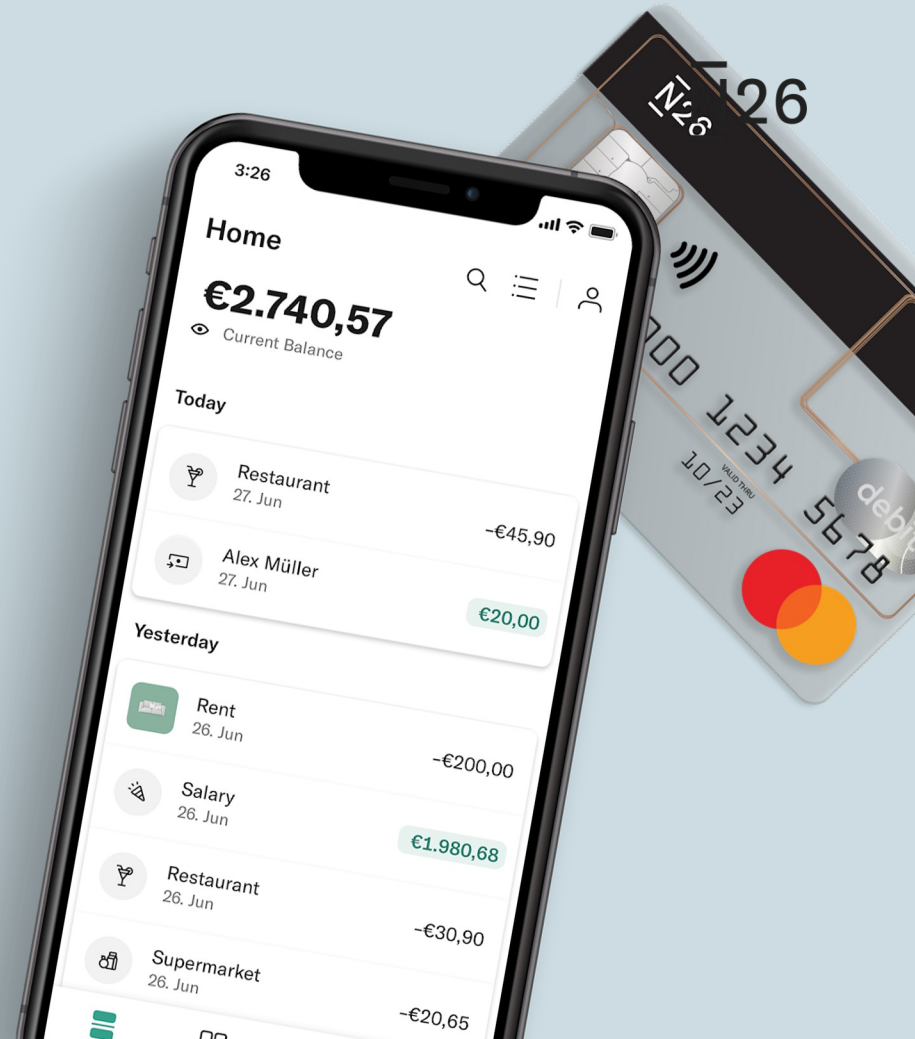
Product Analytics

Feature A Launch Analytics

By Sitian Gao



Key Findings in Growth & Retention

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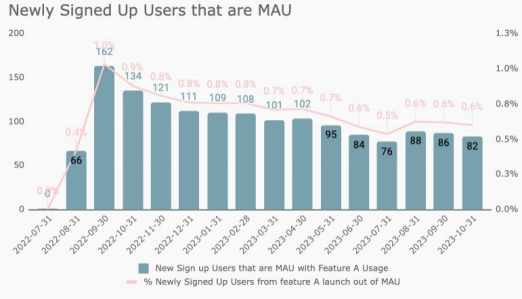
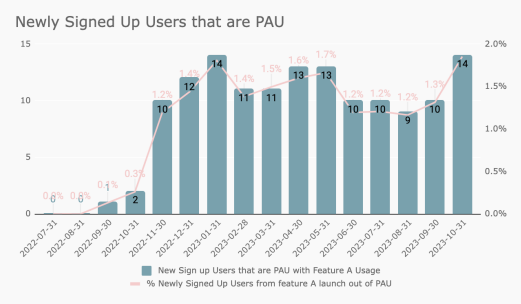
Growth

1525 Two months post launch newly signed up users that are MAU

140 Two months post launch newly signed up users that are PAU

* Since data only provided two months post launch new signup, limited to see if more new users drawn by feature A



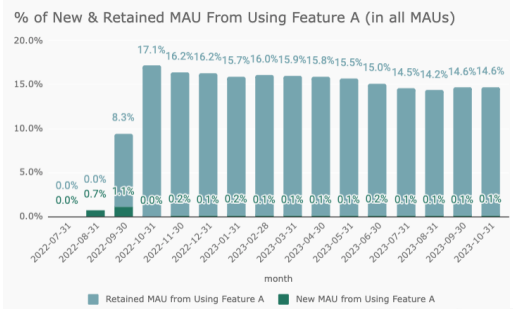


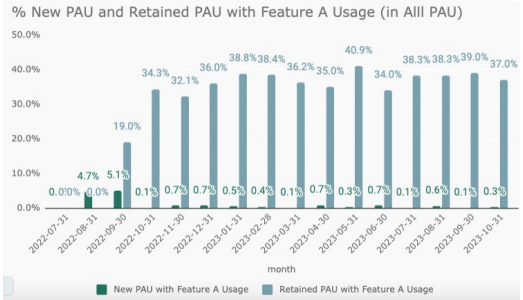
Retention

14%-17% % that feature A contributed to the retained MAUs

34%-40% % that feature A contributed to the retained PAUs

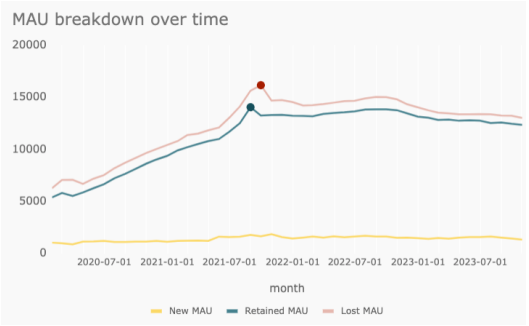
* In comparison to MAUs, PAUs are more loyal to feature A and they have steady doubled usage.

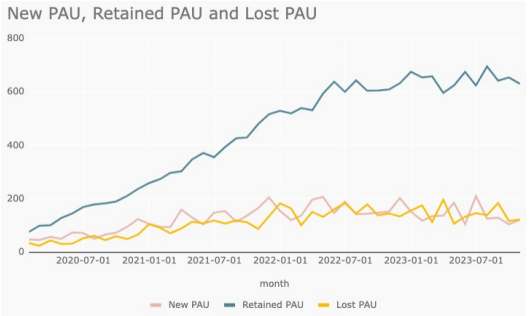




Overall Landscape

Lost to Retained MAU ratio (1.1) has been consistent across months, rate of losing MAU and retaining existing MAU has been slowed down after September 2021.
PAU retention has been increasing steadily. Lost to Retained PAU in the range of 0.2-0.4, with a recent months of decline of this ratio, which means PAU has been more stably retained.





Key Findings in Contribution and Cohort

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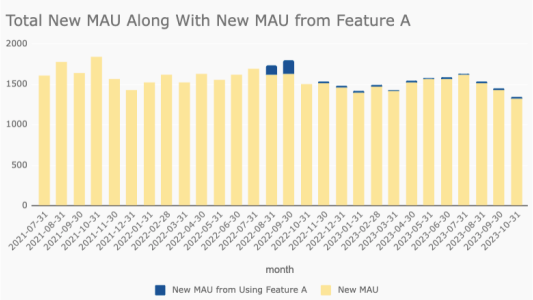
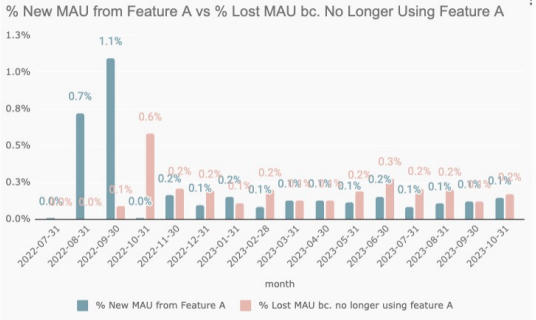
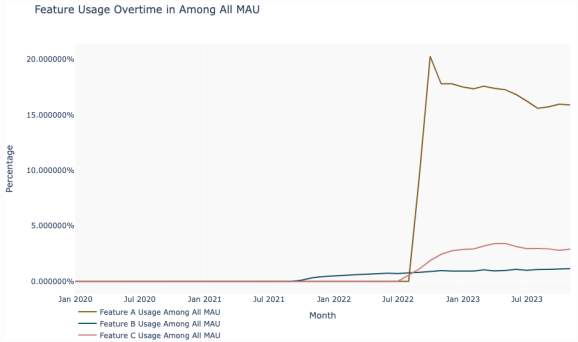
Feature A's Contribution

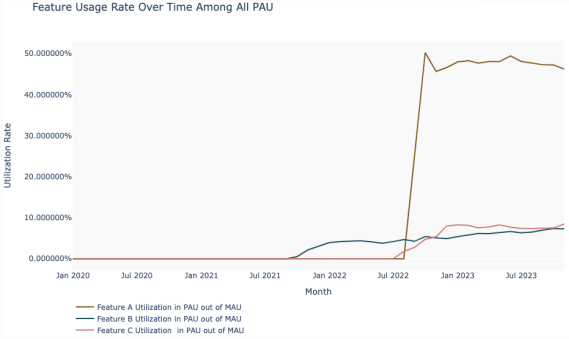
Although we can observe a post feature launch MAU increase in August and September 2022, then it has been creating diminished impact to MAUs. There is a seasonality on increase of MAU in July-September, which could contribute to New MAU and feature A contribution.
After three months of post launch, feature A contributes the same to new and lost MAUs.

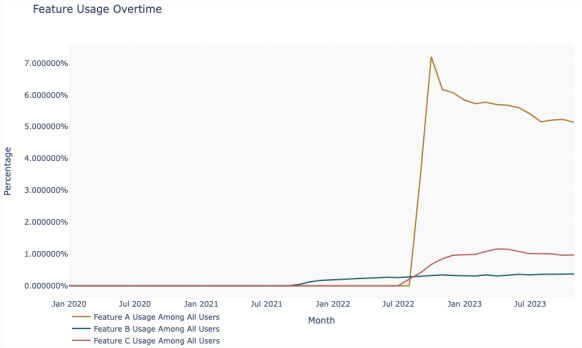




Feature A,B,C Cohort







All three features are more consistently used by PAUs, especially feature A usage in this group is above 40% since launch. We observed a gradual and steady feature B usage, which caught up with feature C usage among PAU.
Feature A's usage has steadily decreased among all users.
Three features usage trend in MAU and all users are similar, but MAU usage is doubled on usage percentage.

Other Findings

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Active Months

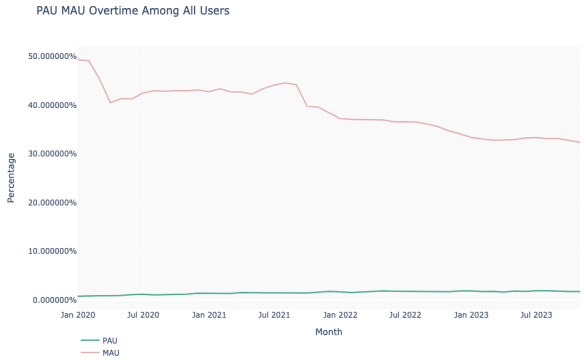
Statistics	PAU Active Months	MAU Active Months
Average	7.3	16.3
Median	4	12
Min	1	1
Max	47	47
Standard Deviation	8	14

Statistics	PAU (with Feature A Usage) Active Months	MAU (with Feature A Usage) Active Months
Average	5.4	10.5
Median	4	13
Min	1	1
Max	15	16
Standard Deviation	4	4.5

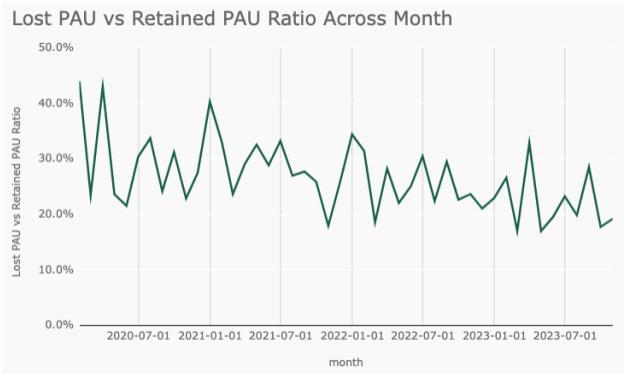
PAU has lower median and average number of active months. This may worth a further investigation on if PAUs have churned.

In feature A usage group, MAU's median active months has exceeded 12 months, which is one month higher than all MAUs. Feature A launch potentially contributed to bringing MAUs up.

PAUs MAUs Patterns



PAU is a very stable but low percentage in all users. MAU has shown volatility and has a decreasing trend. PAU has grown from below 1% to above 1.6% since Spain market launch. 50% PAU are active more than 4 months. 25% PAU are active more than 7 month.



PAU retention has been increasing steadily. Lost PAU vs Retained PAU in the range of 20% - 40%, with a recent months of decline of this ratio, which means PAU has been more stably retained.

Recommendations

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Problems	Next Steps	Level of Effort	
MAU Decline: Two directions that can boost MAU: • Reduce lost MAU, convert them to retained MAU • Increase newly acquired MAU	Two directions that can boost MAU: • Reduce lost MAU, convert them to retained MAU • Increase newly acquired MAU Requires more analysis on MAU decline reasons, we do not have enough variables in the sample data.	XL	Requires partnership with product, marketing, and operations teams on next steps
Feature A's Engagement Usage is large in MAUs and PAUs but not steady enough after three month of launch. Trend of feature A has also gone downwards, potentially driven by MAU overall trend.	• Analysis on more segments of users • Understand impact on revenue • Cross comparison with other markets • Understand engagement churn and create churn preventions with product managers • A/B test on different versions of same feature, evaluate performance	L	Create in-app and push notifications to let users engage more. Sent emails or texts messages, but requires to evaluate third party cost. Provide incentive programs: discount, free trials of other premium features that compliments feature A.
Feature A's Growth Not enough new users brought by feature A, relatively large portion of feature A usage are retained MAUs and PAUs.	• Analyze new vs existing users • Find the similar users that are in the market but haven't signed up	L	Work with marketing to identify opportunities on acquiring these users that are matching with feature A's target customers

Other Metrics and Analytics Methods

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Other Metrics

* The new metrics indicated in previous slides are not listed here

- **Retention rate**: measures if the previous month's active user is still active
- **Weekly active users (WAU)**: this metric is more sensitive to feature launches due to a shorter time period
- **7-Day moving average of active users**: moving average smooths out seasonality, which means if there is a spike, it is not due to seasonality. Therefore, this can be better used to measure if a feature launch has an impact
- **Weekly number of transactions**: obtain a general understanding of the trend of this metric, feature launch should not impact account transaction functions
- **Weekly account transaction revenue**: see if features boosts this revenue metric
- **Customer churn rate**: measures customer churn, see if features contributed to customer lost
- **User acquisition cost**: can monitor this metric to evaluate feature cost and return

Product Cross Sell Related:

- **Membership growth rate**: investigate if new features makes users to purchase membership of N26
- **Scheduled payments adoption rate**: see if feature A makes users to use more scheduled payments and become more active
- **ETF or crypto investment usage rate**
- **Monthly deposit over 1000 euros account percentage:** additional to consistency usage, this one provides a money deposit threshold

PAU Alternatives

PAU is a very stable but low percentage in all users. Here are two alternatives:

- In the last 6 months a user has money in and out for at least 3 months: for example, this provides more flexibility if someone is out for vacation, may not using the account for frequent transactions

- Alternatively, PAU can be defined as monthly transactions over 800 euros: this measures who use this account for major transactions every month

* 800 euro can be calculated further with more transaction data. The threshold requires further analysis.

Other Analytics Methods

Segmentations:
Membership class, product cross sell, new vs existing users, country and market specific impact, user profile clusters.
Segmentations provides more wholistic view of feature performance. And specific recommendations to a certain segment.

Pre-post analysis:
I did some pre-post analysis on metrics based on feature launches month.
This is analysis cannot remove the noise of seasonality and also cannot find confounders that contribute to the performance.

A/B Tests:
A/B tests: do not impact the whole market, can test feature variations during the same time and launch the best one.

Model:
Churn prediction:
Forecast if customer is about to churn due to features. Can define churn's definition (less frequent login, less frequent transactions, etc.)
Find the customer who are about to churn through churn forecast model. Send them in-product notifications, emails, incentive programs (free trial of memberships, membership discounts, etc)

Pseudo Group:
Create a similar group of launch market and predict feature performance.

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Questions and Discussions?