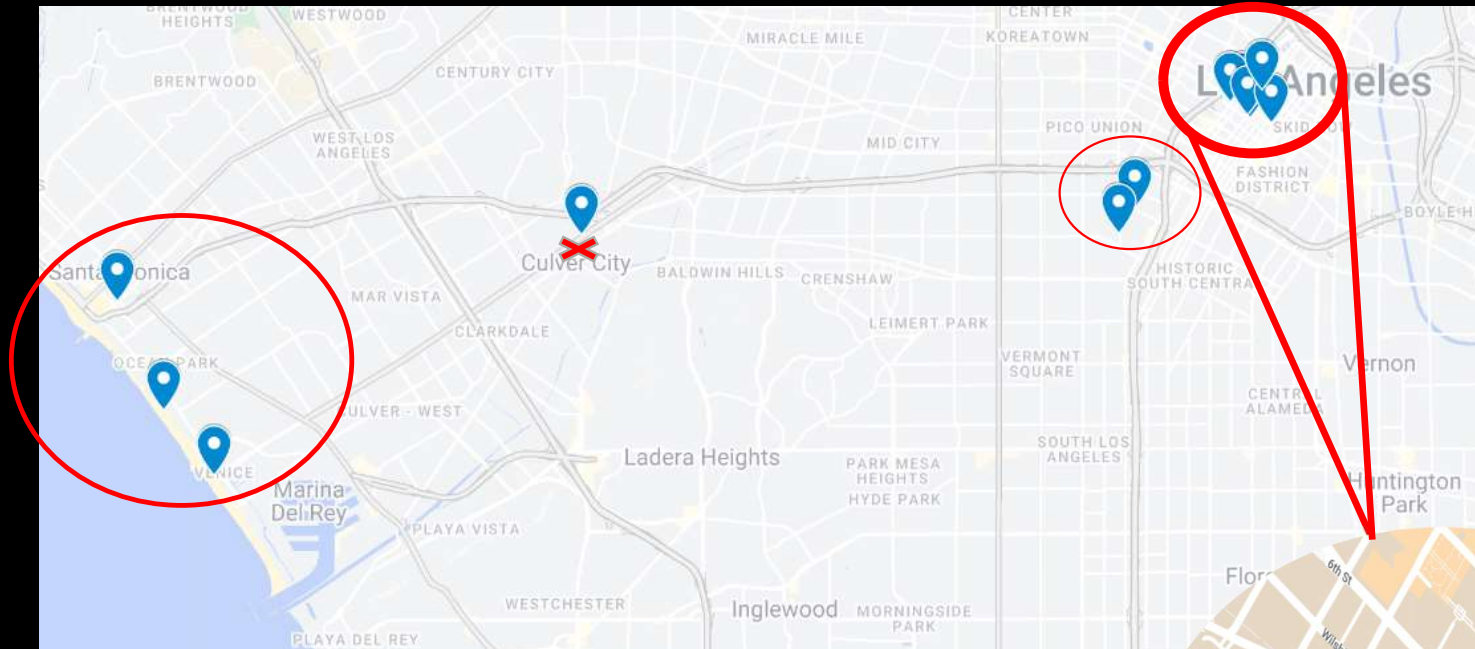
Hour	Monday	Tuesday	Wednesday	Thursday	Friday
12 AM	45	39	59	59	42
1 AM	19	21	29	28	33
2 AM	22	18	21	15	29
3 AM	14	16	14	15	10
4 AM	21	33	26	34	25
5 AM	15	20	17	16	18
6 AM	83	119	104	108	97
7 AM	164	172	191	180	134
8 AM	283	265	310	299	229
9 AM	286	366	332	369	370
10 AM	342	319	359	350	406
11 AM	486	499	492	510	503
12 PM	592	581	550	579	610
1 PM	569	600	629	666	662
2 PM	563	620	588	617	597
3 PM	682	577	640	612	645
4 PM	595	704	681	687	736
5 PM	668	658	698	720	650
6 PM	578	542	648	589	636
7 PM	507	458	539	491	510
8 PM	319	318	335	322	318
9 PM	237	211	237	210	234
10 PM	120	119	125	121	162
11 PM	73	87	86	101	128
Total	7,283	7,362	7,710	7,698	7,784

No. of rides by time / pass type

Hour	Annual Pass	Monthly Pass	One Day Pass	Walk-up
12 AM	44	125	21	54
1 AM	18	74	18	20
2 AM	10	55	21	19
3 AM	5	39	11	14
4 AM	9	115	7	8
5 AM	16	49	13	8
6 AM	74	355	22	60
7 AM	200	476	33	132
8 AM	217	832	68	269
9 AM	224	997	137	365
10 AM	130	942	235	469
11 AM	178	1,421	303	588
12 PM	240	1,656	324	692
1 PM	311	1,717	317	781
2 PM	246	1,552	303	884
3 PM	294	1,623	330	909
4 PM	393	1,783	285	942
5 PM	447	1,869	230	848
6 PM	399	1,808	194	592
7 PM	297	1,631	135	442
8 PM	210	1,054	68	280
9 PM	165	722	38	204
10 PM	108	374	28	137
11 PM	65	238	32	140
Total	4,300	21,507	3,173	8,857

- Monday to Friday only
- Every Pass Type

TOP 12 STATIONS



- Monday to Friday
- 7 AM to 6 PM
- Passholders only

7th & Flower	766	DTLA
Figuerroa & 8th	716	DTLA
Downtown Santa Monica E Line Station	548	Westside
Ocean Front Walk & Navy	546	Westside
Olive & 8th	457	DTLA
Severance & Adams	405	DTLA
Ocean Front Walk & North Venice	403	Westside
Grand & 8th	380	DTLA
7th & Spring	330	DTLA
5th & Grand	318	DTLA
Hoover & 32nd	315	DTLA
Bagley & Venice	261	Westside

HEAT MAPS

No. of rides by time / day

Hour ▾	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
12 AM	95	45	39	59	59	42	93
1 AM	76	19	21	29	28	33	93
2 AM	57	22	18	21	15	29	63
3 AM	40	14	16	14	15	10	28
4 AM	20	21	33	26	34	25	14
5 AM	8	15	20	17	16	18	9
6 AM	35	83	119	104	108	97	51
7 AM	74	164	172	191	180	134	86
8 AM	206	283	265	310	299	229	199
9 AM	342	286	366	332	369	370	367
10 AM	472	342	319	359	350	406	552
11 AM	737	486	499	492	510	503	596
12 PM	781	592	581	550	579	610	789
1 PM	884	569	600	629	666	662	844
2 PM	916	563	620	588	617	597	937
3 PM	914	682	577	640	612	645	882
4 PM	790	595	704	681	687	736	890
5 PM	761	668	658	698	720	650	779
6 PM	518	578	542	648	589	636	600
7 PM	437	507	458	539	491	510	460
8 PM	288	319	318	335	322	318	310
9 PM	212	237	211	237	210	234	230
10 PM	151	120	119	125	121	162	171
11 PM	99	73	87	86	101	128	156
Total	8,913	7,283	7,362	7,710	7,698	7,784	9,199

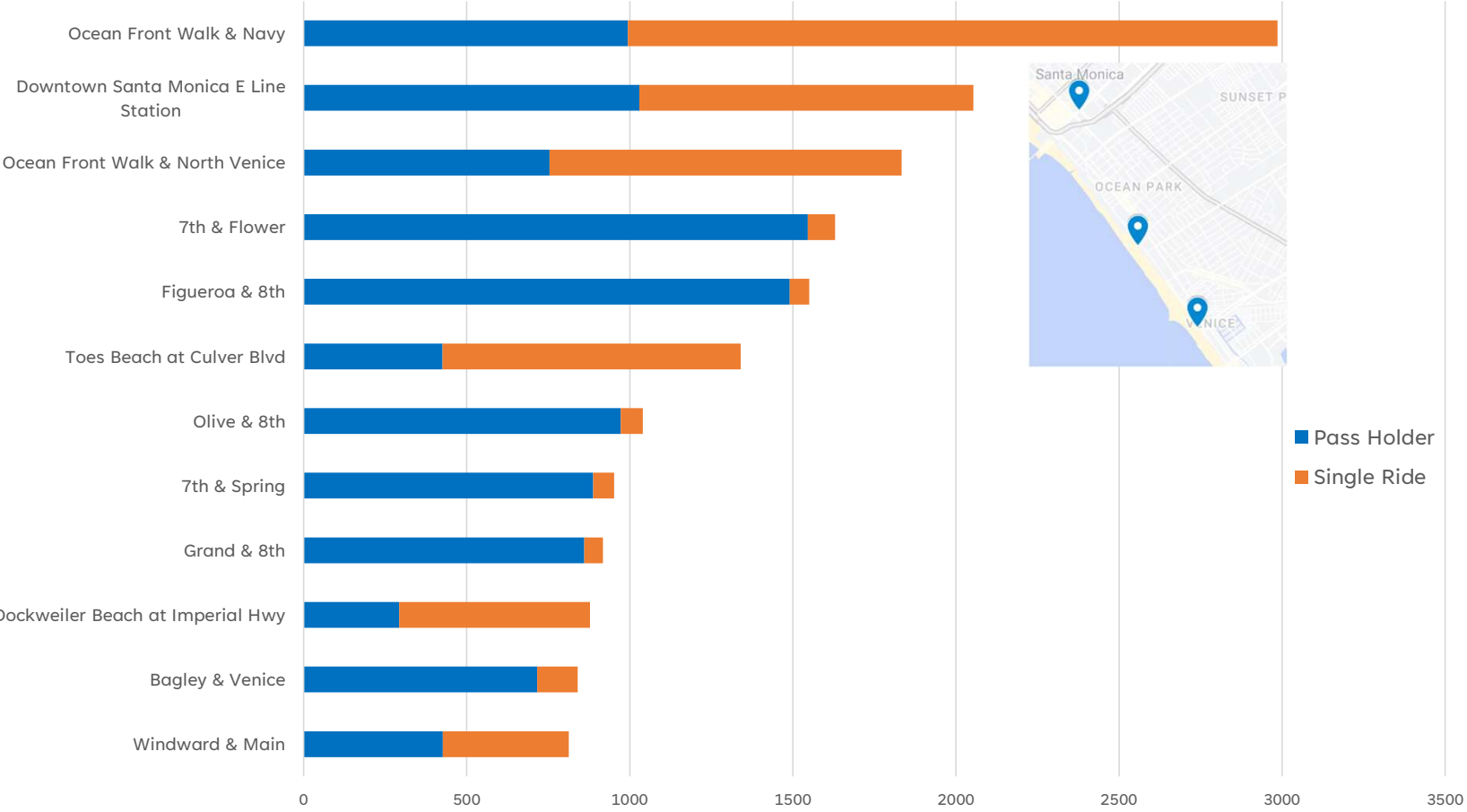
No. of rides by time / pass type

Hour ▾	Annual Pass	Monthly Pass	One Day Pass	Walk-up
12 AM	64	218	41	109
1 AM	48	139	34	78
2 AM	18	115	34	58
3 AM	9	77	22	29
4 AM	18	127	15	13
5 AM	19	54	14	16
6 AM	101	379	37	80
7 AM	204	571	51	175
8 AM	248	1,011	141	391
9 AM	318	1,302	237	575
10 AM	209	1,382	393	816
11 AM	274	1,931	506	1,112
12 PM	352	2,225	614	1,291
1 PM	472	2,334	571	1,477
2 PM	361	2,222	607	1,648
3 PM	431	2,274	623	1,624
4 PM	496	2,435	546	1,606
5 PM	543	2,572	415	1,404
6 PM	482	2,400	298	931
7 PM	372	2,158	196	676
8 PM	273	1,409	111	417
9 PM	207	974	70	320
10 PM	165	537	57	210
11 PM	98	365	47	220
Total	5,782	29,211	5,680	15,276

- All Days
- Every pass type

TOP 12 STATIONS

- All Days
- All Hours
- Pass Holder vs Single Ride



CONCLUSION

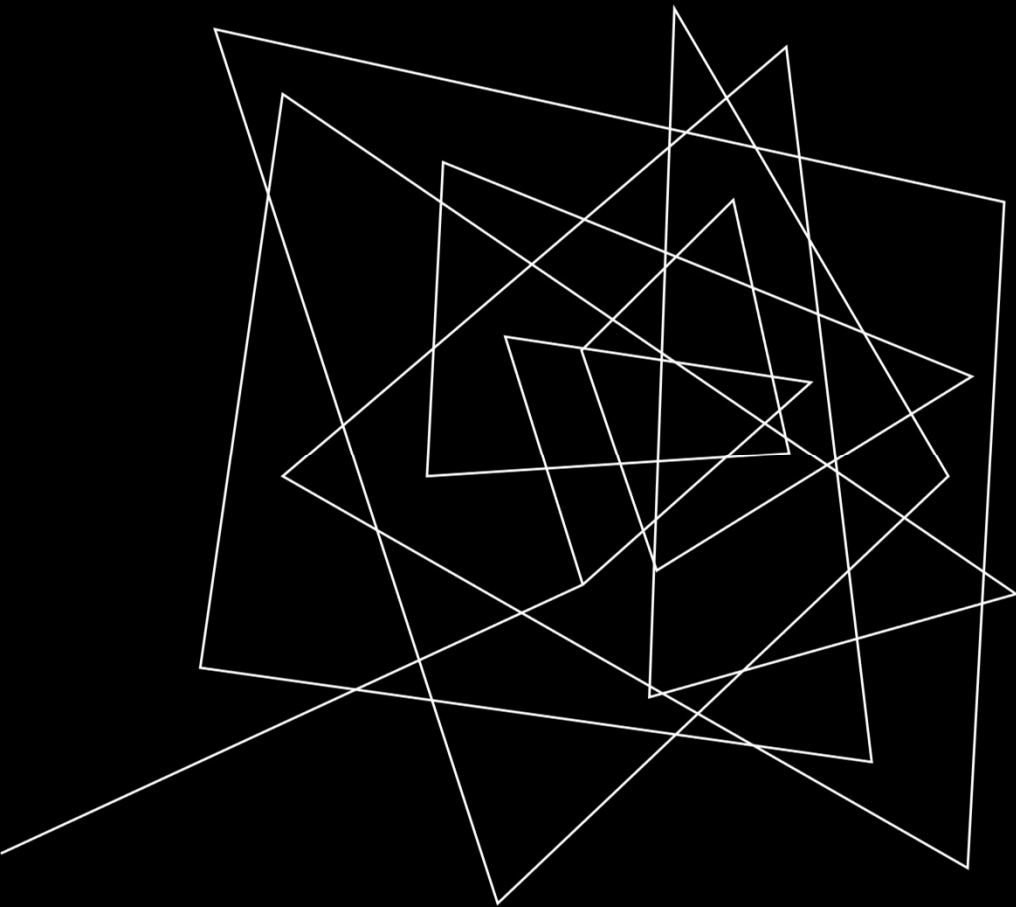
- Recommending that canvassing for promotions and marketing materials for the Annual & Monthly passes should be focused near **Downtown / Financial District**, and the areas surrounding the **USC campus**.
- For Single Rides, the area of focus should be near the **Santa Monica / Venice** areas as well as all the entry points to LA like **airports, train & bus stations**.





IF I HAD MORE TIME...

- Exploring the behavior of One-way vs Round trips. Could there be patterns here that could optimize where staff are moving bikes around at the beginning or end of a day?
- Is there a tendency of users to choose an electric vs standard bike in certain areas? Should we invest in more inventory of one over the other because of this?
- Knowing that the Annual & Monthly passes get the first 30 minutes free, are we pricing these passes correctly based on the average trip duration? Do our customer perceive the value of signing up for these passes?



THANK YOU!