OLEKSIY DANILIN, Business Analyst
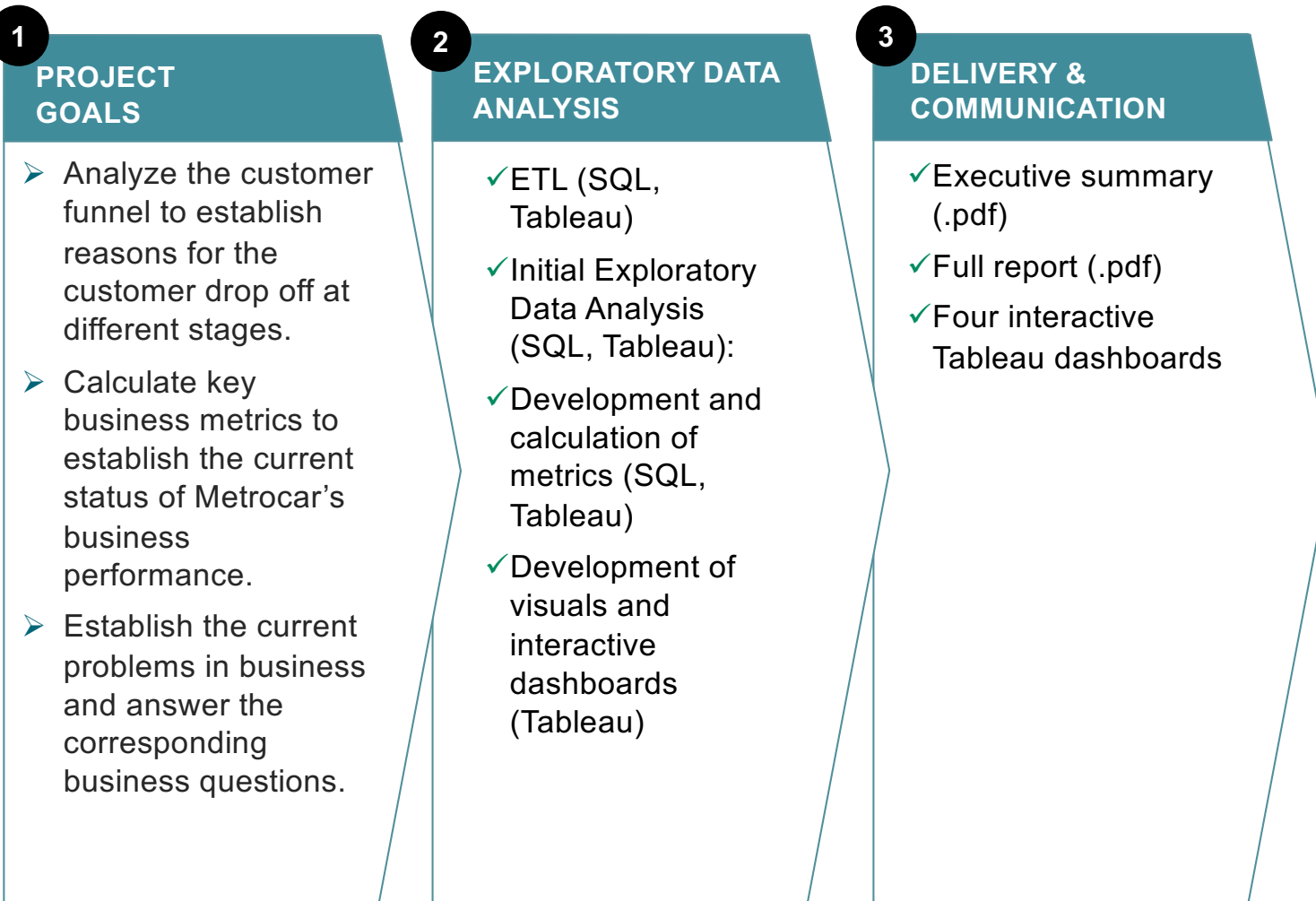
CUSTOMER FUNNEL ANALYSIS:
What needs to be done to improve retention

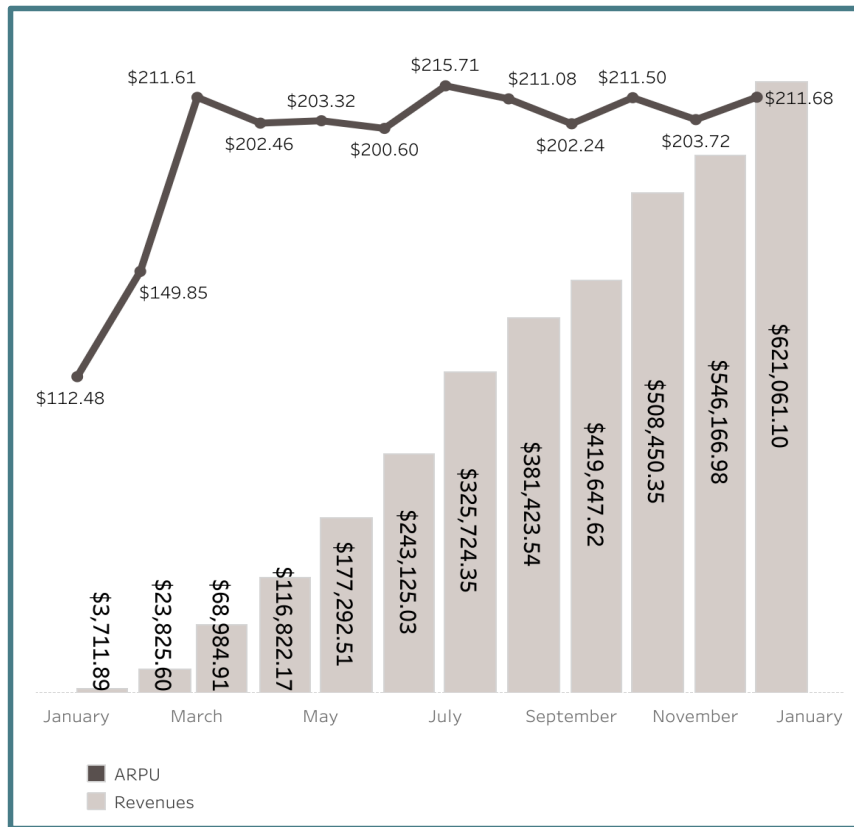Prepared for: Masterschool

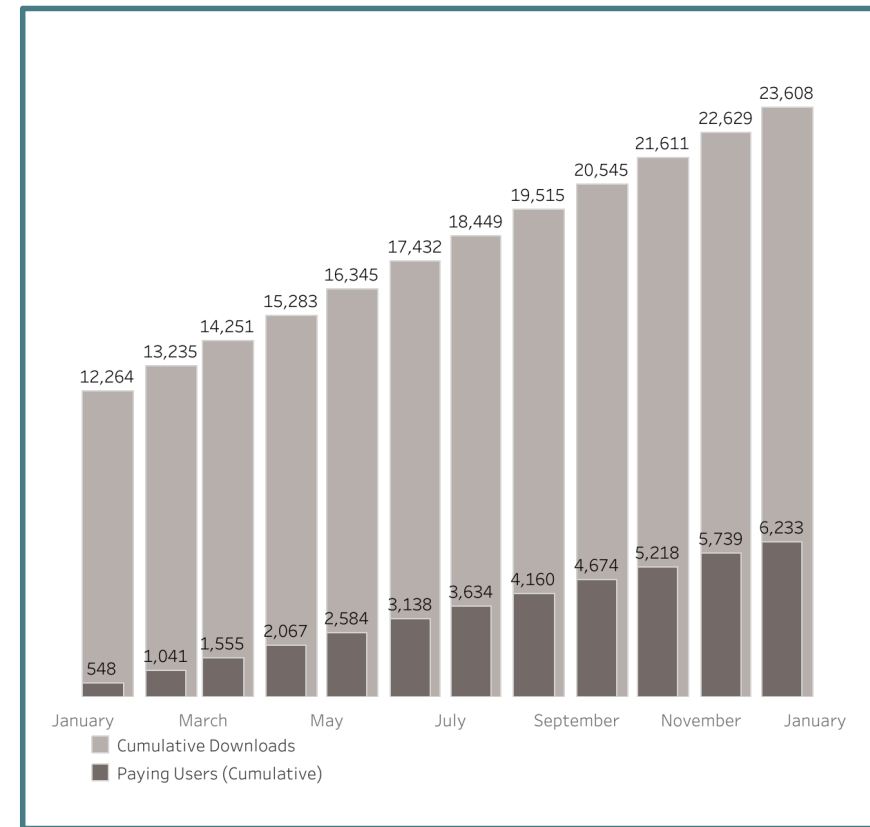metrocar

1

PROJECT GOALS

➢ Analyze the customer funnel to establish reasons for the customer drop off at different stages.

➢ Calculate key business metrics to establish the current status of Metrocar's business performance.

➢ Establish the current problems in business and answer the corresponding business questions.

2

EXPLORATORY DATA ANALYSIS

✓ETL (SQL, Tableau)

✓Initial Exploratory Data Analysis (SQL, Tableau):

✓Development and calculation of metrics (SQL, Tableau)

✓Development of visuals and interactive dashboards (Tableau)

3

DELIVERY & COMMUNICATION

✓Executive summary (.pdf)

✓Full report (.pdf)

✓Four interactive Tableau dashboards

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MONTHLY REVENUES AND ARPU (2021)

Legend:
- ARPU
- Revenues

ARPU values: $112.48, $149.85, $211.61, $202.46, $203.32, $200.60, $215.71, $202.24, $211.08, $211.50, $203.72, $211.68

Revenue values: $3,711.89, $23,825.60, $68,984.91, $116,822.17, $177,292.51, $243,125.03, $325,724.35, $381,423.54, $419,647.62, $508,450.35, $546,166.98, $621,061.10

Months: January, March, May, July, September, November, January

MONTHLY DOWNLOADS AND PAID USERS (2021)

Cumulative Downloads: 12,264, 13,235, 14,251, 15,283, 16,345, 17,432, 18,449, 19,515, 20,545, 21,611, 22,629, 23,608

Paying Users (Cumulative): 548, 1,041, 1,555, 2,067, 2,584, 3,138, 3,634, 4,160, 4,674, 5,218, 5,739, 6,233

Legend:
- Cumulative Downloads
- Paying Users (Cumulative)

Months: January, March, May, July, September, November, January

➢ **A successful revenue growth from month to month:** in 2021, the total revenue reached $3,436 million.

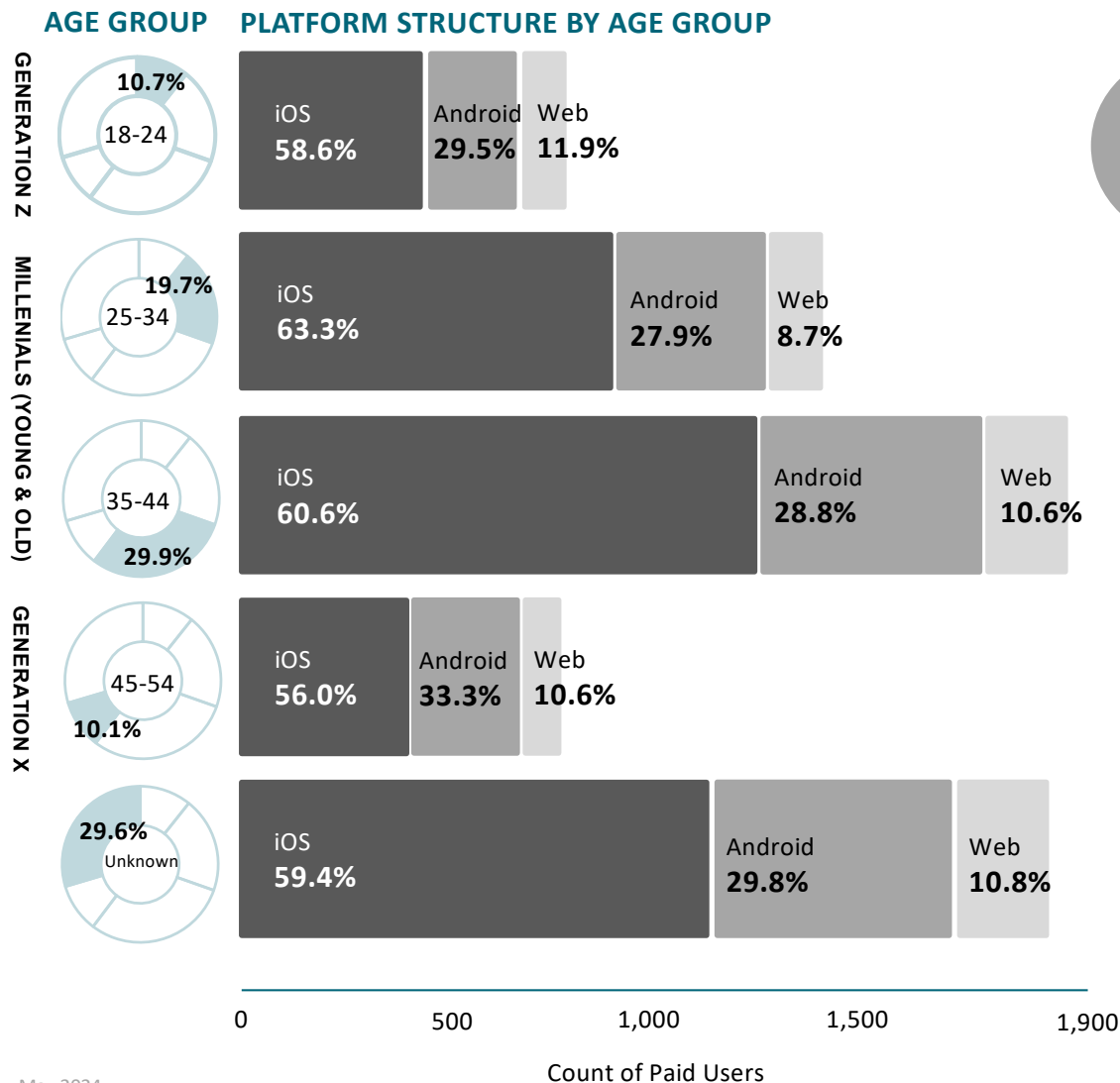➢ By Jan 2022, the monthly revenue increased by 142 times YoY.

➢ **A significant growth in the number of paying users,** which increased from 4.4% of total DLs in Jan 2021 to 26.4% in Dec 2021.

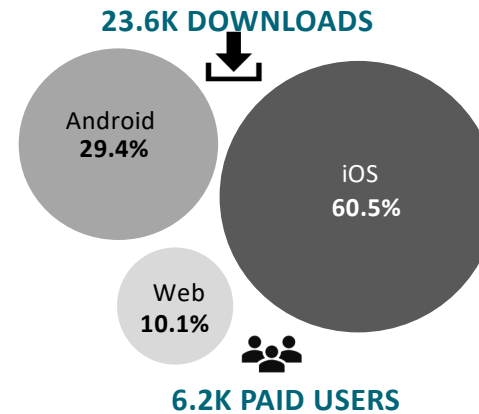➢ With monthly ARPU at approx. $213, a small fraction of loyal paying customers drive monetization.
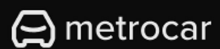
OLDER (35-44 YEARS) AND YOUNGER (25-34 YEARS) MILLENNIALS, WHO SHOW A STRONG PREFERENCE FOR APPLE DEVICES, ARE THE CORE USER DEMOGRAPHICS
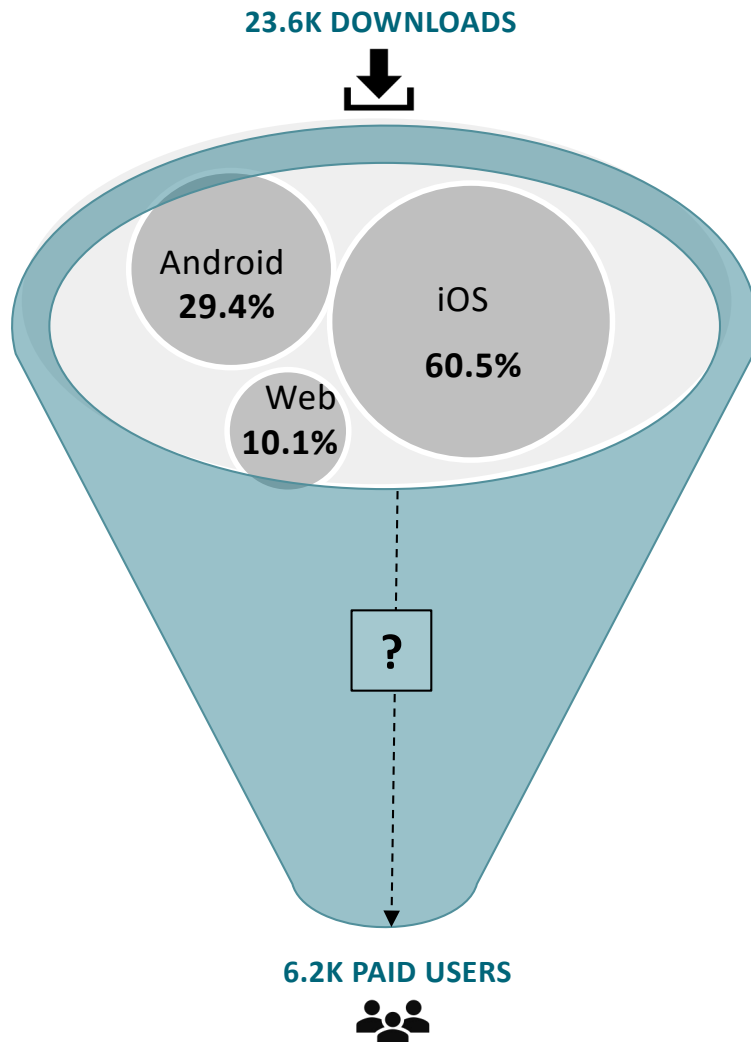
PAID USERS : AGE vs. PLATFORM

AGE GROUP   PLATFORM STRUCTURE BY AGE GROUP

GENERATION Z

18-24 — 10.7%

iOS 58.6% | Android 29.5% | Web 11.9%

MILLENNIALS (YOUNG & OLD)

25-34 — 19.7%

iOS 63.3% | Android 27.9% | Web 8.7%

35-44 — 29.9%

iOS 60.6% | Android 28.8% | Web 10.6%

GENERATION X

45-54 — 10.1%

iOS 56.0% | Android 33.3% | Web 10.6%

Unknown — 29.6%

iOS 59.4% | Android 29.8% | Web 10.8%

0   500   1,000   1,500   1,900

Count of Paid Users

DLs & PAID USERS: STRUCTURE BY PLATFORM

23.6K DOWNLOADS

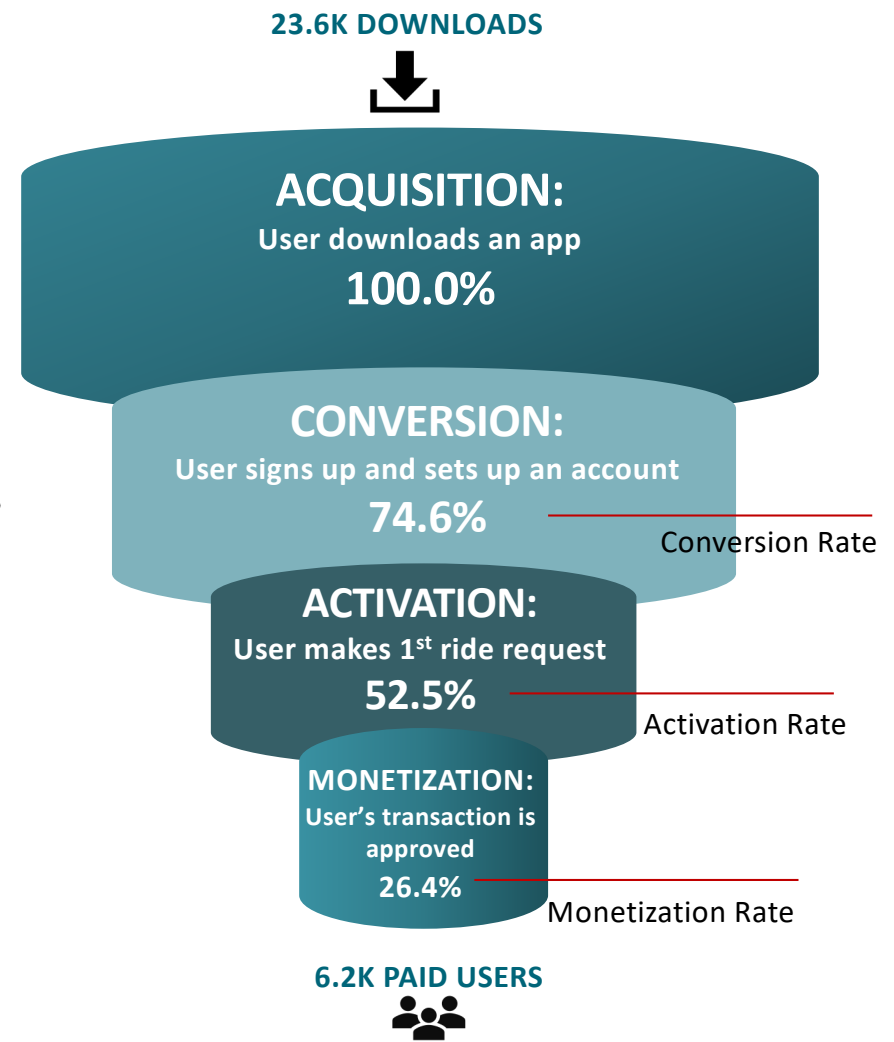Android 29.4%

iOS 60.5%

Web 10.1%

6.2K PAID USERS

➤ Exploratory Data Analysis reveals no significant differences in customer distribution by platform across the funnel (from downloads to paid users)

➤ All age groups show strong preference for iOS devices, with the highest iOS shares among **the Millennials**.

➤ On the other hand, the highest share of Android users is among **the Generation X.**

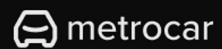➤ Interestingly, the Android share is relatively high among **Z Gen** users, too.

DEMYSTIFYING THE CUSTOMER FUNNEL BEGINS WITH DEFINING PRINCIPAL STAGES AND ASSOCIATED BENCHMARKS/INDICATORS TO IDENTIFY KEY PROBLEMS

DOWNLOADS STRUCTURE BY PLATFORM

23.6K DOWNLOADS

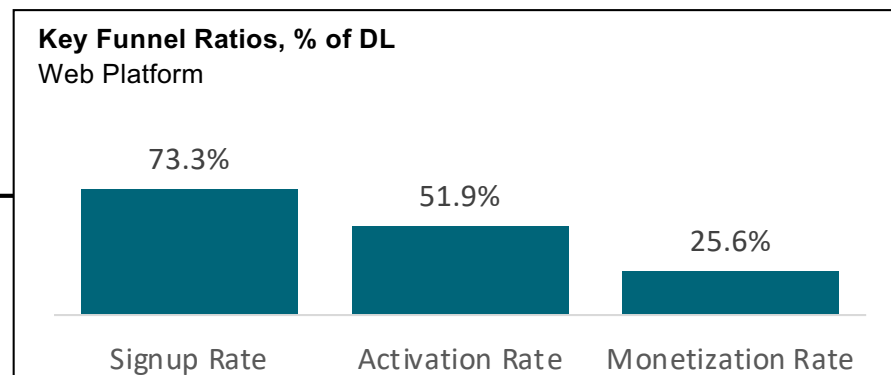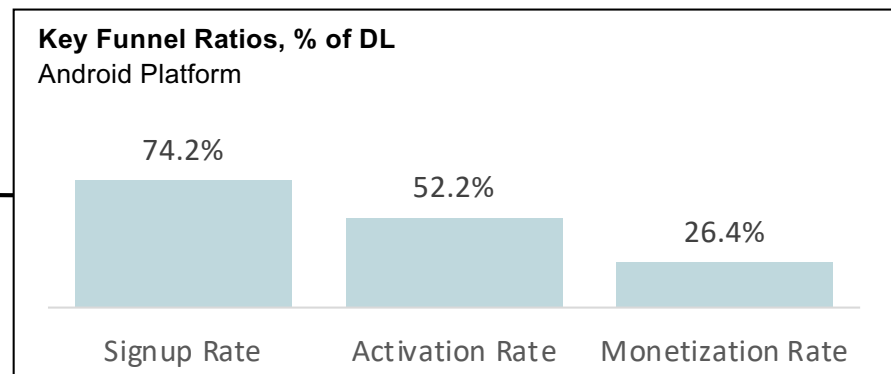Android **29.4%**

iOS **60.5%**

Web **10.1%**

?

6.2K PAID USERS

ACQUISITION:
User downloads an app
100.0%

CONVERSION:
User signs up and sets up an account
74.6%

Conversion Rate

ACTIVATION:
User makes 1st ride request
52.5%

Activation Rate

MONETIZATION:
User's transaction is approved
26.4%

Monetization Rate

6.2K PAID USERS

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➤ The difference in the funnel ratios is minimal among the user platforms, although iOS users tend to perform better than others.

Key Funnel Ratios, % of DL
Total
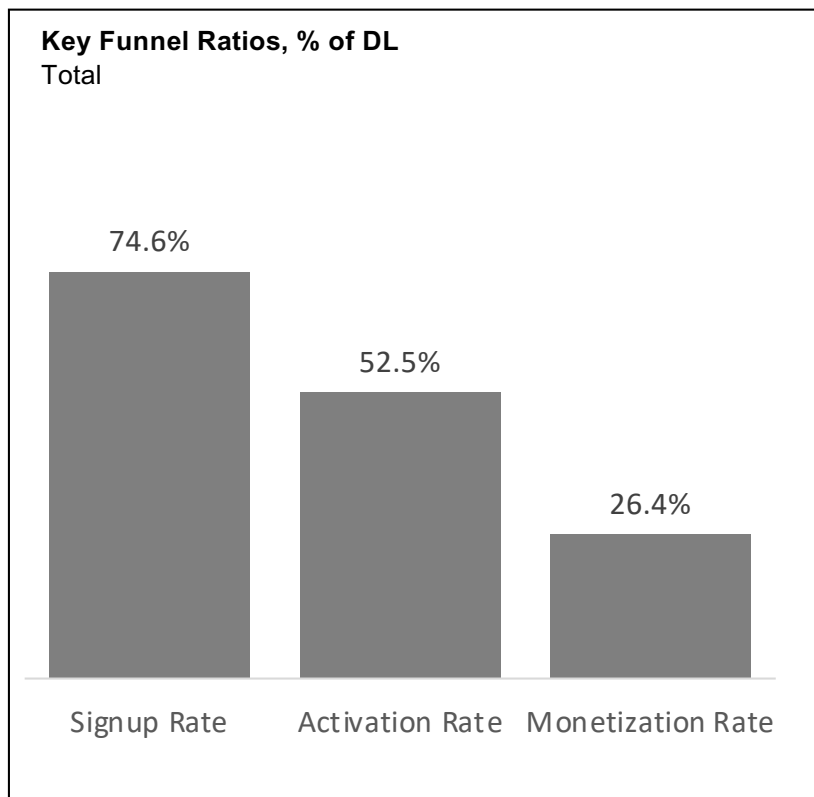
➤ Due to these small differences, similar retention strategies could be applied across all the three platforms.

Key Funnel Ratios, % of DL
iOS Platform

Key Funnel Ratios, % of DL
Android Platform

Key Funnel Ratios, % of DL
Web Platform

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KEY PROBLEMS ALONG FUNNEL STAGES

PROBLEM'S STATUS

— MODERATE
— CRITICAL

ACQUISITION

1. **Underrepresentation of Android users**: 32% of mobile downloads (excl. web installations) against 40-45% on average in the US market (various estimates for 2021).

CONVERSION

2. **Relatively low Conversion Rate**: 75% of downloads converted to signup accounts.
3. **Relatively long Time from Download to Signup** (24 hours on average).
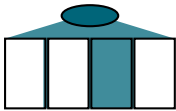
ACTIVATION

4. **Long Activation Time**: It takes 6 days on average between a sign-up and the 1st ride request.
5. **Low Activation Rate**: Only 53% of downloads and 70% of signed-up users request rides.
6. **Low Completion Rate**: Only 58% of requested rides are completed.
7. **Low Acceptance Rate**: Only 64% of requested rides are accepted by drivers.
8. **High Cancellation Rate**: 42% of requested rides are cancelled by either drivers or users.

MONETIZATION

9. **Low Monetization Rate:** Only 26% of downloads have become paying users
10. **Loss due Declined Transactions:** 5% of declined transactions resulted in a loss of USD 179.1K in 2021 (Collectability Ratio stands at 95% of total transactions).
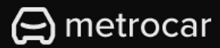
THE "DORMANT" PERIOD BETWEEN SIGN-UP AND THE 1ST RIDE REQUEST IS NOTABLY LONGER AMONG ANDROID USERS, ESPECIALLY WITHIN THE GEN X DEMOGRAPHIC
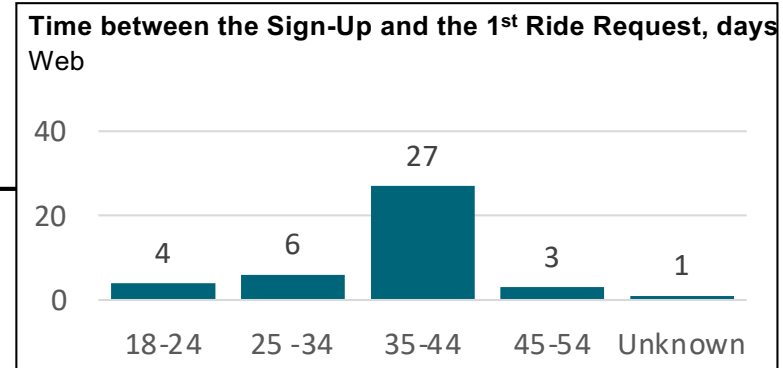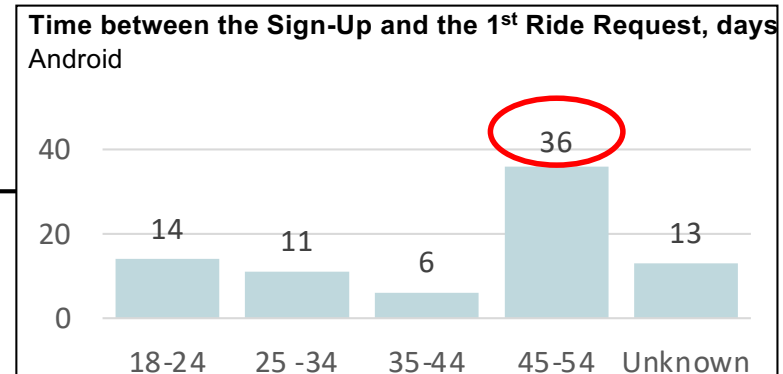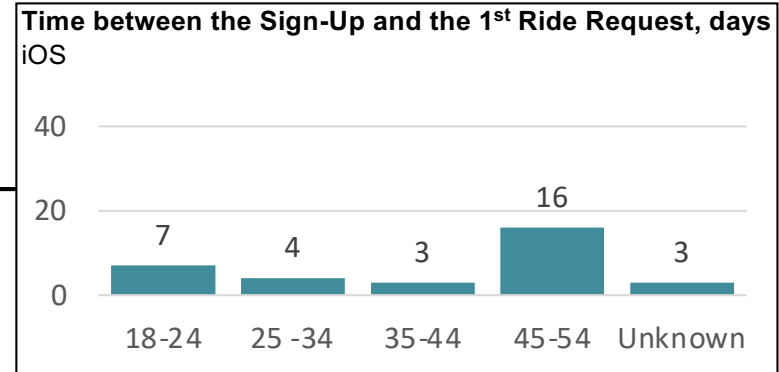
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ACTIVATION

PLATFORM DIMENSION

➤ On average, iOS users onboard more quickly than Android or web-based users, suggesting potential user experience friction in the Android app and web browser interface.

➤ To reduce the inactive period among web-based users, they should be encouraged/facilitated to transition to mobile apps.

Time between the Sign-Up and the 1st Ride Request, days
Total

Total: 6, iOS: 3, Android: 12, Web: 8
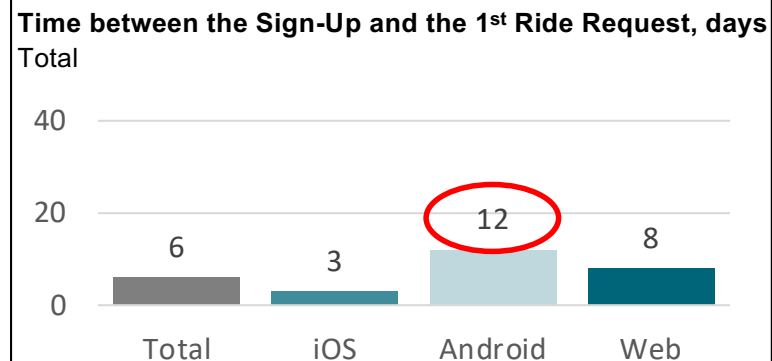
DEMOGRAQPHIC DIMENSION

➤ Gen X users (ages 45-54) have the longest inactive periods among both Android and iOS users, indicating that this demographic may benefit from additional onboarding assistance.

➤ In the web segment, the patterns of inactivity across demographic groups differ from those observed among mobile users and require further investigation.

Time between the Sign-Up and the 1st Ride Request, days
iOS

18-24: 7, 25-34: 4, 35-44: 3, 45-54: 16, Unknown: 3

Time between the Sign-Up and the 1st Ride Request, days
Android

18-24: 14, 25-34: 11, 35-44: 6, 45-54: 36, Unknown: 13

Time between the Sign-Up and the 1st Ride Request, days
Web

18-24: 4, 25-34: 6, 35-44: 27, 45-54: 3, Unknown: 1
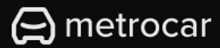
ACTIVATION IS THE MOST CHALLENGING FUNNEL STAGE, WHERE MULTIPLE UX ISSUES CAUSING ONLY 58% OF THE REQUESTED RIDES TO BE COMPLETED AND 55% TO BE PAID

USER FUNNEL

ACQUISITION
(23,608 downloads)
100.0%

CONVERSION
(17,623 sign-ups)
74.6%

-5,985

ACTIVATION
(12,406 requesting users)
52.5%

-5,217

MONETIZATION
(6,233 PAID USERS)
26.4%

-6,173

50% of requesting users drop off before paying

It takes 6 days (144h) on average between sign-up & 1st request
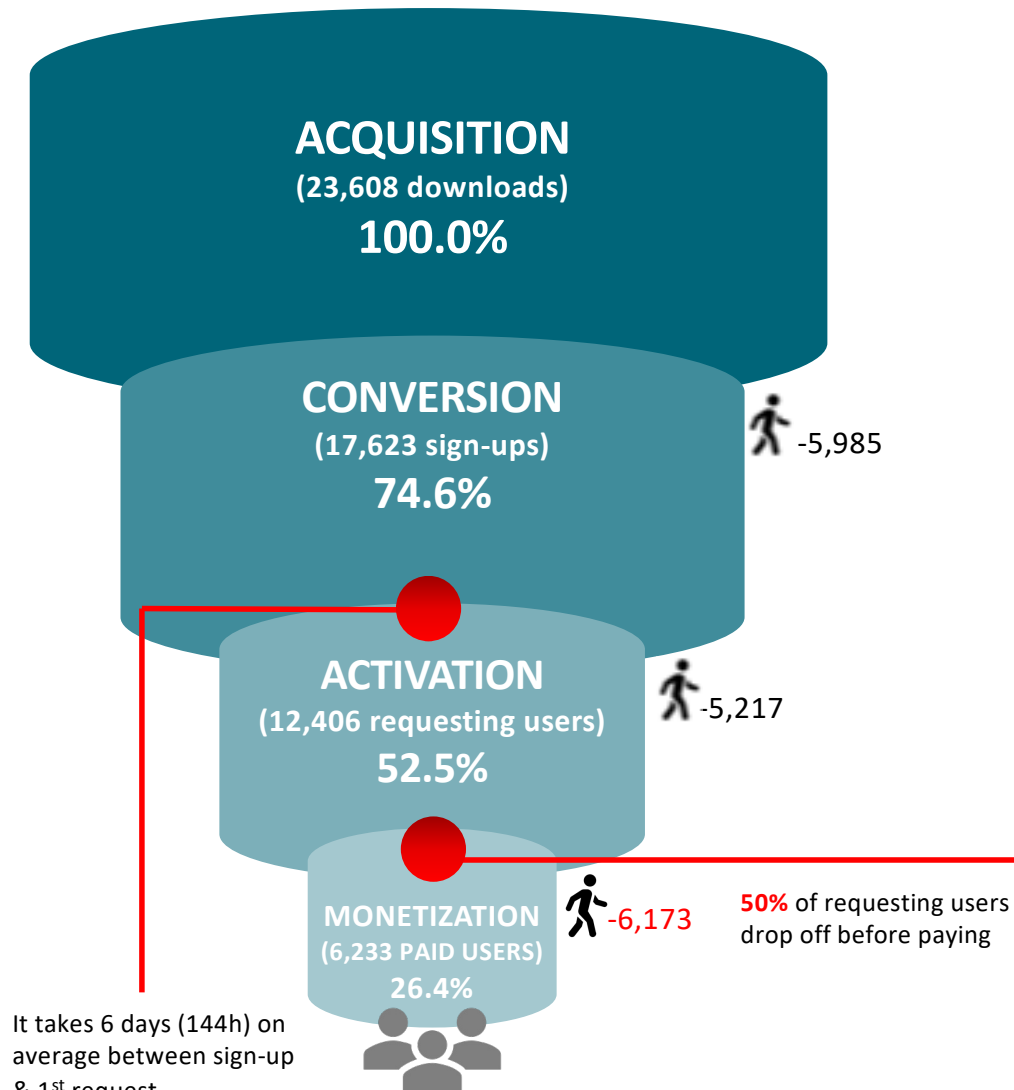
USER EXPERIENCE JORNEY
(FROM ACTIVATION TO MONETIZATION)

REQUESTED RIDES
(385,477)
100.0%

ACCEPTED RIDES
(248,379)
64.4%

COMPLETED RIDES
(223,652)
58.0%

10% of accepted rides is cancelled

PAID RIDES
(212,628)
55.2%

5% of completed rides is not paid

36% of requests is not accepted
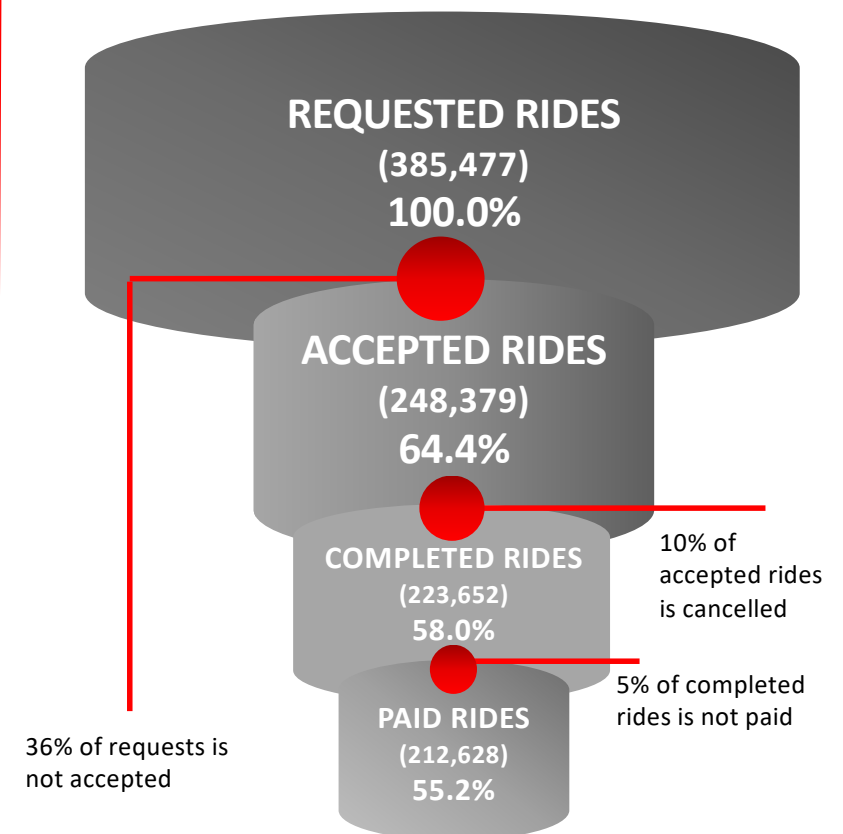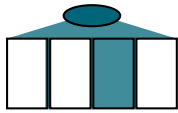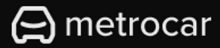
CANCELLATION IS THE PRIMARY UX ISSUE AT THE ACTIVATION STAGE: APPROX 42% OF ALL REQUESTED RIDES ARE CANCELLED, WITH 85% OF THESE CANCELLATIONS OCCURRING BEFORE THE DRIVER APPROVES THE REQUEST

ACTIVATION

Average Waiting Time vs Cancellations
Min, %

TOTAL WAITING TIME: 15.4min

RIDE REQUESTTED — 6.9min → RIDE ACCEPTED — 8.5min → DRIVER ARRIVED

84.7%   15.3%

CANCELLATIONS: 162k (42%)
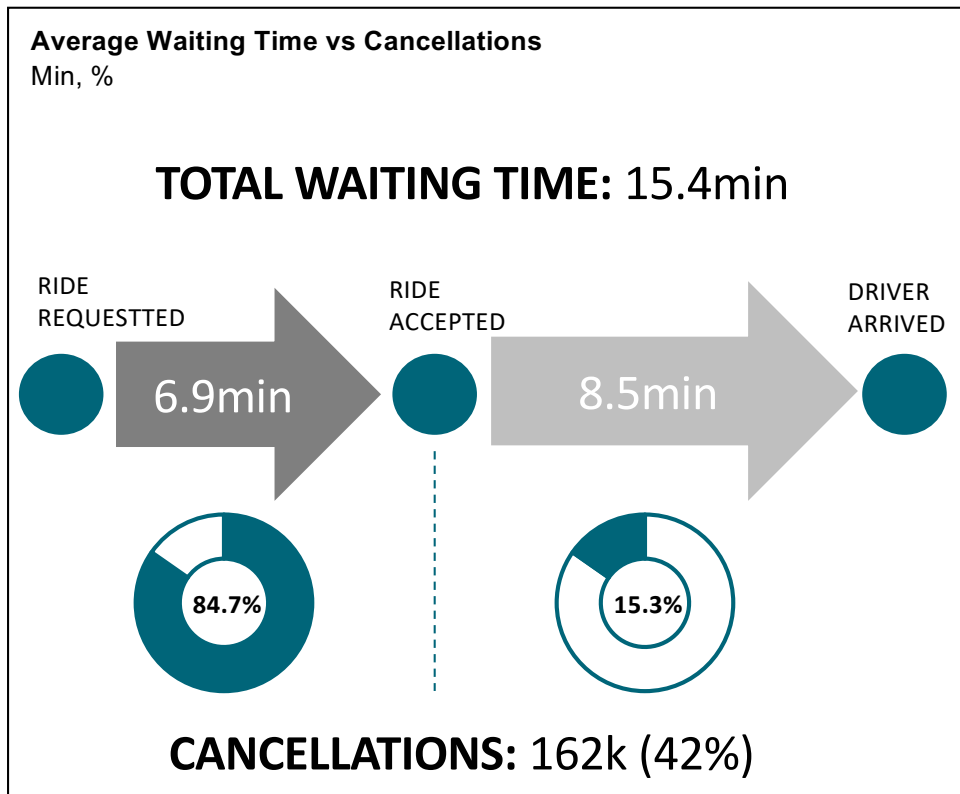
Time between 1st ride and acceptance
Min

Max	20.0
Avg	6.9
Med	6.0
Min	2.0
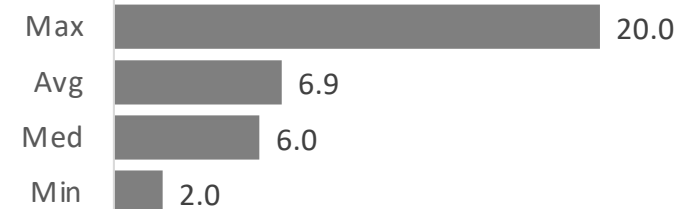
Time from acceptance to driver's arrival
Min

Max	15.0
Avg	8.5
Med	8.0
Min	2.0
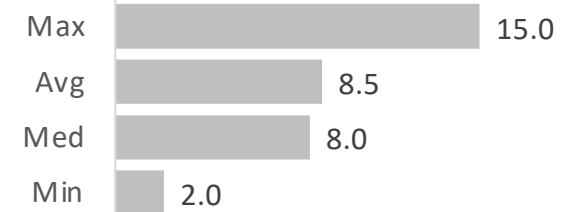
➤ The data do not specify whether drivers or customers are responsible for cancellations, but most occur before the ride request is accepted

➤ On average, waiting times are within reasonable ranges at both stages and cannot be considered a sufficient reason for cancellation

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A BLEND OF **UX** IMPROVEMENTS, TARGETED MARKETING STRATEGIES, AND BOTH CUSTOMER-CENTRIC AND DRIVER-CENTRIC APPROACHES CAN HELP REDUCE USER DROP OFF AT EACH FUNNEL STAGE

STRATEGY RECOMMENDATIONS

1 ACQUISITION

USER EXPERIENCE
- Optimize Performance of the Android app
- Ensure Feature Parity on Android
- Analyze Data & User Feedback
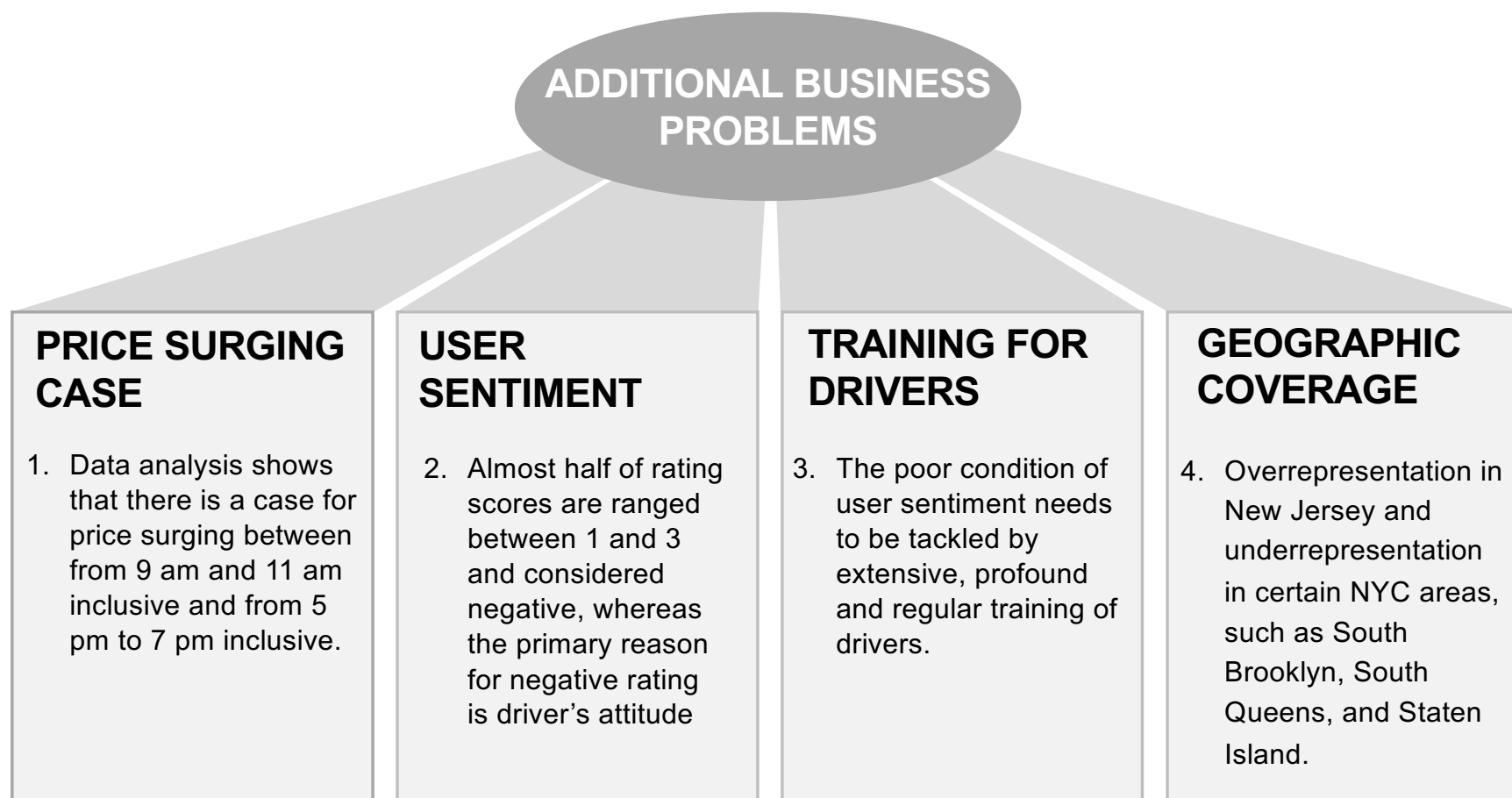
TARGETED MARKETING
- Android-specific Campaigns
- Incentives for Android Users
- Community Engagement

2 CONVERSION

USER EXPERIENCE
- Optimize Onboarding
- Engage Users Immediately
- Analyze Data & User Feedback

APP PERFORMANCE
- Reduce Friction
- Follow-up Reminders
- Usability Testing

3 ACTIVATION

USER STRATEGIES
- Enhance Booking Features
- Implement a Fair Cancellation Fee Policy
- Improve Customer-Driver Communications

DRIVER STRATEGIES
- Introduce Dynamic Pricing (Price Surging)
- Implement a Reward System for Accepting Rides
- Improve dynamic driver allocation algorithms

4 MONETIZATION

PAYMENT OPTIMIZATION
- Subscription models for frequent users
- Multiple payment options
- Transparent and itemized billing

PAYMENT COLLECTION
- Pre-Authorization
- Auto-Debit
- Post-Ride payments

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ADDITIONAL BUSINESS PROBLEMS

PRICE SURGING CASE

1. Data analysis shows that there is a case for price surging between from 9 am and 11 am inclusive and from 5 pm to 7 pm inclusive.

USER SENTIMENT

2. Almost half of rating scores are ranged between 1 and 3 and considered negative, whereas the primary reason for negative rating is driver's attitude

TRAINING FOR DRIVERS

3. The poor condition of user sentiment needs to be tackled by extensive, profound and regular training of drivers.

GEOGRAPHIC COVERAGE

4. Overrepresentation in New Jersey and underrepresentation in certain NYC areas, such as South Brooklyn, South Queens, and Staten Island.
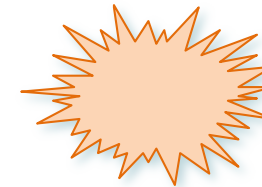
FOR MORE INFORMATION, PLEASE REFER TO THE EXTENDED REPORT

QUESTIONS?

COMMENTS?

IDEAS?

PROPOSALS?

Please contact: OLEKSIY DANILIN
E-Mail: oleksiy.danilin@gmail.com

CLICK HERE:

Four Interactive Tableau Dashboards to further slice and dice the User Cohort Data

https://public.tableau.com/app/profile/oleksiy.danilin/viz/MetrocarDashboards/ANIMATEDPICKUPLOCATIONMAPMONTHLY

CLICK HERE:

All the project's deliverables, incl. report, and SQL code

https://github.com/oleksiy-danilin/Metrocar