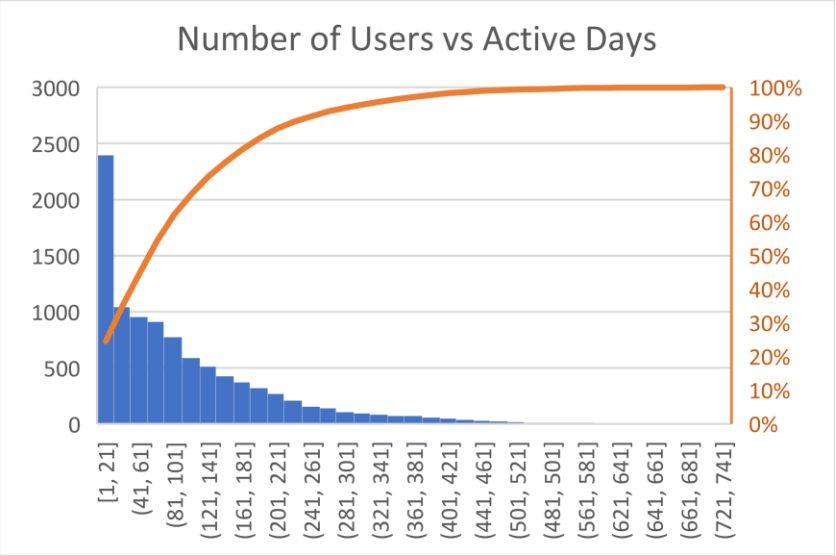
Beverage Brand Case Study

A D2C beverages brand, Yle has been in operation for 2 years. The brand sells their beverages solely through their own app. Management wants to understand if zombies (zombies are another term for inactive users, who have not been transacting for elongated periods of time) are a real issue for them and if yes, ways to solve this problem. Problem statements are:

1. How would you define zombie for this brand
2. Are zombies real issue for the company/management
3. What insights can you come up with on zombie behavior
4. What experiments/strategy you can propose to reduce/win-back zombies

Yle is an expensive beverage and use cases are parties/special occasions (low frequency and high volume purchase behavior).

Solution:



Exploratory data analysis:

Total number of Users signed up: 10000
Total number of Users with transaction record: 3485
Total number of users with no transaction record: 6515 (65.15%)

Average active days of users: 102
Median active days of users: 72
25% of users have active days less than 22 days.

Median age of users: 33 years

Number of signed up users with active days > 72 (median) but no transaction attemp = 2945

Transaction Analysis:

Total Txn attemps: 174092
Total completed transactions: 141163 (81%)
Total failed transactions: 19811 (11.4%)
Total “created” transactions: 12645 (7.2%)

Total transacting users: 3485

Median number of transactions per user: 28
Number of users who transacted between One to Five times: 666 (19%)

Delivery Analysis:

Total Success Traxsactions: 141163
Total Delivery Success: 131189
Total Undelivered: 9974 (7%)

Ale's Drinks analysis:

Total transactions attemps: 174092

- **Based on price:**
  Txn count for Rs1000 products: 170943 (98%)
  Txn count for Rs100 products: 3149

- **Based on taste:**
  Sour: 15381
  Savoury: 52355
  Sweet: 41840
  Bitter: 31077
  Salty: 33439

- **Based on number of Items Ordered:**

% of Orders	Number of items ordered
40%	Upto 5
50%	Upto 7
60%	Upto 10
70%	Upto 15
80%	Upto 23
90%	Upto 45
95%	Upto 60

Analysis wrt Device type

	device_make	no_of_devices
1	apple	2,007
2	samsung	1,809
3	xiaomi	1,807
4	oneplus	1,400
5	vivo	911
6	oppo	752
7	realme	583
8	motorola	155
9	huawei	108
10	google	69
11	hmd global	56
12	asus	56
13	lge	44
14	infinix mobility limited	27
15	lenovo	20
16	tecno mobile limited	12

	device_make	txn_count
1	apple	31,057
2	xiaomi	30,705
3	samsung	30,510
4	oneplus	25,679
5	vivo	19,025
6	oppo	14,101
7	realme	13,631
8	motorola	2,622
9	huawei	1,305
10	hmd global	1,116
11	[NULL]	1,108
12	google	939
13	asus	926
14	lge	569
15	tecno mobile limited	403
16	infinix mobility limite	257
17	10or	69
18	jio	35

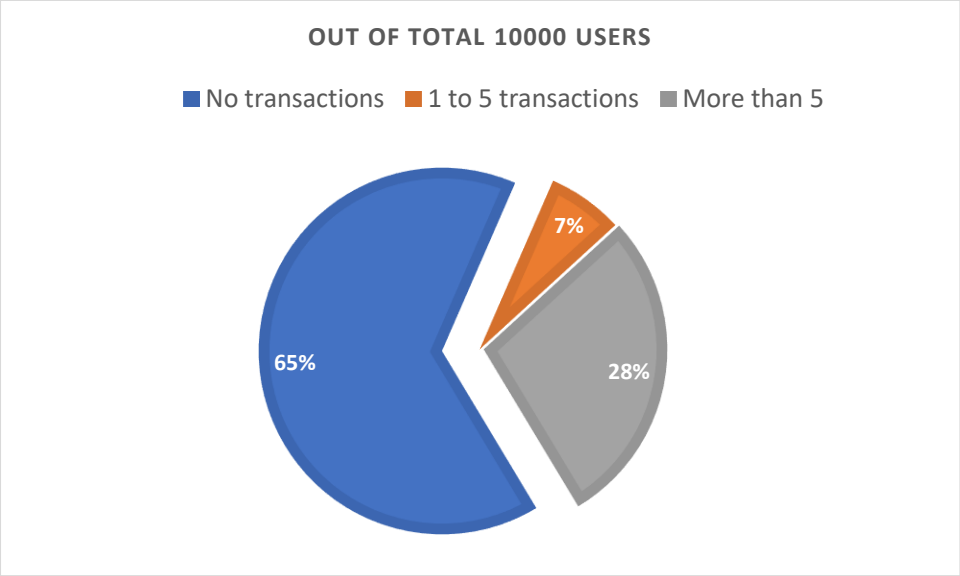
Q. How would you define zombie for this brand? What Insights can you come up on zombie behaviour?

Ans: Zombies can be defined for this brand as follows:

Type 1: Based on Low Active days on App.

- 50% of users have active days less than 72 days.
- 25% of users have active days less than 22 days.

Type 2: Based on Low transaction attempts after signup.



- Median number of txn for transacting users is 28.

Q. Are zombies real issue for company/management? What experiments/strategy you can propose to reduce/win-back zombies?

Ans. With median active days as 72 and high number of users (65%) with no transaction, **Yes zombies are issue for company.**

However, the underlying causes for such zombie behaviour could be minimized by focusing on Internal factors and External factors.

The imrovements will not only reduce zombie behavior but ensure better App experience, higher order sales and higher revenue and higher user satisfaction.

(A) Internal Factors: Factors which are controllable by the management.

Following Hypothesis are being laid out w.r.t Internal Factors.

Assuming the App journey as: App download -> Sign up page (Email/Phone) -> Catelouge Page -> Buy -> Delivery details page -> Checkout Page -> Success/Fail

Hypothesis	Reasons	Improvements/Solution to reduce Zombie number
Product pricing with respect to competition is high	• High prices wrt to competitor brands can discourage users. • No transaction activity after signing up can be an indicator to this as users deciding to not buy after checking prices.	• Conduct market research for competitive pricing wrt competition. • Discounts/offers during special calendar occasions or Festivals • Discounts on Large order amounts.
Need UI/UX Improvements	• Possible problems in product discovery and items specifications. • Users not able to navigate through the app for checkout process. Call to action (Buy/Checkout) buttons not easily accessible.	• Catelouge page as first page after opening app. • Clean, tile like scrollable design with 4-6 items visible at a time. • Basic details (Size, Price, Taste, Buy/Cart) visible corresponding to each product tile. • Running offers visible on first page. • Visible/Attractive/Accessible CTA buttons in product page.
Lacking mechanism to win back zombie users	• Lack of outbound calling or emails to zombie users. • Lack of customer support in case of complaints.	• Outbound call team to reach customers with Active days more than 3 but no transaction attempt. • SMS/Push Notifications/Email marketing on occasions such as festivals, birthdays, etc. • Since this is expensive beverage, Order size is large and frequency low. Hence, Dedicated customer support team to fulfill the grievances/complaints.
High dropoffs in payment procedure	• 19% of transactions attemps are not completed. Resuting in Loss of customer confidence and loss of revenue.	• Outbound call to customers on failed transaction. Convert prepaid method to COD if needed. • Fixing the payment issues and bugs with the Payments service provider.

Need to rationalize non-delivery rate	• 7% of successful placed orders are undelivered. Reasons could be due to last mile unserviceability.	• Resolving the issues with Logistics service provider.
Improvement in taste of drinks	• Lower sale of Non-Sweet Savoury drinks suggest improvements in taste or introduction of new variants.	• Market research of competitors' drinks taste, quality, texture. • Improving the R&D facility.

(B) External Factors: Factors which are based upon market preferences

Hypothesis	Reasons for Hypothesis	Improvements/Solution to reduce Zombie number
Better Competitor visibility	• In terms of pricing, advertising, taste, quick delivery fulfillment, partnerships the competitors command advantage in market share.	• Market research, competitor analysis to explore newer channel of distribution. • Digital marketing, Whatsapp marketing, Email marketing primarily targeting the signed up users and other prospective customers. • Improving the product branding for self marketing at the offline events. Ex: Improving the Label Colour, container design, etc.
Customers' preference to buy Beverages from offline stores	• Spontaneous demands for celebration events, • Psychological urge to consume when seeing in stores, • Shipment & Packaging safety concerns.	• Marketing reachout a week ahead of special occasions. • Highlighting the safe, fast delivery at product page to gain customer confidence.
Unservicable locations	• After entering pincode, Delivery not available to customer locations.	• Outbound call to customer to understand needs. If order quantity exceeds X, then arrange fulfillment via alternate logistics partner.
Unfavourable Geo-political factors	• If Ale is alcoholic beverage, government restrictions on sale.	• Target marketing efforts on other locations.

Recommended priority order to implement the improvements:

Criteria: Since this is low frequency product with high order volumes, it should be ensured that every Order attempt is successfully converted to a sale. Also, it is being used in social events, word of mouth plays a key role in future sales, hence service quality matters.

S.No	Improvement	Reason
0.	Ensuring drinks stock availability	Items should not be out of stock.
1.	UI/UX Improvements	Higher conversion rate to transaction stage, better product discovery and better user experience.
2.	Minimize dropoffs at Payment Stage	One out of five missed opportunity is of great significance for a low frequency product.
3.	Outbound call/Customer support to convert leads to successful sale.	Capitalizing on every lead gained. Also for a high volume order, human connect is necessary to ensure confidence in customers.
4.	Email/SMS/Whatsapp/Referral marketing to Signed up users.	Leveraging the existing database of users. Lower marketing costs, high revenue opportunity.
5.	Market research to rationalize the Price, Alternative Supply Chain partnerships.	Level playing field with the competition. Faster delivery fulfillment and more options for customers.
6.	Improving Product branding and ‘exclusiveness’ feeling of the product.	The low frequency consumption and ‘sacredness/exclusiveness’ go hand in hand.
7.	Reasearch and Development in new drinks variants-taste/texture/quality.	Multiple new options available to users, higher orders per customer, diversification.
8.	Explore new markets, new customer acquisition, new Supply Chain partnerships.	Growth of company.

SQL codes:

Ref 1: Number of transacting users

```sql
select count(distinct cu.user_id)
from public.case_users cu
left join public.case_transactions ct
on cu.user_id = ct.user_id
where ct.txn_id is not null
```

Ref 2: Average active days of all users

```sql
select avg(active_days)
from public.case_users
```

Ref 3: Median of Active days:

```sql
select max(active_days)
from (select active_days,
      NTILE(100) over(order by active_days) as percentile
      from public.case_users
      where active_days is not null) as t
where percentile = 50
```

Ref 4: 25 percentile of Active days:

```sql
select max(active_days)
from (select active_days,
      NTILE(100) over(order by active_days) as percentile
      from public.case_users
      where active_days is not null) as t
where percentile = 25
```

Ref 5: Transaction status counts:

```sql
select count(txn_id) as Number_of_txn
from public.case_transactions ct
where txn_status = 'completed'
```

```sql
select count(txn_id) as Number_of_txn
from public.case_transactions ct
where txn_status = 'failed'

select count(txn_id) as Number_of_txn
from public.case_transactions ct
where txn_status = 'created'
```

Ref 6: Median of transaction count per user

```sql
with txn as (
	select user_id as users, count(txn_id) as txn_count
	from public.case_transactions ct
	group by user_id
	)
select max(txn_count)
from (select txn_count,
	NTILE(100) over(order by txn_count) as percentile
	from txn
	where txn_count is not null) as t
where percentile = 50
```

Ref 7: Number of users transacting between 1 to 5 times:

```sql
with txn as (
	select user_id as users, count(txn_id) as txn_count
	from public.case_transactions ct
	group by user_id
	)
select count(users) as no_of_users
from txn
where txn_count between 1 and 5
```

Ref 8: Delivery status counts:

```sql
select count(txn_id) as Number_of_txn
from public.case_transactions ct
where delivery_status = 'delivered'

select count(txn_id) as Number_of_txn
from public.case_transactions ct
where delivery_status = 'not_delivered'
```

Ref 9: Product taste order counts:

```sql
select cp.product_taste, count(ct.txn_id)
from public.case_users as cu
left join public.case_transactions as ct
on cu.user_id = ct.user_id
left join public.case_products cp
on ct.product_id = cp.product_id
group by product_taste
```

Ref 10:

```sql
--Total transaction attempts counts per user
select user_id, count(txn_id) as Number_of_txn
from public.case_transactions ct
group by user_id
order by Number_of_txn
```

Ref 11: Device type

```sql
select cu.device_make , count(txn_id) as txn_count
from public.case_users cu
left join public.case_transactions ct
on cu.user_id = ct.user_id
group by cu.device_make
having txn_count > 20
order by count(txn_id) desc

select device_make, count(device_make) as no_of_devices
from public.case_users cu
group by device_make
having count(device_make) > 10
order by count(device_make) desc
```