RE: Assessment AfriChange

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2025-03-01

Executive Summary:[1]

This analysis of Africhange Limited's user and transaction data reveals a platform with strong potential for growth, supported by a diverse user base and significant transaction activity. While challenges exist particularly around user retention, KYC completion, and funnel drop-offs the data also highlights clear opportunities to optimize the user journey, enhance engagement, and drive business growth. Below are the key findings and actionable recommendations to unlock this potential.

Key findings - User Growth & Retention: User onboarding shows volatility, with significant retention drops (e.g., 14.7% by month 3). High-frequency users (10+ transactions) are a loyal segment, but retention strategies must focus on improving onboarding and engagement to reduce churn.

- KYC Bottlenecks: 61.8% of users haven't started KYC, with only 19.9% passing. Drop-offs are highest in Nigeria and among younger/older users. Streamlining KYC and incentivizing completion can unlock growth, especially in high-potential markets.

- Transaction Activity: The platform processed 164,882 transactions ($60.5M CAD), with Canada and the CAD-NGN corridor driving volume. Emerging corridors like CAD-AUD (200,275% growth) offer new revenue opportunities, while declining corridors like CAD-GHS need attention.

- Funnel Drop-offs: Significant drop-offs occur at each stage—41.1% at profile completion, 66.1% at KYC, and 72.9% at transactions. Regional differences (e.g., 16.1% conversion in Canada vs. 1.8% in Nigeria) highlight the need for localized strategies.

Path to Growth - Optimize the User Journey: Simplify profile completion, streamline KYC, and reduce transaction friction.

- Enhance Retention: Improve onboarding, target high-frequency users, and address retention drops in key cohorts.

- Leverage Opportunities: Focus on emerging corridors, resolve issues in declining corridors, and expand in high-potential markets like Nigeria.

- Data-Driven Decisions: Use analytics to monitor trends and refine strategies.

Africhange Limited is well-positioned for growth, with a strong foundation in transaction activity and a diverse, global user base. By addressing key bottlenecks in the user journey, enhancing retention strategies, and capitalizing on high-growth opportunities, the platform can unlock significant value and drive sustained business success. The path forward is clear: *simplify*, *engage*, and *grow*.

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[1]Tools: *R* for *R-Markdown* with *ggplot* for visualization, *PowerBI* and *Streamlit* for UI and *Cohere* for Generative Ai.

User Analysis

Data Prep: [2]

Exploratory Data Analysis:Track and visualize

Providing insights into the following metrics

- **user growth Daily,WOW,MOM**.
- **Total Number of Users**,
- **Verified and Non-Verified Users**
- **Average Volume per User**
- **Max and Min Transaction Volume**
- **Age Distribution**:
- **Gender Distribution**
- **User Location**:
- **User Profession**:

User Growth: Daily, WOW, MOM growth changes   The formula for the comparative growth rate is, e.g for Month On Month:

$$\text{MOM} = \left(\frac{\text{Current Month Frequency} - \text{Previous Month Frequency}}{\text{Previous Month Frequency}} \right) \times 100$$

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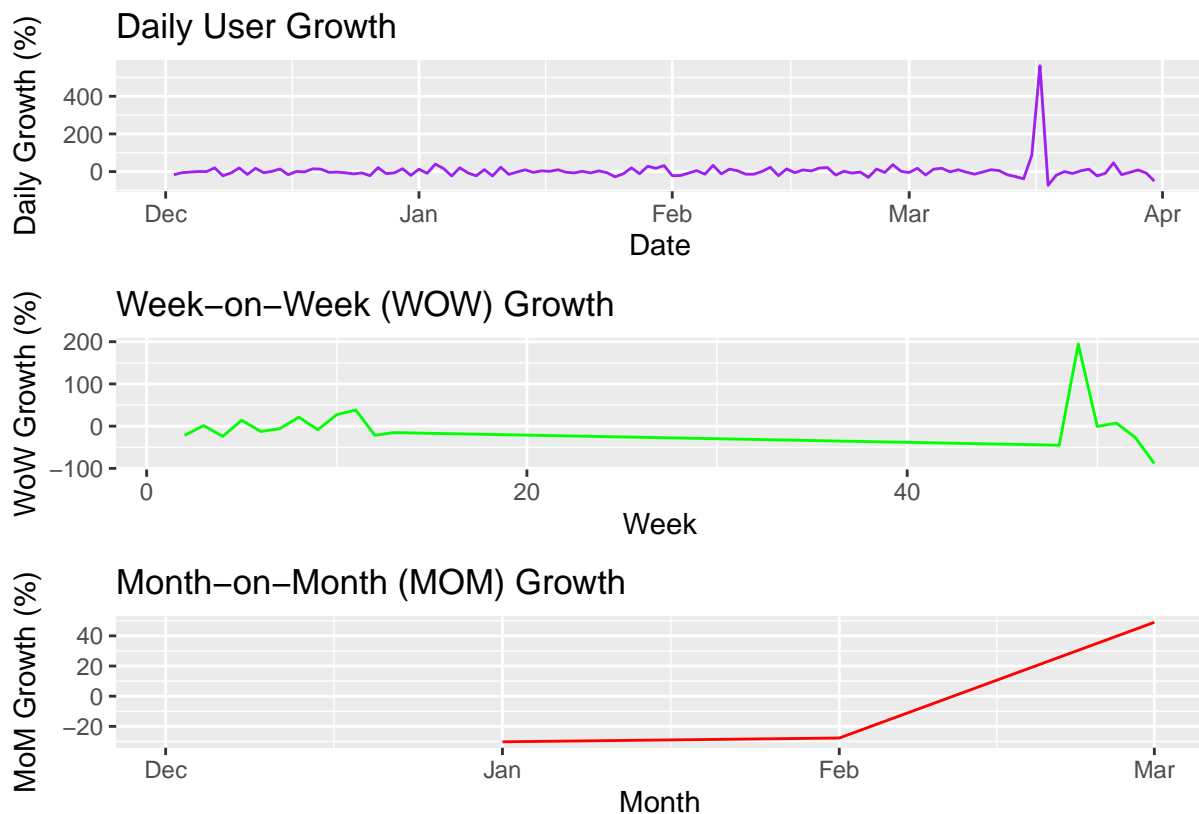
[2]Data, *User_Table* and *Transaction_Table*, has been loaded and prepared on the back-side.

Interpreting the patterns:

Daily Growth (DoD) Overall Trend is a volatility with downward bias: Fluctuations between positive and negative growth, with an overall downward trend, indicating inconsistent user onboarding and potential decline.

December 2023:

Early December: High onboarding initially (peaking at 322 users) followed by a decline and fluctuations around 200-300 users. In late December, we see significant drop around Christmas to 167 users due to the holiday season.

January 2024:

Early January: Slight recovery but lower than December, fluctuating between 150-250 users. Mid-January: Pronounced decline with numbers dropping below 150 on several days. Late January: Slight recovery but overall trend downward compared to December.

February 2024: Early February: Continued decline with numbers often below 150. Mid-February: Minor recovery with numbers in the 140-150 range. Late February: Fluctuating numbers without a significant upward trend.

March 2024: Early March: Slight increase with numbers in the 130-180 range. Mid-March: Significant spike on March 17th (827 users), followed by a sharp decline. Late March: Stabilized but volatile numbers with a drop to 80 users on March 31st.

Key Observations

Lack of Consistency: Frequent swings between positive and negative growth highlight a lack of stability in user onboarding. This inconsistency could be due to unpredictable user behavior, uneven marketing efforts, or operational inefficiencies.

Deep Negative Spikes: Sharp drops into negative growth (e.g., -1000 or lower) are particularly alarming, indicating specific events or issues that caused a significant drop in onboarding, such as technical glitches, poor user experiences, or negative feedback.

Absence of Recovery: While occasional positive spikes occur, they are not sustained, and the overall trend remains downward. This suggests that efforts to boost onboarding growth are either insufficient or not addressing the root causes of the decline.

Monthly Growth (MOM) *December 2023 to January 2024*: There was a significant decline in user onboarding, with a decrease of 30.2%. This indicates a substantial drop in new users compared to the previous month.

January 2024 to February 2024: The downward trend continued, albeit at a slightly reduced rate, with a 27.7% decrease. This suggests ongoing challenges in maintaining user growth.

February 2024 to March 2024: A notable recovery was observed, with a 49.0% increase in user onboarding. This rebound indicates a successful strategy or external factors positively impacting user acquisition.

Weekly Growth (WOW) *Weeks 1 to 7*: The initial weeks show a volatile pattern with significant fluctuations. For instance, *Week 2* saw a 21.7% drop, followed by a slight increase in *Week 3*, and another substantial drop in Week 4.

Weeks 8 to 12: This period experienced more stability with some positive growth. Week 8 had a 21.2% increase, and Week 10 saw a 27.3% rise, peaking in Week 11 with a 38.2% increase.

Weeks 13 to 48: There was a sharp decline in Week 13, followed by a significant drop in *Week 48*, with a 45.1% decrease. This indicates a potential issue or seasonal dip in user onboarding.

Weeks 49 to 53: The final weeks of the data show extreme volatility. *Week 49* had an extraordinary 194% increase, likely due to a specific campaign or event. However, this was followed by a sharp decline in *Week 53*, with an 88.5% drop, suggesting a possible correction or end of a promotional period.

Overall the data reveals a highly variable user onboarding pattern with significant monthly and weekly fluctuations. The monthly data suggests a recovery in March after a challenging start to the year. The weekly data indicates periods of growth interspersed with sharp declines, highlighting potential areas for improvement in user acquisition strategies. The extreme volatility in the final weeks suggests the impact of specific events or campaigns, which could be analyzed further to understand their effectiveness and sustainability.

The daily trend underscores these observations, showing similar volatility and inconsistency.

Other Metrics:

- **Total Number of Users**: 21906 (Active Users: 20961)
- **Average Volume per User**: C$ 3678.19185162663

Table 1: Combined Tables

Table 2: Min-Max Transaction Volume

send_currency_Nin	Min_Transaction	Max_Transaction
CAD	2	9500
GBP	15	505
NGN	1000	11590000

Table 3: Age/Age-Group Distribution

Generation	Count
Boomers	459
Gen Alpha	10
Gen X	3192
Gen Z	9775
Millennials	8447
Silent Generation	23

Table 4: Gender Distribution

Gender	Count
Female	4851
Male	12844
Non-Binary	4211

Table 5: Verified and Non-Verified Users

Profile Status	Count
Non-Verified	9005
Verified	12901

Table 6: Combined Tables

Table 7: Location Distribution

Location	Count
AUSTRALIA	34
CANADA	5561
NIGERIA	16293
UNITED KINGDOM	18

Table 8: Professional Distribution

| Profession	Count
Business Professional	2928
Creative Professional	1900
Education Professional	514
Engineer	508
Finance Professional	474
Government Employee	121
Healthcare Professional	594
Other	4688
Retired	31
Sales Professional	516
Self-Employed	112
Service Professional	718
Student	2831
Technology Professional	1284
Trades Professional	437
Unemployed	62
Unknown	4188

KYC Status

Here we would review the various dynamics around KYC and it's impact on Transaction Activity.

Reviewing the following: - KYC Distribution - - General Distribution - - Country Distribution - - Age-Group Distribution - The Status over time - The Status over time spent as an account holder - Correlations
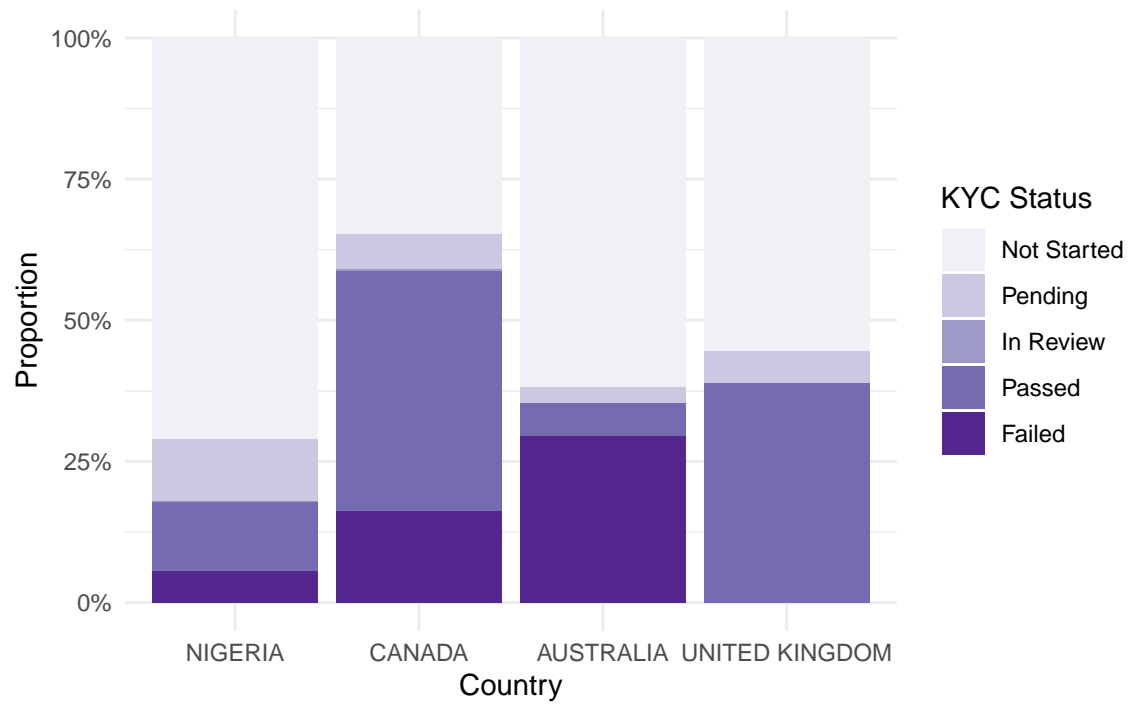
Then we look at an overview of the *Journey Analysis* general impact.

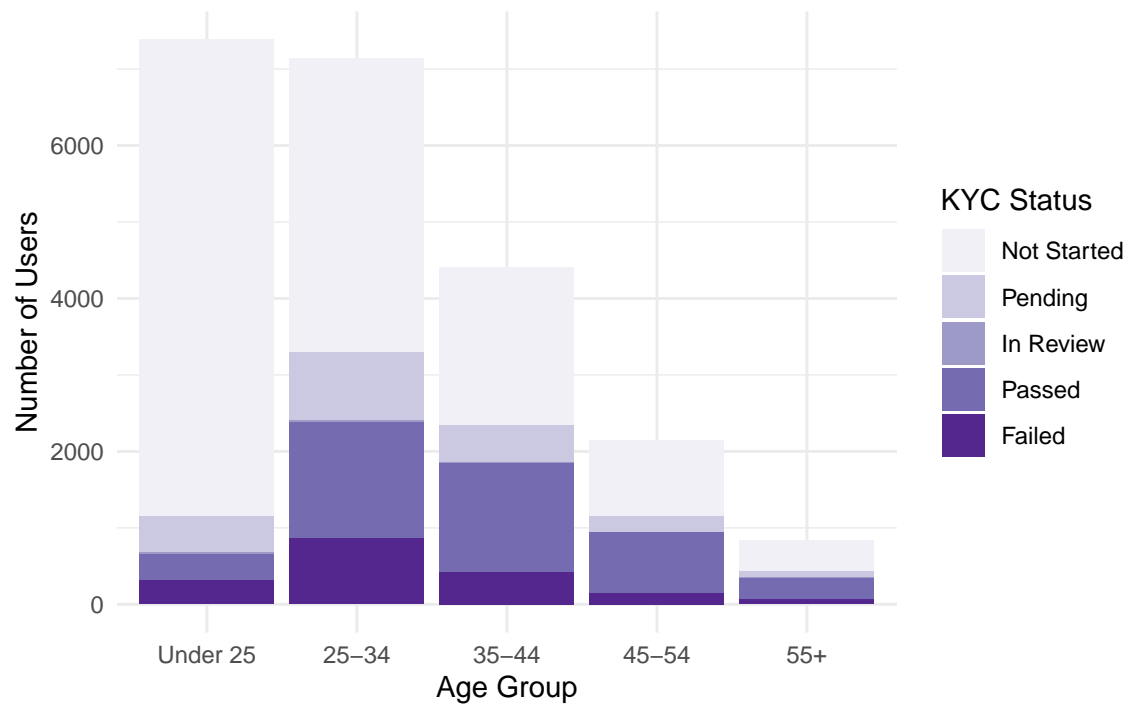| KYC Status	Users	Percentage (%)
Not Started	13543	61.8232448
Passed	4359	19.8986579
Pending	2120	9.6777139
Failed	1816	8.2899662
In Review	68	0.3104172

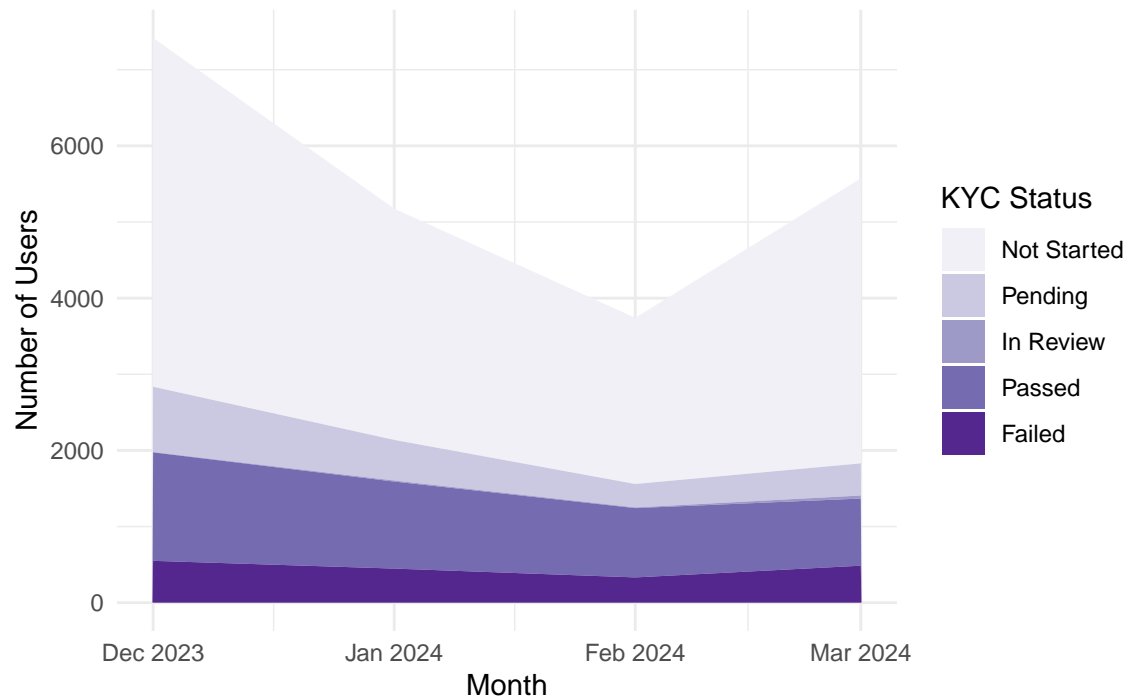## KYC Status Distribution
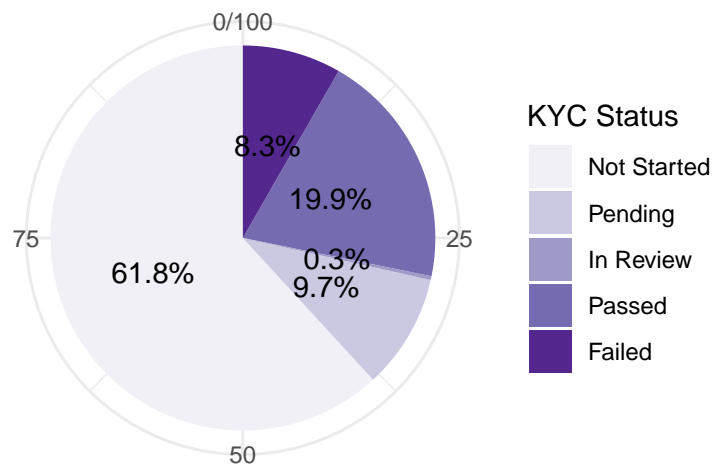
KYC Status Distribution by Country

KYC Status by Age Group
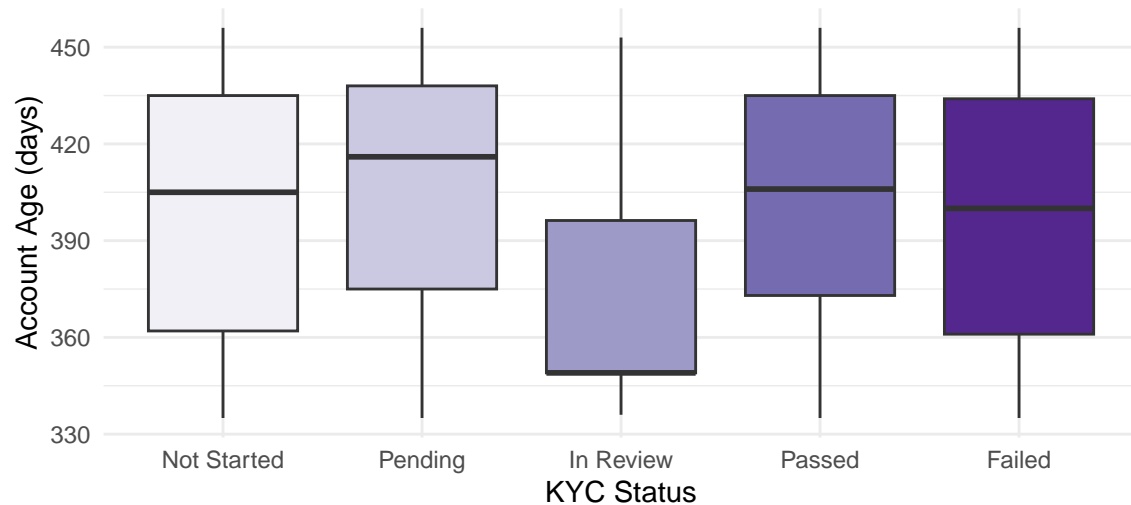
KYC Status Trends Over Time

User Journey Analysis

Time from account creation to KYC completion (for Passed status). [3]

As a proxy, we'll analyze account age distribution by KYC status

Account Age Distribution by KYC Status

Users who passed KYC tend to have older accounts (average 360 days), suggesting that KYC completion often happens later in the user journey. This could indicate a lack of urgency or barriers early on.

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[3]Note: This assumes there might be additional data with KYC completion date

Relationship Between Profile Completion and KYC Status
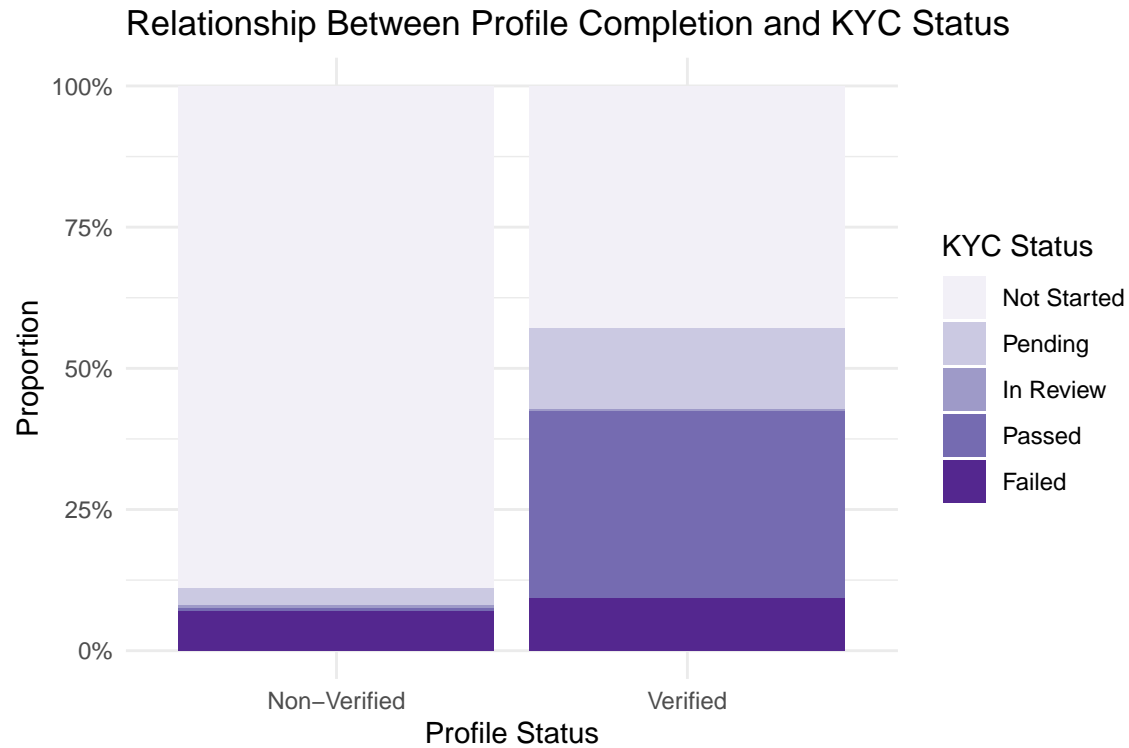
Business Impact Analysis

Business Impact of KYC Verification
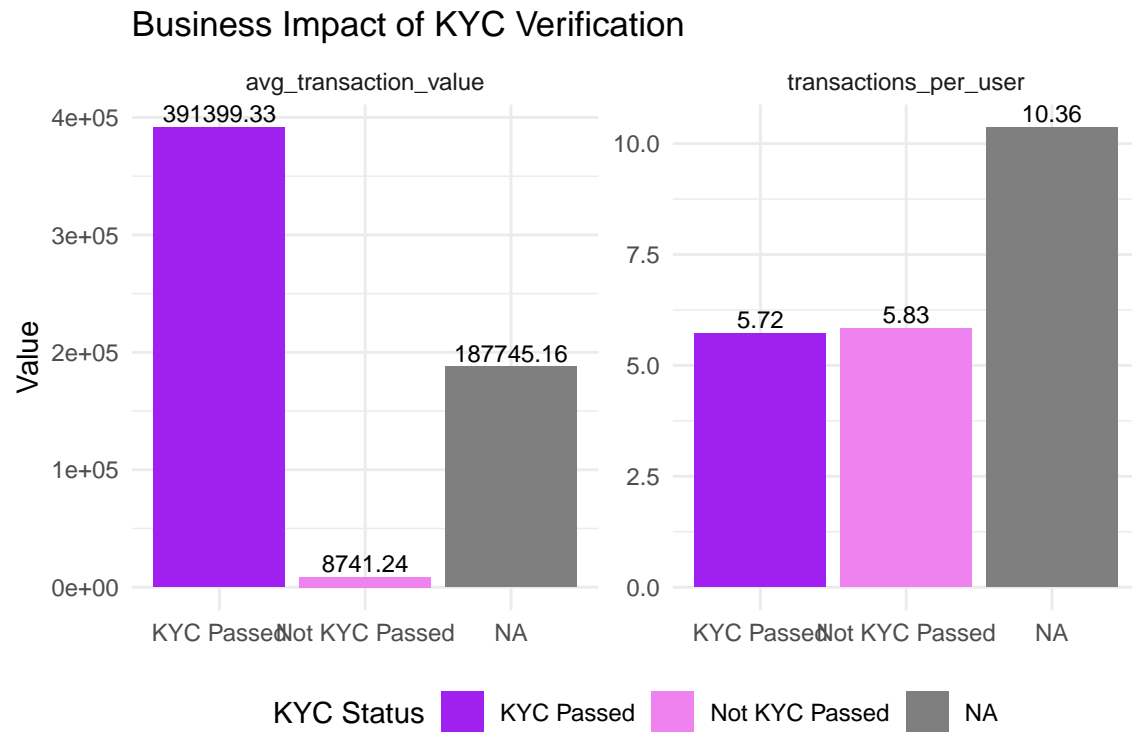
Interpreting:

KYC Agnostic to Transaction Activity

61.8% of users have not started KYC, yet they may still be transaction-active. Only *19.9%* have passed KYC, but they aren't necessarily the most active.

This implies KYC status alone doesn't predict transaction behavior. Other factors (e.g., user intent, product engagement) may drive activity.

Country Distribution

Nigeria has the highest proportion of KYC Not Started users, suggesting regional barriers or behavioral differences compared to Canada, Australia, and the UK.

Age Group Distribution

Under 25 and *55+* users have the highest KYC Not Started rates, indicating potential barriers or lower urgency in these groups.

Trends Over Time

KYC Passed users are increasing, a positive trend. However, KYC Not Started remains high *(61.8%)*, highlighting the need for targeted efforts.

Final Takeaway

While KYC completion is critical for compliance it doesn't directly drive transaction activity. There significant regional and age-specific distributions require targetted strategies to address the *NOT Started* rates. KYC completion directly impacts revenue, compliance, and customer retention. By focusing on increasing KYC Passed rates and reducing barriers for non-starters, that may include *simplifying KYC* and *incentivizing completion*, the business can unlock significant growth, reduce risks, and enhance customer lifetime value.

Transactions

Total Number of Transactions: 164882

Total Amount of Transactions in CAD (BaseAmount): 6.0487865×10^7

Table 10: Transaction Volume by SendCurrency Corridor

Currency	Count	Volume (C$)
CAD	140910	30928932
NGN	23968	29558317
GBP	4	616

Table 11: Transaction Volume by Sender Location

Country	Count	Volume (C$)
CANADA	5799	2738947
NIGERIA	987	762225

Table 12: Transaction Volume by Send Currency and Receive Currency Corridor

Corridor	Count	Volume	total_received
CAD-NGN	138929	30082649	32146279426
NGN-CAD	21956	31175883768	28536556
NGN-NGN	1834	1018982888	1018982888
CAD-CAD	962	526262	526262
CAD-GHS	630	176930	1583887
CAD-KES	198	52817	5889736
CAD-USD	145	176511	130248
NGN-GHS	140	35018518	329323
CAD-AUD	33	40172	23279
NGN-USD	20	48395925	31019
CAD-EUR	12	3356	2276
NGN-KES	8	123602	596600
NGN-AUD	7	1499550	877
GBP-NGN	4	720	667080
NGN-EUR	2	33500	18
CAD-INR	1	10	620
NGN-INR	1	12000	625

Table 13: Growth per Corridor in Volume (Monthly)

month	corridor	monthly_volume	prev_month_volume	growth_rate
2024-03-01	CAD-AUD	40075	20	2.002750e+05
2024-01-01	CAD-CAD	119636	3133	3.718576e+03

2024-02-01	CAD-CAD	127397	119636	6.487178e+00
2024-03-01	CAD-CAD	153137	127397	2.020456e+01
2024-03-01	CAD-EUR	3307	50	6.514000e+03
2024-01-01	CAD-GHS	83390	1946	4.185200e+03
2024-02-01	CAD-GHS	63191	83390	-2.422233e+01
2024-03-01	CAD-GHS	24876	63191	-6.063363e+01
2024-02-01	CAD-KES	20880	6607	2.160285e+02
2024-03-01	CAD-KES	27772	20880	3.300766e+01
2024-01-01	CAD-NGN	10943600	231527	4.626706e+03
2024-02-01	CAD-NGN	9439193	10943600	-1.374691e+01
2024-03-01	CAD-NGN	9463278	9439193	2.551595e-01
2024-01-01	CAD-USD	29728	812	3.561084e+03
2024-02-01	CAD-USD	88443	29728	1.975074e+02
2024-03-01	CAD-USD	56924	88443	-3.563764e+01
2024-02-01	GBP-NGN	427	189	1.259259e+02
2024-01-01	NGN-CAD	10325788	263606	3.817129e+03
2024-02-01	NGN-CAD	9255039	10325788	-1.036966e+01
2024-03-01	NGN-CAD	8692123	9255039	-6.082265e+00
2024-01-01	NGN-GHS	26350	17	1.549000e+05
2024-02-01	NGN-GHS	2720	26350	-8.967742e+01
2024-03-01	NGN-GHS	6885	2720	1.531250e+02
2024-01-01	NGN-NGN	375794	8242	4.459500e+03
2024-02-01	NGN-NGN	269361	375794	-2.832217e+01
2024-03-01	NGN-NGN	283096	269361	5.099105e+00
2024-02-01	NGN-USD	926	7299	-8.731333e+01
2024-03-01	NGN-USD	33678	926	3.536933e+03

Transactions Daily, MoM and WoW

Daily Transactions

Weekly Transactions

Monthly Transactions
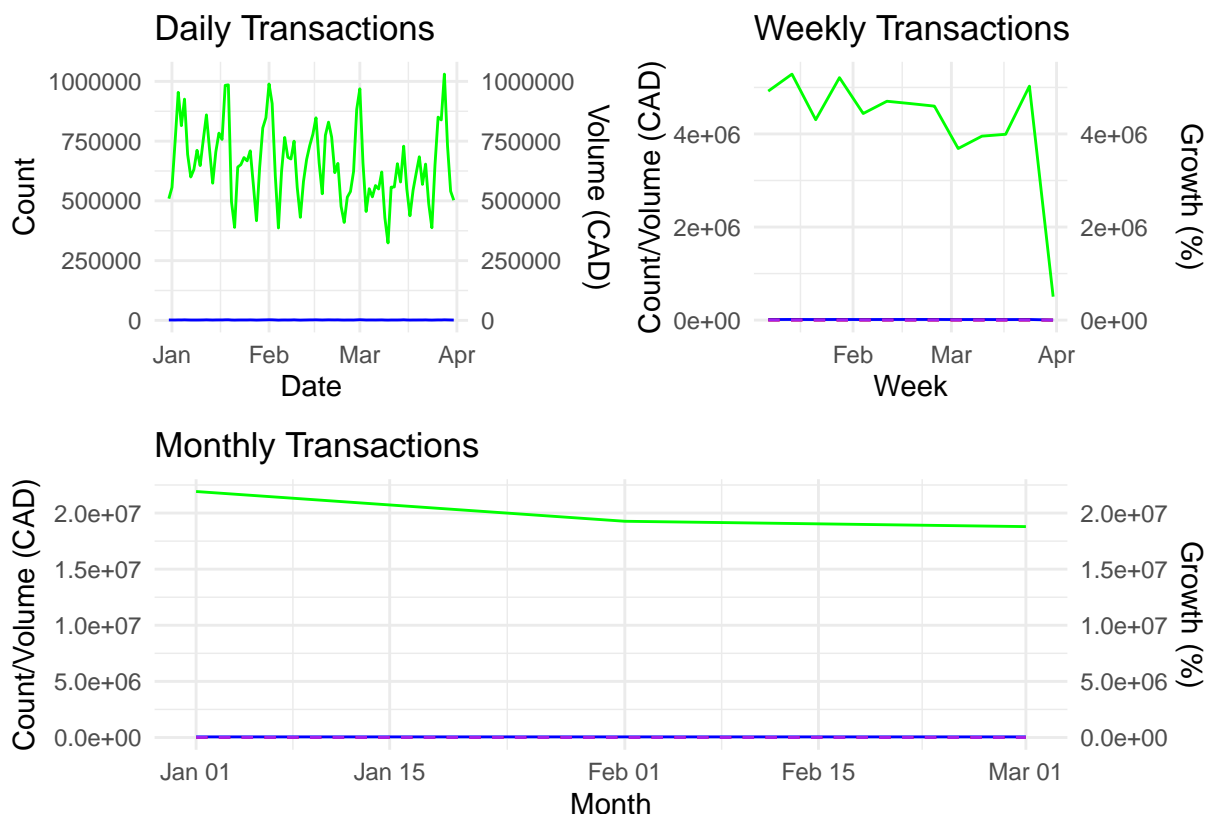
Interpretation: Growth and Opportunity

The platform recorded 164,882 transactions, totaling *60.5 million C$* with an average transaction size of *366.86*. This reflects strong user activity and trust, showcasing the platform's ability to handle significant monetary flows.

Canada Leads the Way CAD dominates as the top send currency, contributing $30.9 million C$ in volume. The *CAD-NGN* corridor is the most active, with *138,929* transactions, driven by remittances between Canada and Nigeria. Representing the backbone of transaction activity.

Global Reach and Diversification Beyond Canada, *NGN (Nigeria)* and *GBP (UK)* are significant send currencies, highlighting a diversified user base.

Other active corridors like *CAD-USD*, *NGN-GHS*, and *CAD-AUD* reflect global demand, with users sending money across continents, indicative of opportunities to expand further in high-growth regions.

Explosive Growth in Emerging Corridors CAD-AUD saw a staggering *200,275%* growth in March 2024, while NGN-USD grew by *3,536%*. These corridors represent emerging opportunities, possibly fueled by new user acquisition or targeted campaigns.

Challenges in Declining Corridors CAD-GHS and *NGN-GHS* experienced significant declines (-60.6% and -89.7%, respectively). These corridors need attention, whether due to regulatory changes, user drop-off, or operational issues.

March 2024: A Strong Finish March saw the highest transaction volume, driven by growth in *CAD-AUD* and *NGN-USD*, likely influenced by seasonal factors or successful marketing efforts.

Pulling everything together

1. Canada is the star, with *CAD* and *CAD-NGN* driving the majority of transactions.

2. Emerging corridors like *CAD-AUD* and *NGN-USD* are growing rapidly, offering new revenue streams.

3. Declining corridors (*CAD-GHS*, *NGN-GHS*) need investigation and intervention to recover lost volume.

4. Global diversification is a strength, but optimizing high-growth regions will be key to sustained success.

The transaction data in general highlights strong platform activity, with Canada as the primary market and *CAD-NGN* as the top corridor. Explosive growth in *CAD-AUD* and *NGN-USD* presents new opportunities, while declining corridors like *CAD-GHS* require attention. Overall, the platform is well-positioned for growth, with a diversified and an active user base.

Metric	Value
Total Transactions	164,882
Total Volume (CAD)	$60,487,865
Average Transaction Size (CAD)	$366.86
Top Send Currency	CAD ($30,928,932)
Top Corridor	CAD-NGN (138,929 transactions)
Highest Monthly Growth Corridor	CAD-AUD
Highest Monthly Growth Rate (%)	200275%

Rentention

Here we track user and transaction retention

Cohort Analysis for Retention

Let's calculates cohort retention rates, which show how well users are retained over time after their initial sign-up (cohort month).

Table 15: Cohort Retention (Monthly)

cohort	months_since_first	users	initial_users	retention_rate
2023-12-01	0	1343	1343	100.00000
2023-12-01	1	1168	1343	86.96947
2023-12-01	2	1136	1343	84.58675
2023-12-01	3	197	1343	14.66865
2024-01-01	0	11168	11168	100.00000
2024-01-01	1	8481	11168	75.94019
2024-01-01	2	7016	11168	62.82235
2024-02-01	0	2488	2488	100.00000
2024-02-01	1	1045	2488	42.00161
2024-03-01	0	1446	1446	100.00000

We see retention decline over time for all cohorts, which is typical, but the steep drop in the December cohort (14.7% by month 3) and the February cohort (42% by month 1) are concerning. Thiw would mean investigating why users are churning, especially in the 2nd and 3rd months.

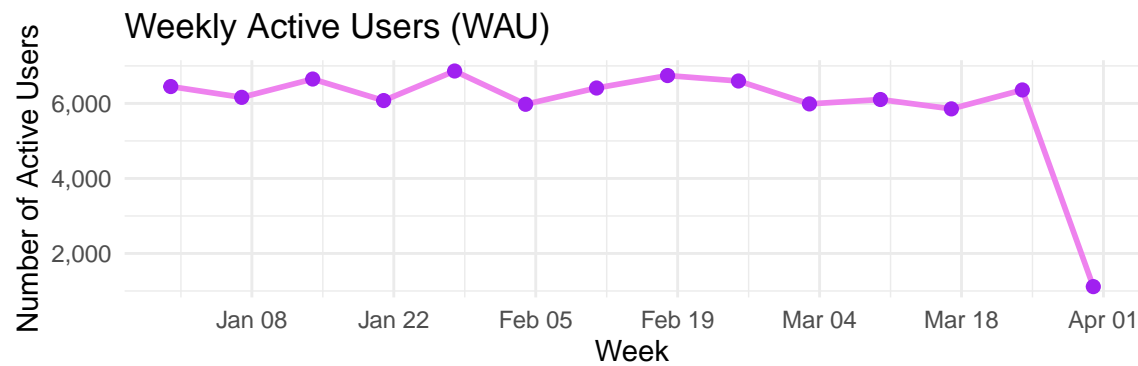*Possible interventions*: Improve onboarding, engagement, or product features to boost retention.

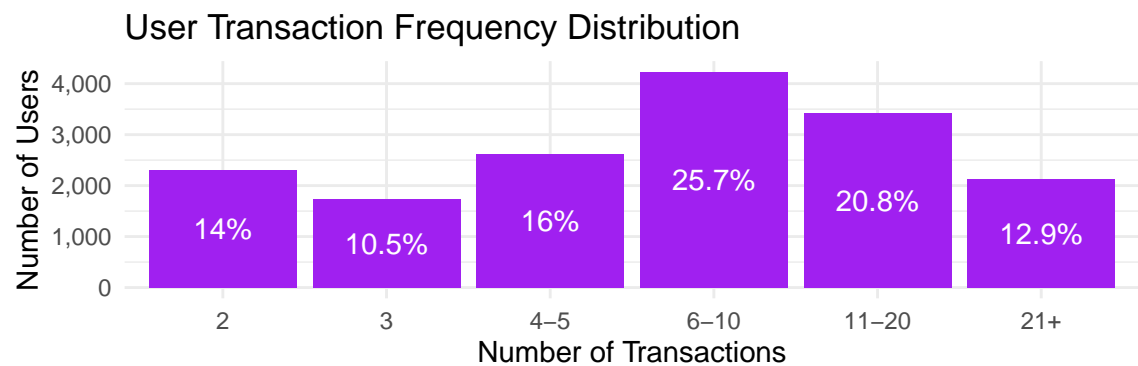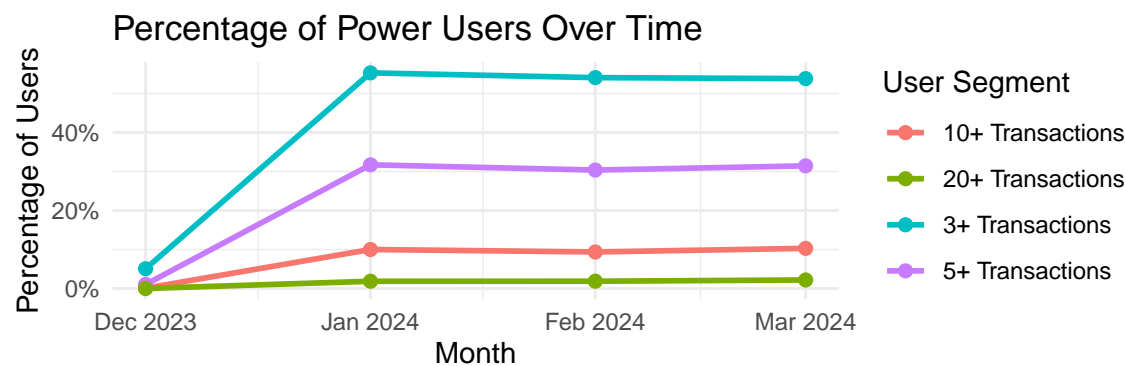**Transaction Frequency**

Monthly Active Users Over Time

16

Weekly Active Users Over Time

Weekly Active Users (WAU)
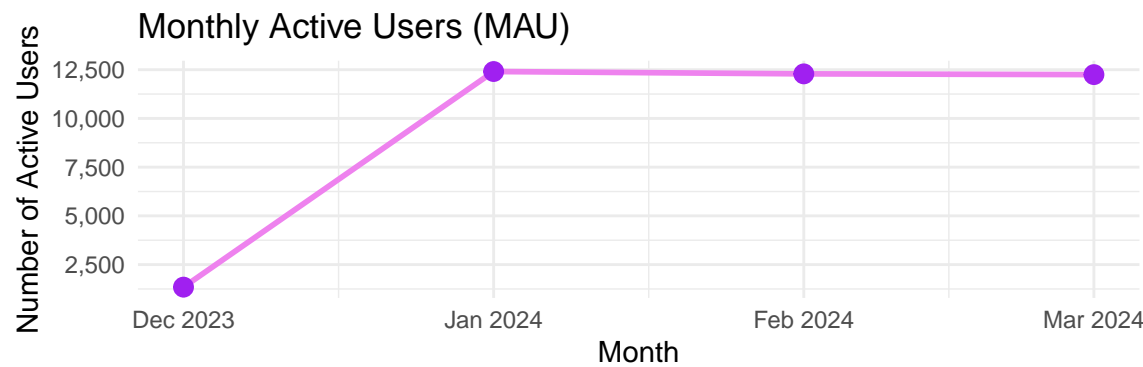
User Transaction Frequency Distribution

User Transaction Frequency Distribution

Monthly User Segments

Percentage of Power Users Over Time

Metric	Value
Total Unique Users	16,445
Monthly Active Users (Latest Month)	12,247
Weekly Active Users (Latest Week)	1,116
Users with 3+ Transactions	12,406 (75.4%)
Users with 5+ Transactions	9,783 (59.5%)

Users with 10+ Transactions	5,553 (33.8%)
Users with 20+ Transactions	2,128 (12.9%)
Average Transactions Per User	10
Month-1 Retention Rate (Average)	68.3%
Month-2 Retention Rate (Average)	73.7%

Interpreting: Challenges and Opportunities

The platform's retention story reveals both challenges and opportunities. While user acquisition is strong, retention declines over time, with steep drops in key cohorts. For example, the *December 2023* cohort saw retention plummet to *14.7%* by the third month, and the *February 2024* cohort dropped to *42%* after just one month. These sharp declines suggest potential issues with user engagement or product experience, particularly in the second and third months. Meanwhile, the January 2024 cohort showed a steadier decline, indicating a gradual loss of interest over time.

To address these trends, the platform must focus on *improving onboarding* and *enhancing engagement* to keep users active beyond the first month. Investigating why certain cohorts experience steeper drops—such as February's sudden decline—is critical to identifying and resolving pain points. Additionally, tracking high-frequency users (those with 10+ transactions) can help prioritize efforts to retain the most valuable and loyal customers.

Retention is a critical metric for the platform's growth and sustainability. While the data shows some concerning trends, it also highlights opportunities for improvement. By understanding why users leave and taking steps to keep them engaged, the platform can turn the retention story into one of sustained growth and success. The journey to better retention starts now.

Funnel Analysis

The funnel analysis breaks down the user journey into four key stages: *Acquisition → Complete Profile → KYC Verified → Transaction.*

User Journey Funnel Analysis: Funnel Overview [4]

Here's how users move through the funnel and where they drop off:

stage	users	pct_of_total	pct_of_previous	dropoff	dropoff_pct
Acquisition	21906	100.000000	100.00000	0	0.00000
Complete Profile	12901	58.892541	58.89254	9005	41.10746
KYC Verified	4376	19.976262	33.91985	8525	66.08015
Transaction	1187	5.418607	27.12523	3189	72.87477

Time to Transaction

- **Median Time:** 15 days
- **Mean Time:** 22.3 days
- **Range:** 0 to 116 days

Key Drop-off Points

stage	dropoff	dropoff_pct
Transaction	3189	72.87477
KYC Verified	8525	66.08015
Complete Profile	9005	41.10746

Conversion by Country

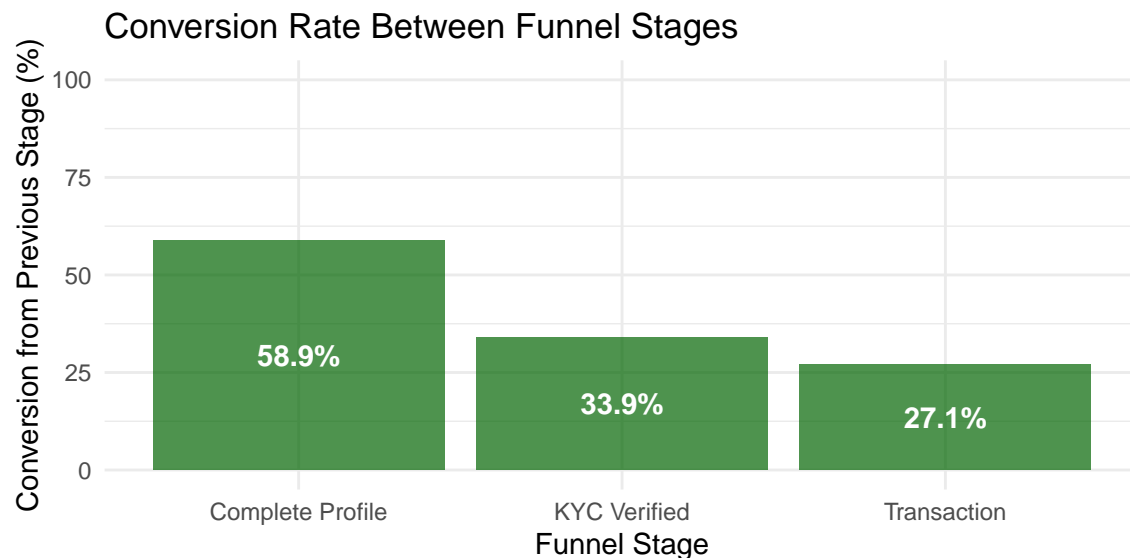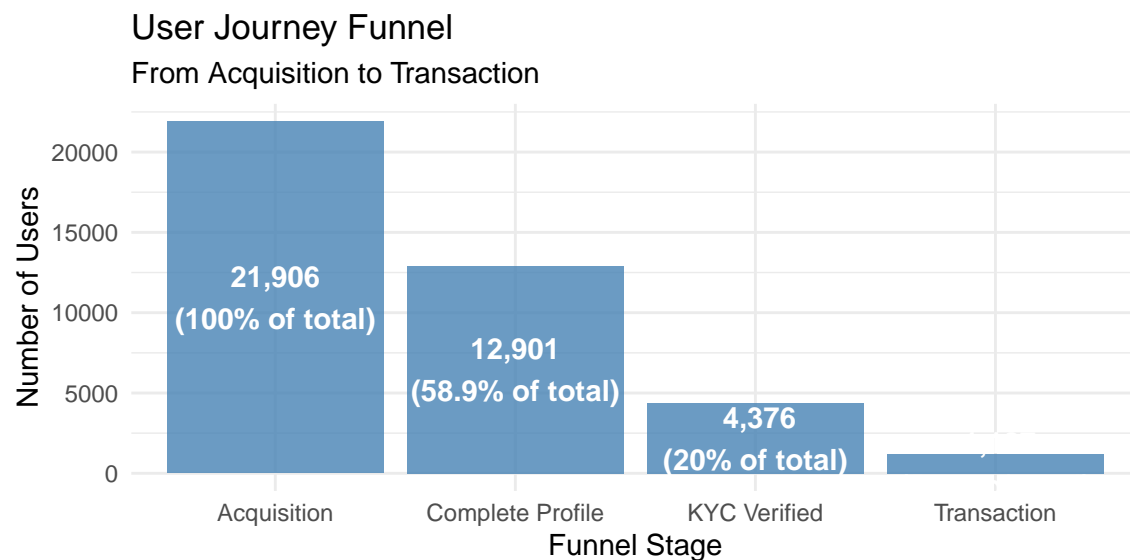| residence_country	total_users	profile_completion_rate	kyc_verification_rate	transaction_rate	overall_conversion
AUSTRALIA	34	70.58824	8.333333	0.00000	0.000000
CANADA	5561	83.52814	51.065662	37.85835	16.148175
NIGERIA	16293	50.46953	24.261218	14.48622	1.773768
UNITED KINGDOM	18	50.00000	77.777778	0.00000	0.000000

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[4]**Note:** 15258 transacting users 92.8% were found in the transaction data but not in the user data.", These were excluded from the funnel analysis for accuracy.
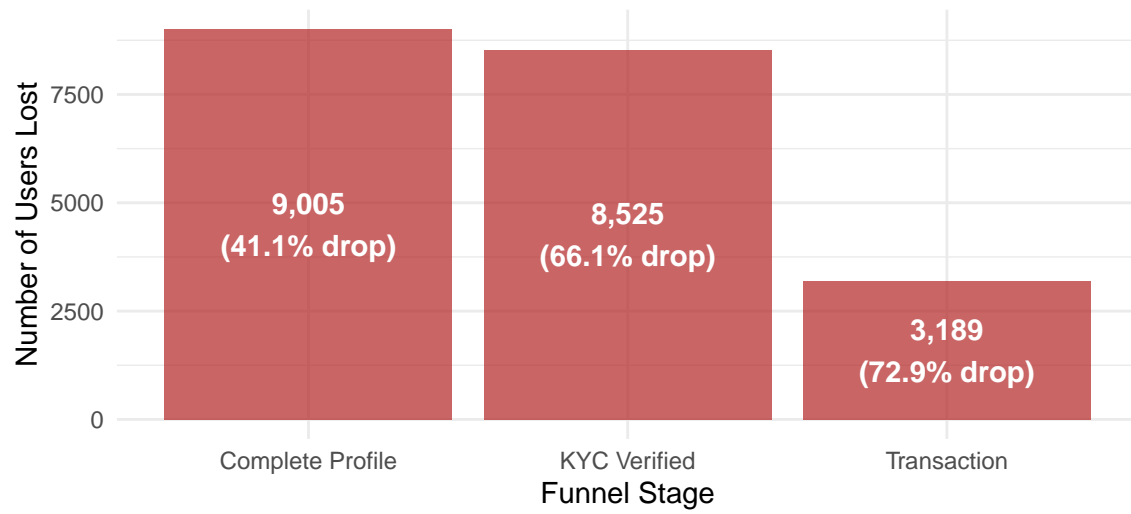
Strategies to Address Drop-offs

Complete Profile Stage - Simplify the profile completion process by reducing required fields to essential ones - Implement progressive profiling to gather information over time rather than all at once - Add progress indicators to show users how close they are to completion - Offer incentives for profile completion (e.g., transaction fee discount)

KYC Verification Stage - Streamline the verification process** with clearer instructions and examples - Implement real-time verification feedback** to reduce frustration - Provide multiple verification options** to accommodate different user preferences - Send targeted reminders** to users who started but didn't complete verification

Transaction Stage - Reduce friction in the first transaction with simplified UI/UX - Offer first-time transaction incentives such as fee waivers - Implement trust indicators to reassure users about security - Create guided tutorials for completing transactions - Add social proof from other users to build confidence
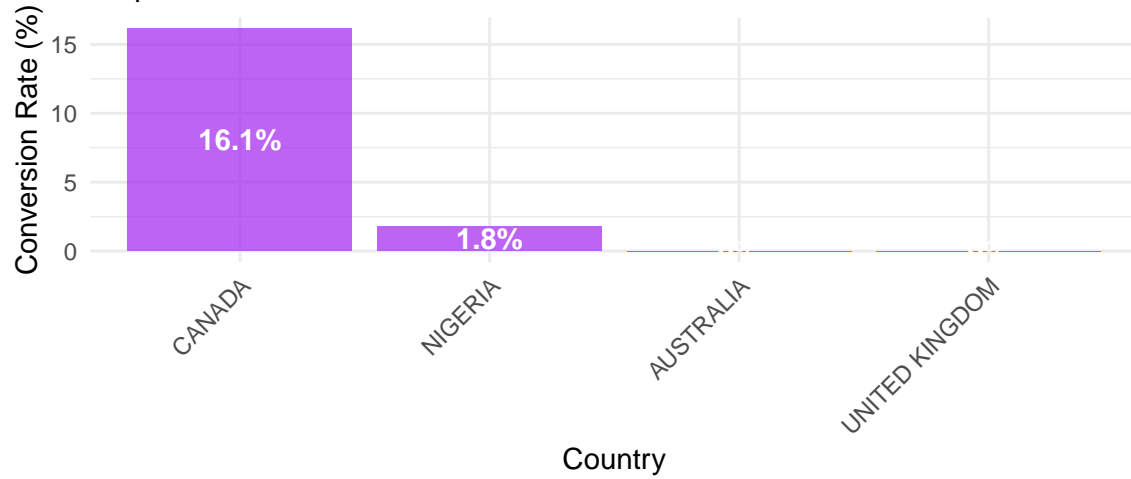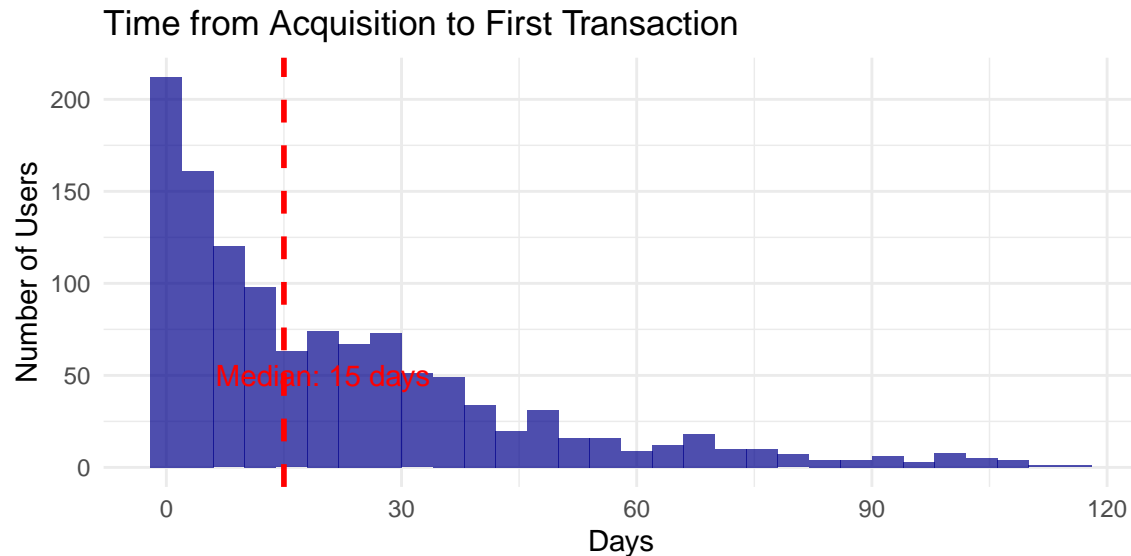
User Journey Funnel
From Acquisition to Transaction

Conversion Rate Between Funnel Stages

User Drop-off by Funnel Stage

Number of Users Lost

9,005 (41.1% drop)	Complete Profile
8,525 (66.1% drop)	KYC Verified
3,189 (72.9% drop)	Transaction

Funnel Stage

Overall Conversion Rate by Country

Acquisition to Transaction

Conversion Rate (%)

CANADA	NIGERIA	AUSTRALIA	UNITED KINGDOM
16.1%	1.8%		

Country

Time from Acquisition to First Transaction

Interpretation: Drop-offs and Opportunities

Where Are Users Falling Off? The funnel analysis reveals three key drop-off points:

- Complete Profile Stage: *41.1%* drop-off-users, possibly because they find profile completion too demanding.

- KYC Verification Stage: *66.1%* drop-off, here, it could be because the verification process feels cumbersome or frustrating.

- Transaction Stage: *72.9%* drop-off-users may hesitate due to security concerns, complexity, or lack of incentives.

Time to Transaction: A Mixed Bag For users who do make it to the transaction stage, the time it takes varies widely. The median time is about *15* days, but some users take up to *116* days. This suggests that while some users are ready to transact quickly, others need more time to build trust or overcome barriers.

Regional Differences: A Global Challenge The journey isn't the same for everyone. In Canada, the overall conversion rate from acquisition to transaction is *16.1%*, the highest among the regions. But in Nigeria, it's just *1.8%*. This stark difference suggests that regional factors—such as trust, usability, or local competition—play a significant role in user behavior.

(*Strategies to Improve the Journey*) To help users their journey, the platform can take several steps:

- Simplify Profile Completion: Reduce the number of required fields and use progressive profiling to gather information over time. Add progress indicators and offer incentives (e.g., fee discounts) to encourage completion.

- Streamline KYC Verification: Provide clearer instructions, real-time feedback, and multiple verification options (e.g., document upload, live video). Send targeted reminders to users who started but didn't finish.

- Reduce Transaction Friction: Simplify the UI/UX for first-time transactions, offer fee waivers, and add trust indicators (e.g., security badges) to reassure users. Guided tutorials and social proof can also help build confidence.

Conclusively, the funnel analysis reveals significant drop-offs at each stage, with the *KYC Verification* Stage being the most critical. By addressing friction points-such as simplifying profile completion, streamlining KYC, and reducing transaction barriers-the platform can improve conversion rates and drive more users to complete transactions. Regional strategies, especially for high-potential markets like *Nigeria*, will also be key to unlocking growth.