



ZOLA CABS CASE STUDY

For @india**gold**

The following case study is designed to simulate a real working environment. You are the Vice President of Operations and report directly to the co-founders of the company. Please go through the case information provided below and answer the questions mentioned at the end. You will be judged on a variety of parameters such as attention to detail, analytical thinking, structuring of thoughts and problem solving ability among other factors. Kindly share your answers in a Word/ PDF document via email to hello@indiagold.co with the subject line as "Business Analyst: Zola Cabs Case Study" within 5 days of receiving this case study. Please use only the information provided in the case material. Should you make any assumptions/ use an alternate data source, please specify the same explicitly or share the data/ data source in the Appendix of your submission document or as footnotes.

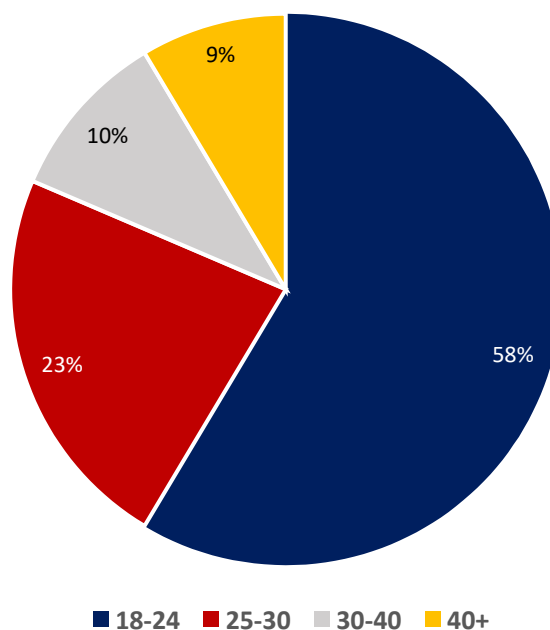
CASE MATERIAL:

Zola Cabs (Zola) is a Transport Network Company (TNC) providing ride hailing services, using an Android and iOS mobile application to match passengers with drivers. It also recently launched a bike-sharing service. Zola operates in only 1 country – LaLa Land, a large populous middle income country with roughly 50% of its population residing in urban areas. The official currency of LaLa Land is Rupee (₹). There is an acute traffic problem in La La land especially as commuters [often get off their vehicles and start dancing in the middle of the road.](#)

COMMON INDUSTRY TERMS:

- **Ride hailing:** The term ride hailing covers a myriad services, including the traditional taxicab services and the emerging app based businesses which offer booking a cab via an app/ website.
- **Ride sharing:** Many TNCs which provide ride hailing services also provide ride sharing services where more than one passengers can share a vehicle at a single point of time. Ride sharing is driven by an algorithm that matches passengers together on the basis of a Similarity Score matching the kilometres and time plied on a common route in a way that maximises the net revenue from the product. From a product perspective a single Ride Sharing Trip can comprise of multiple User Trips. Ride sharing is a growing option in the TNC business though a majority of its revenue still comes from the ride hailing trips.

Age wise split of users availing ride sharing

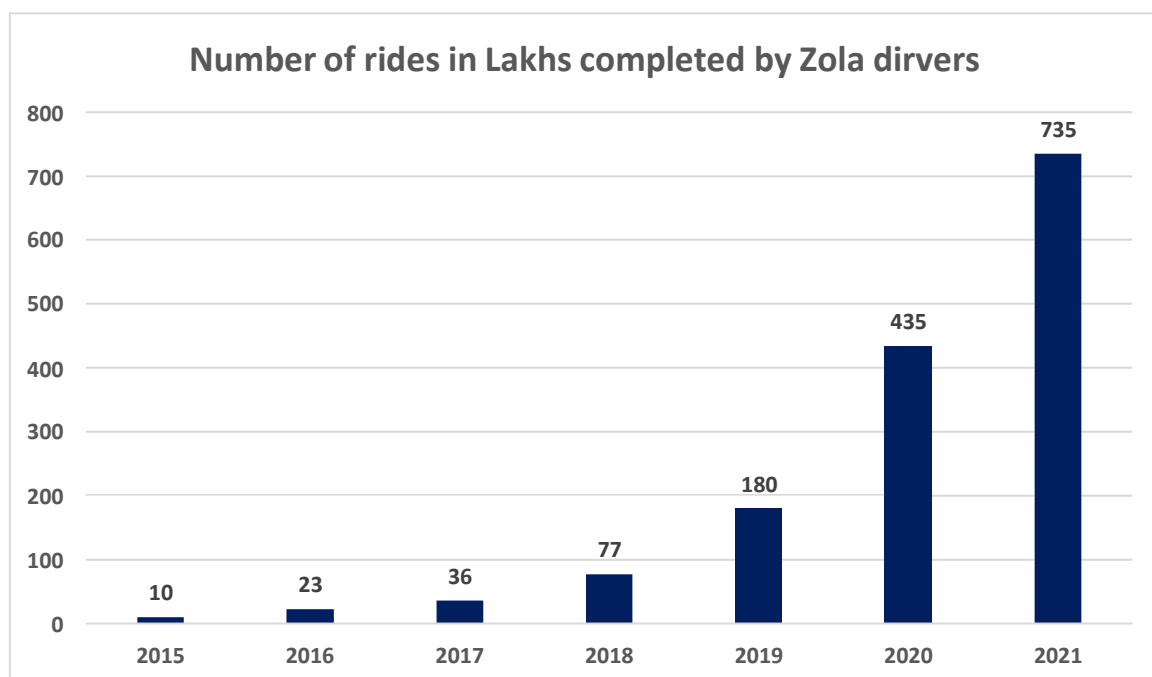


COMPANY BACKGROUND:

Zola Cabs was started by Nitant Mishra and Deep Abbor in 2014. The idea for starting Zola Cabs came about when Nitant and Deep would have to travel across the Capital city of La La Land every day and they couldn't find a convenient and inexpensive transport option for commuting. By piloting with an Android app in 2015, they were able to operate a few cars around Capital city to test the service out initially as a ride sharing facility where riders could find other passengers travelling to nearby destinations. A commuter travelling in the same direction could find other riders and then on board them as co-riders. No drivers were onboarded until 2014 when Zola was subsequently registered as a TNC.

Between 2015 and 2021, Zola raised \$1.8 bn (weighted average, \$1= ₹72). Investors have been attracted by the growth prospects and future returns of the company. By the end of 2021, Zola was operating its ride hailing services in over 200 towns and cities throughout La La Land and had 10 million registered users.

The company has 1,400 employees. Most of these are employed at its headquarters located in Capital city and work in engineering (40%), product management (10%), customer services (20%), business development and operations (20%), and other verticals (10%). Drivers are onboarded as independent contractors.



2021 is projected*

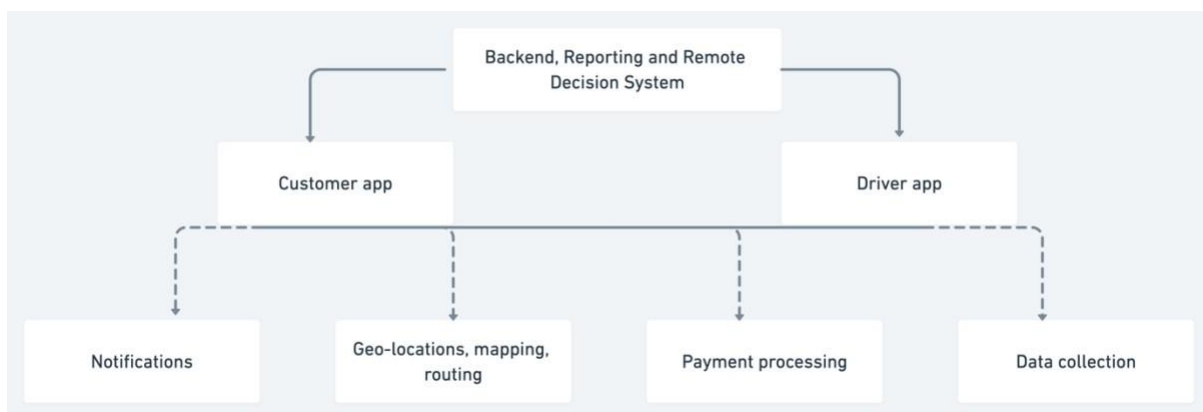
BUILDING AND OPERATING A CUSTOMER CENTRIC BUSINESS:

“If you make customers unhappy in the physical world, they might each tell six friends. If you make customers unhappy on the internet, they can each tell 6,000” – Jeff Bezos (Founder and CEO, Amazon)

Zola prides itself on customer centricity – negative customer feedback is taken seriously on priority as part of the company culture. It is constantly trying to improve the product and operations to ensure customer safety, reduce cancellations, increase retention and eliminate scope for fraud. Given the early stages of the company it also runs a strong referral program combined with several offers depending on identified customer segments.

PRODUCT/ PROCESS:

Behind the website and apps, there is a complex network of continually interacting software, supporting the operation of the services offered.



Relatively static data held about drivers includes their driving licence number, insurance details, car registration details, bank details and home address. There is also dynamic data generated continually whilst drivers are working including driver ratings, number of kilometres driven, average journey time, and car speed. The Zola AWS database captures all this information as it happens and can use it to provide analyses of driver activities for performance monitoring and market intelligence purposes. Occasionally, the database management team at Zola undertakes one-off analysis of information such as car speed per driver. Customer data is collected from the point of registration, where customers are asked for their name, home address, email, date of birth and mobile phone number. Customers will also provide payment information at this point that will be automatically used when they take a ride with Zola. The Zola-D database also stores dynamic customer data including information about each journey taken. Data about journey durations, time of day, start and end points and fares are all stored but little analysis of this information occurs at present.

Zola uses off-the-shelf 'Hypertracker' software to assist with the process of coordinating the locations of drivers and customers.



When a customer makes a ride request, they can enter the pick-up location manually, or ask the app to use their current location as the pick-up point. Either way, the geolocation, mapping and routing software will then use that initial position to identify drivers nearby. Zola then uses its notification software (described below) to inform nearby drivers that a ride is required, stating the details of the requested ride. Drivers can then choose whether to accept the job or not. When a driver accepts responsibility for providing a ride, Hypertracker will then provide details of the optimal route to reach the customer and their ultimate destination.

Drivers and customers receive notifications through the Zola apps. The notification software has been built internally by Zola. The notification system works as a microservice and interacts closely with several other systems such as the Alert Management System and the Driver Onboarding System.

Note that:

- At the point of the initial request, the customer will state whether they would like to travel alone or share their ride. Ride sharing will only be facilitated if another customer is requesting a similar ride at the same time.
- When a driver accepts the ride request, it is removed from the notification system.
- When the customer gets out of the taxi the driver presses a button in the app to record that the customer has departed. This is matched to the GPS data to calculate a final price which is automatically charged to the customer

PRICING:

The price of each ride varies based on which city the customer is in, and each element of the fee structure can differ. The cost of each ride is made up of a standard base fare plus a charge per kilometre travelled. Zola also charges a cancellation fee if the customer fails to show up or cancels within 5 minutes of the designated pick-up time. If a driver cancels the trip after accepting the trip, then the driver is charged half of the cancellation fee applicable to the rider in the city. Prices tend to be higher in the larger cities, where demand for drivers is higher. It also applies a policy of 'surge pricing' in some of the major towns and cities in which it operates.

	Capital City	Tier 1 Cities (except Capital)	Tier 2 Cities	Tier 3 Cities
Base Fare (₹)	55	50	45	35
Charge ₹ per km	22	20	20	20
Minimum Fare (₹)	67	60	53	48
Cancellation Fee (₹)	30	30	25	25
Average distance covered per trip(km)	11	9.5	7	6.5

In case of shared rides, riders are charged equally depending upon the overlap in their time and kilometres traversed together. In the period where the ride is not shared as part of a trip, the rider is charged 50% of what he/she would have if they were riding alone.

FINANCIAL STATEMENTS

Statement of profit or loss for the year ended 31 Dec, 2020 (in ₹Lakhs)		
	2020	2019
Revenue	1,74,600.00	74,944.80
Cost of Sales	(1,55,455.20)	(66,297.60)
Gross Profit	19,144.80	8,647.20
Administration Cost	(42,998.40)	(20,988.00)
Operating Loss	(23,853.60)	(12,340.80)
Loss before tax	(23,853.60)	(12,340.80)
Income Tax	-	-
Loss	(23,853.60)	(12,340.80)

Statement of financial position as on December 31, 2020 (in ₹Lakhs)		
	2020	2019
Net Current Assets		
PPE	23,659.20	13,305.60
Current Assets		
Trade and other receivables	957.60	410.40
Cash and cash equivalents	19,015.20	10,893.60
	19,972.80	11,304.00
Total Assets	43,632.00	24,609.60
Equity		
Share Capital	87,480.00	47,880.00
Retained earnings	(49,932.00)	(26,078.40)
	37,548.00	21,801.60
Current Liabilities		
Trade and other payables	6,084.00	2,808.00
Total Liabilities	43,632.00	24,609.60

Statement of cash flows for the year ended at Dec 31, 2020 (in ₹Lakhs)		
	2020	2019
Operating loss	(23,853.60)	(12,340.80)
Depreciation	4,017.60	2,188.80
Increase in trade receivables	(547.20)	(223.20)
Increase in trade payables	3,276.00	1,180.80
Net cash outflow from operating activities	(17,107.20)	(9,194.40)
Capital Expenditure	(14,371.20)	(9,979.20)
Equity raised	39,600.00	21,600.00
Net increase in cash and cash equivalents	8,121.60	2,426.40
Cash and cash equivalents brought forward	10,893.60	8,467.20
Cash and cash equivalents carried forward	19,015.20	10,893.60

QUESTIONS:

From the list of questions provided below, please select and answer any questions of your choice. Note that you need to complete answers to questions worth 20 points at least.

1. The Operations team is under pressure to increase the number of ride sharing trips as single passenger ride hailing services is seeing a slowdown in month on month growth. The Growth team has also agreed to increase the visibility of ride sharing as an option for a price sensitive market like La La Land. As a Product Manager you are tasked with coming up with a methodology to calculate the Similarity Score that matches riders with drivers. Write a very short PRD on how such a score should be defined/ implemented. Please explain your answer with a hypothetical scenario. Feel free to make any assumptions to cover possible scenarios/ cases/ distance/ time/ cost variables. **(10 points)**
2. Create a notifications management system for the drivers and the riders in a simple excel sheet mapping the various instances at which the notifications should be sent, the heading and body of the notifications, the type of notifications and what should happen/ what screen in the app should open if it is a push notification is clicked by the user. Map the entire journey of the user(s). **(5 points)**
3. On your way to work, your team member informs you that several drivers have started protesting to their cluster managers about the recent hike in CNG/ diesel prices (which is used by most cabs plying with Zola Cabs) which has led to a significant reduction in

their earnings. The net impact of the fuel price hike has meant that the cost of each trip has gone up by ₹1 per km. Given that the share of drivers of the total cost for the trip borne by the customer was negotiated only last month and cannot be changed for next 11 months– you need to readjust the pricing model in a way that impact on revenue is less than $\pm 5\%$ of daily revenue. In the appendix you will find the hypothetical ride data for Zola cabs in an hour on a weekday during morning peak hours recorded across all cities in La La Land where Zola cabs is operational. Note that for every ₹1/km change in price, the demand for the rides (calculated as its impact on revenue) decreased by 7% in Capital city, 5% in Tier 1 cities and 10% in tier 2 and 3 cities. Please explain how you derive the answer – points would be awarded based on your approach and reasoning skills. There are no wrong answers. **(10 points)**

4. Create the wireframe for a back end dashboard that can be used by a city's Operations Manager to monitor the performance of all cabs in the city. What all features would you build into the design that might be relevant for an Operations Manager to track riders/ monitor daily KPIs/ manage fraud and safety alerts/ decide whether or not to apply surge pricing? **(10 points)**

APPENDIX:

The following table contains hypothetical rides data in 1 hour on a weekday during morning peak hours recorded across all cities in La La Land where Zola cabs is operational. You can extrapolate this data with any requisite assumptions to make an informed assessment while answering the case questions.

RIDE #	CITY TYPE	FARE (₹)	DISTANCE (km)	STATUS	SURGE PRICE APPLIED
1	TIER 3	825	12	BOOKED	Y
2	TIER 3	350	7	BOOKED	Y
3	TIER 2	25	0	CANCELLED	
4	TIER 1	590	27	BOOKED	
5	TIER 3	1365	21	BOOKED	Y
6	TIER 3	515	24	BOOKED	
7	TIER 2	12.5	0	CANCELLED	
8	TIER 2	285	12	BOOKED	
9	CAPITAL	385	15	BOOKED	
10	TIER 3	12.5	0	CANCELLED	
11	TIER 1	15	0	CANCELLED	
12	TIER 2	2295	36	BOOKED	Y
13	CAPITAL	759	32	BOOKED	
14	CAPITAL	30	0	CANCELLED	
15	CAPITAL	253	9	BOOKED	

16	TIER 2	12.5	0	CANCELLED	
17	TIER 1	1460	34	BOOKED	Y
18	TIER 2	12.5	0	CANCELLED	
19	TIER 1	690	32	BOOKED	
20	TIER 3	885	13	BOOKED	Y
21	TIER 1	570	26	BOOKED	
22	TIER 3	195	8	BOOKED	
23	TIER 3	430	9	BOOKED	Y
24	TIER 3	12.5	0	CANCELLED	
25	TIER 1	870	41	BOOKED	
26	TIER 1	1620	38	BOOKED	Y
27	CAPITAL	407	16	BOOKED	
28	TIER 3	235	10	BOOKED	
29	TIER 3	475	22	BOOKED	
30	TIER 3	12.5	0	CANCELLED	
31	TIER 3	670	15	BOOKED	Y
32	TIER 1	1740	41	BOOKED	Y
33	CAPITAL	1001	43	BOOKED	
34	TIER 3	395	18	BOOKED	
35	TIER 2	785	37	BOOKED	
36	CAPITAL	30	0	CANCELLED	
37	TIER 1	370	16	BOOKED	
38	TIER 1	30	0	CANCELLED	
39	TIER 2	405	18	BOOKED	
40	CAPITAL	407	16	BOOKED	
41	CAPITAL	495	20	BOOKED	
42	TIER 3	395	18	BOOKED	
43	TIER 1	15	0	CANCELLED	
44	CAPITAL	297	11	BOOKED	
45	TIER 1	15	0	CANCELLED	
46	TIER 2	845	40	BOOKED	
47	CAPITAL	1815	25	BOOKED	Y
48	CAPITAL	30	0	CANCELLED	
49	CAPITAL	649	27	BOOKED	
50	TIER 1	350	15	BOOKED	
51	CAPITAL	15	0	CANCELLED	
52	CAPITAL	30	0	CANCELLED	
53	CAPITAL	15	0	CANCELLED	
54	CAPITAL	803	34	BOOKED	
55	TIER 3	175	7	BOOKED	
56	TIER 1	15	0	CANCELLED	
57	CAPITAL	1958	42	BOOKED	Y

58	CAPITAL	15	0	CANCELLED	
59	TIER 1	830	39	BOOKED	
60	TIER 1	1380	32	BOOKED	Y
61	TIER 3	135	5	BOOKED	
62	TIER 3	615	29	BOOKED	
63	TIER 1	590	27	BOOKED	
64	TIER 1	450	20	BOOKED	
65	TIER 1	30	0	CANCELLED	
66	CAPITAL	30	0	CANCELLED	
67	CAPITAL	15	0	CANCELLED	
68	TIER 2	12.5	0	CANCELLED	
69	CAPITAL	363	14	BOOKED	
70	CAPITAL	2475	35	BOOKED	Y
71	TIER 2	2535	40	BOOKED	Y
72	CAPITAL	30	0	CANCELLED	
73	TIER 2	145	5	BOOKED	
74	CAPITAL	693	29	BOOKED	
75	CAPITAL	30	0	CANCELLED	
76	TIER 3	12.5	0	CANCELLED	
77	TIER 2	565	26	BOOKED	
78	TIER 1	30	0	CANCELLED	
79	TIER 2	785	37	BOOKED	
80	TIER 3	115	4	BOOKED	
81	CAPITAL	275	10	BOOKED	
82	TIER 3	470	10	BOOKED	Y
83	TIER 2	625	29	BOOKED	
84	TIER 2	165	6	BOOKED	
85	TIER 3	230	4	BOOKED	Y
86	TIER 2	365	16	BOOKED	
87	CAPITAL	385	15	BOOKED	
88	TIER 3	950	22	BOOKED	Y
89	TIER 3	475	22	BOOKED	
90	CAPITAL	847	36	BOOKED	
91	CAPITAL	30	0	CANCELLED	
92	TIER 3	435	20	BOOKED	