



# **M4D Impact Service Evaluation**

## **Airtel & HNI's 3-2-1 Madagascar service – Full Report**



# Key Questions



HNI asked M4D Impact to focus on a set of core questions as part of our review & assessment

As a result of this review, we also flagged questions we believe most pertinent to HNI's business model

- 1 Where are the bottlenecks in the customer journey?
- 2 What are the drivers of repeated usage? What is the most effective content?
- 3 How can we determine which users are more valuable for a mobile operator?
- 4 What is user willingness to pay for the service?
- 5 From which gender are the users of the gender menu? What gender content is most effective?
- 6 How do marketing/promotional activities impact 3-2-1?



# Summary of Findings



1

Where are the bottlenecks in the customer journey?

- **The home menu is the main roadblock** on the customer journey: 52% of calls do not pass it
- **Family planning and water & sanitation** are less successful in channeling users to messages
- Only **32% of calls end up in a message listened to** at over 75%

2

What are the drivers of repeated usage? What is the most effective content?

- The launch of the **gender content has generated high usage representing 47% of all IVR content accessed and creating** spill over on family planning
- **The most popular content is gender and health**
- Chances to listen to a message in full is more than **twice for a repeat user** than for occasional users
- Gender, health and family planning are the most popular **content repeat users have paid for**

3

How can we determine which users are more valuable for a mobile operator?

- 3-2-1 users show **lower churn rates** than non 3-2-1 users
- **Further analytics** need to be conducted to fully demonstrate the value for Airtel, especially **at the user level**

# Summary of Findings



4

What is user willingness to pay for the service?

- User interviews indicate that **individuals are willing to pay**
- **Yet** attrition at the home page reaches 45.0% of paid calls made by repeat users suggesting a **high number of users hanging up potentially for fear of being charged**
- **19.5% of paying users** are occasional users **not listening to a single message in full**, i.e. not really engaged with the service

5

From which gender are the users of the gender menu? What gender content is most effective?

- **53% of users have entered their gender on the IVR only once**, 21% twice
- The **audience of the gender menu is balanced** with 41% of consistent female answers and 38% male answers
- Flip floppers represent 20% of the users of the gender menu, the **main drivers of flip flopping being curiosity and error**

6

How do marketing/promotional activities impact 3-2-1?

- **Batch SMS have impacted IVR and USSD traffic**, more than radio and TV

# Our approach



The following presentation details relevant insights and recommendations to tackle the aforementioned questions, using analytical techniques applied to mobile usage data sets, aggregating findings from millions of data points generated by the base of HNI's +3million users of the 3-2-1 service

We divide the presentation of findings into the following sections:

**Project & Organisation Overview:**  
An impressive service that needs to substantiate its value proposition and look to drive highest quality usage in view of internationalization

Organisation  
Service  
Need

**Business Model Snapshot:**  
Documenting 3-2-1 usage will be the corner stone of HNI's business model

**Exploring channels of access:**  
IVR the richest channel, though single-channel users tend to use SMS/USSD

**Mapping the Customer Journey:**  
Only one third of IVR calls end up in actual message delivery

**Mapping content access trends:**  
Creating data driven evidence around the engagement with content from users

**In-depth Gender Area Focus:**  
Access to gender menu in focus, with analysis that can be replicated across content areas to powerful effect

**Specific Customer Insights:**  
The lack of willingness to pay flagged, and the flip-flopper problem assessed

**Recommendations:**  
Strengthen partnerships, increase understanding of users, and monitor performance in real time

# Project & Organisation Overview:

An impressive service that needs to substantiate its value proposition to drive highest quality usage in view of internationalization



# HNI engages content providers + MNOs, reaching a mass audience

Organization Overview	Product Overview	Performance Overview	Key Problem Overview
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HNI has reached +3m mobile subscribers with the 3-2-1 service in Madagascar since 2010

HNI, a US-based NGO offers **public service information** via Airtel 3-2-1 on a range of topics such as health, agriculture and gender in the local language via mobile phone:

- 
 Working with **content providers** who are trying to reach a mass audience, HNI have designed a model to build and fund content generation committees, making content mobile ready

The mobile phone represents the most cost-effective way to reach the population at large. Multi-channel access value added services (VAS), e.g. IVR + SMS + USSD allow efficient targeting

- 
 The partnership with a **mobile network operator (MNO)** enables reaching millions of individuals. 3-2-1 records **3m+** users since its launch in Madagascar in 2010



# The organisation is entering an ambitious internationalization phase

Expansion will depend on key social and commercial metrics across markets

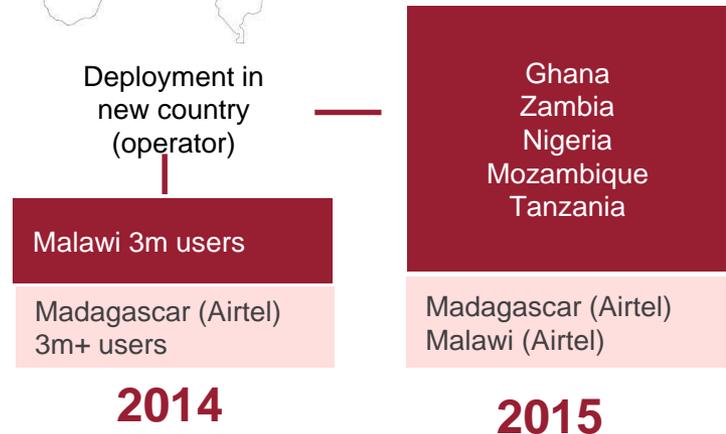
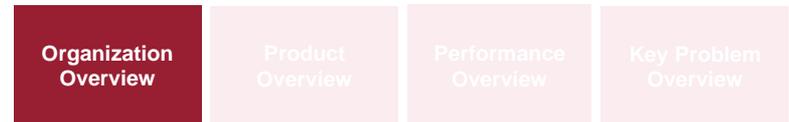
HNI is internationalizing and needs to demonstrate its value to funders and partners. The headline metric for driving commercial and social impact is the number of users. More specific metrics need to be explored across the commercial and social dimensions of the service:



Partner MNOs derive revenue from stickiness of users and their average revenue per user (ARPU)



3-2-1 users are able to collect information on topics and change behavior



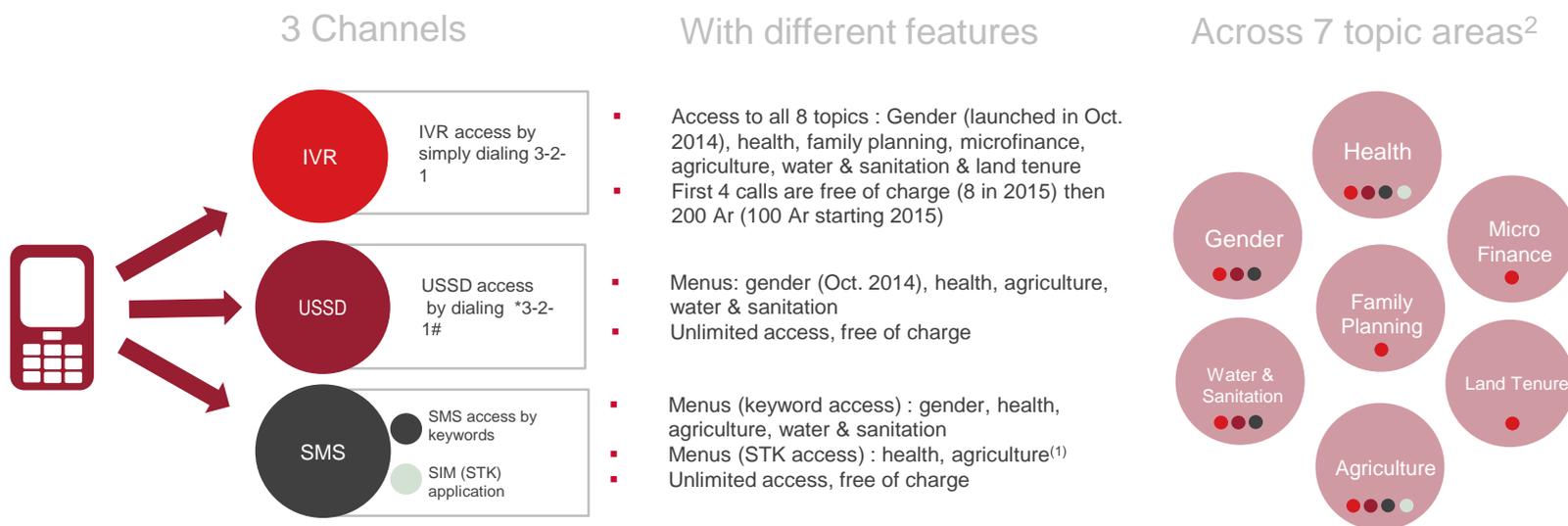
HNI's ambition is to reach a total of 50 million potential subscribers by end 2015

# 3-2-1 is a multi-channel VAS leveraging IVR, USSD and SMS

Users can access the service via different channels & get varying access to content, mainly for free

Organization Overview	<b>Product Overview</b>	Performance Overview	Key Problem Overview
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The IVR offers access to the richest range of content, and is also best suited to users with lower literacy levels, yet allows only 4 free calls per month. Other channels have less content, but allow unlimited free access. Access to all channels is significantly subsidized by the MNO



(1) Access to agriculture topic depends on the version of the SIM, Airtel having changed the STK application over time for size constraint  
 (2) Emergency (launched in Dec. 2014), but has been excluded from analysis in this report which covers a period of data pre Dec 2014

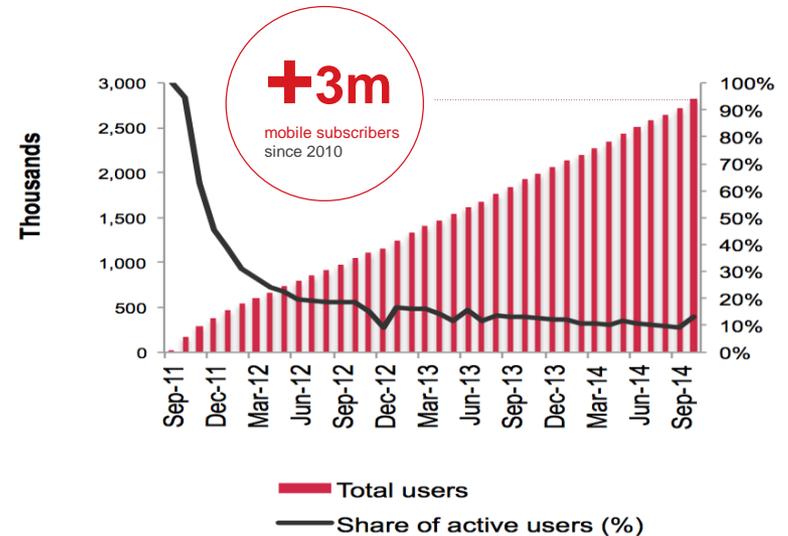
# User acquisition is dynamic though users lifetime remains limited

Organization Overview	Product Overview	<b>Performance Overview</b>	Key Problem Overview
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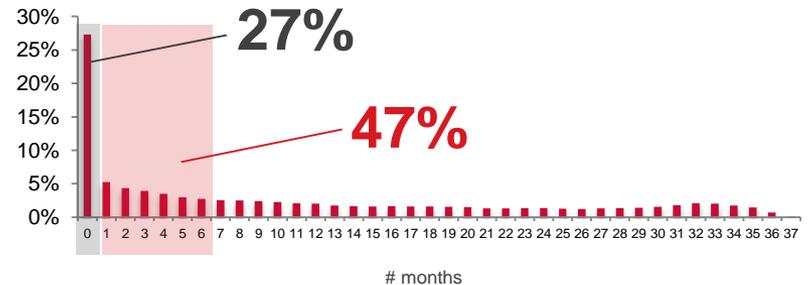
## Users active over the last ~6 months are relatively new to the service

While the user base has steadily grown, active rates (i.e., proportion of monthly active users) have been slowly declining over the last 2 years. There are concerns around recurring usage of the service, as approximately half of users who have actively used the service in the last 6 months are very recent additions to the 3-2-1 user base (i.e. have only been using the service for 6 months)

These results highlight the need to investigate the quality and nature of the usage of 3-2-1's user base in more detail. While the user base growth is a positive story, the declining active rates are negative story which needs addressing.



Distribution of recent users<sup>(1)</sup> by number of months since first usage



**!** Looking at users active from the 1<sup>st</sup> June 2014, 27% of the users started using the service less than one month before their last use, and 47% have started using it less than 6 months before

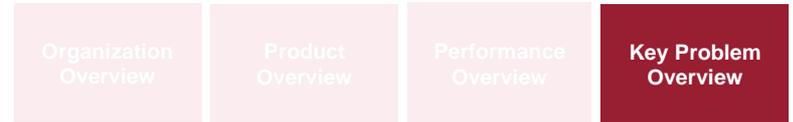
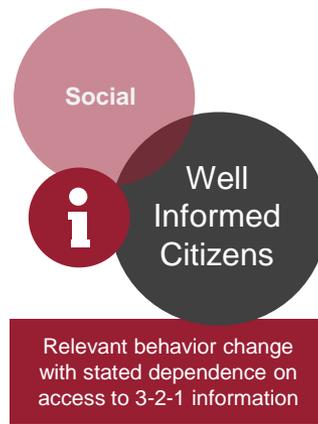
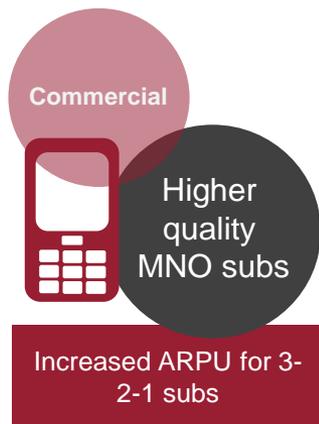
(1) Users being active after 1<sup>st</sup> of June 14.

# HNI want to better understand and drive relevant customer behavior

## Need to understand behavior related to intended impacts

The intended impact for the service covers both commercial and social dimensions:

- **Commercial** – Do 3-2-1 subscribers become more active and valuable customers on the mobile network?
- **Social** – Do 3-2-1 subscribers become better informed, and able to act on critical information related to given content areas?



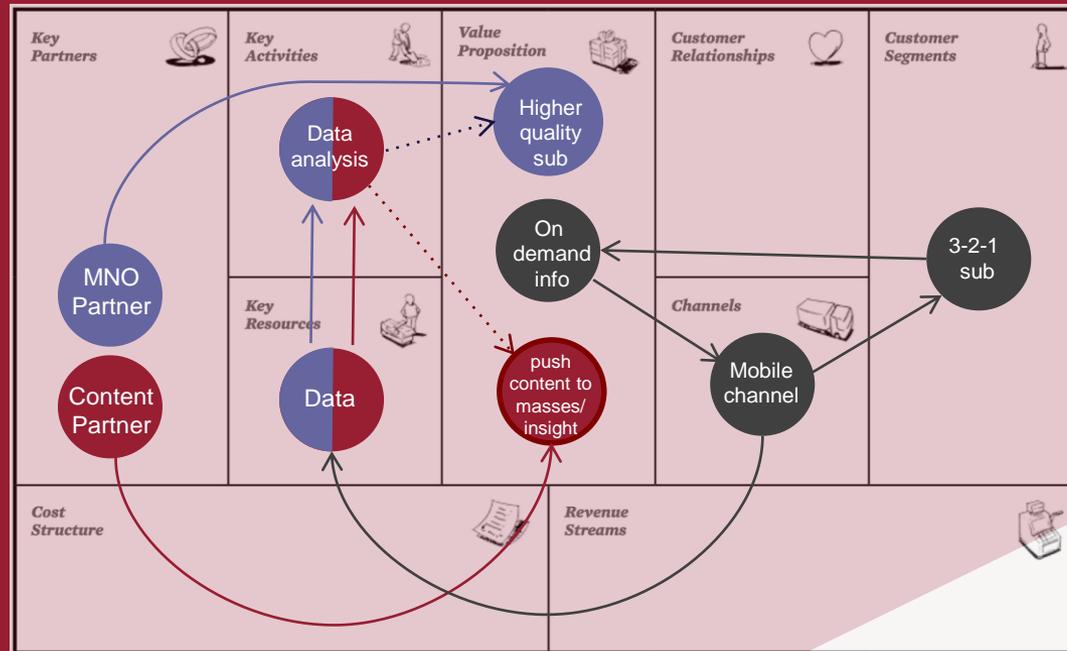
## By leveraging their existing data

HNI have rich user data across channels for over 3m 3-2-1 subscribers. However, this data has been under used to date in shedding light on key questions that would drive service improvements.

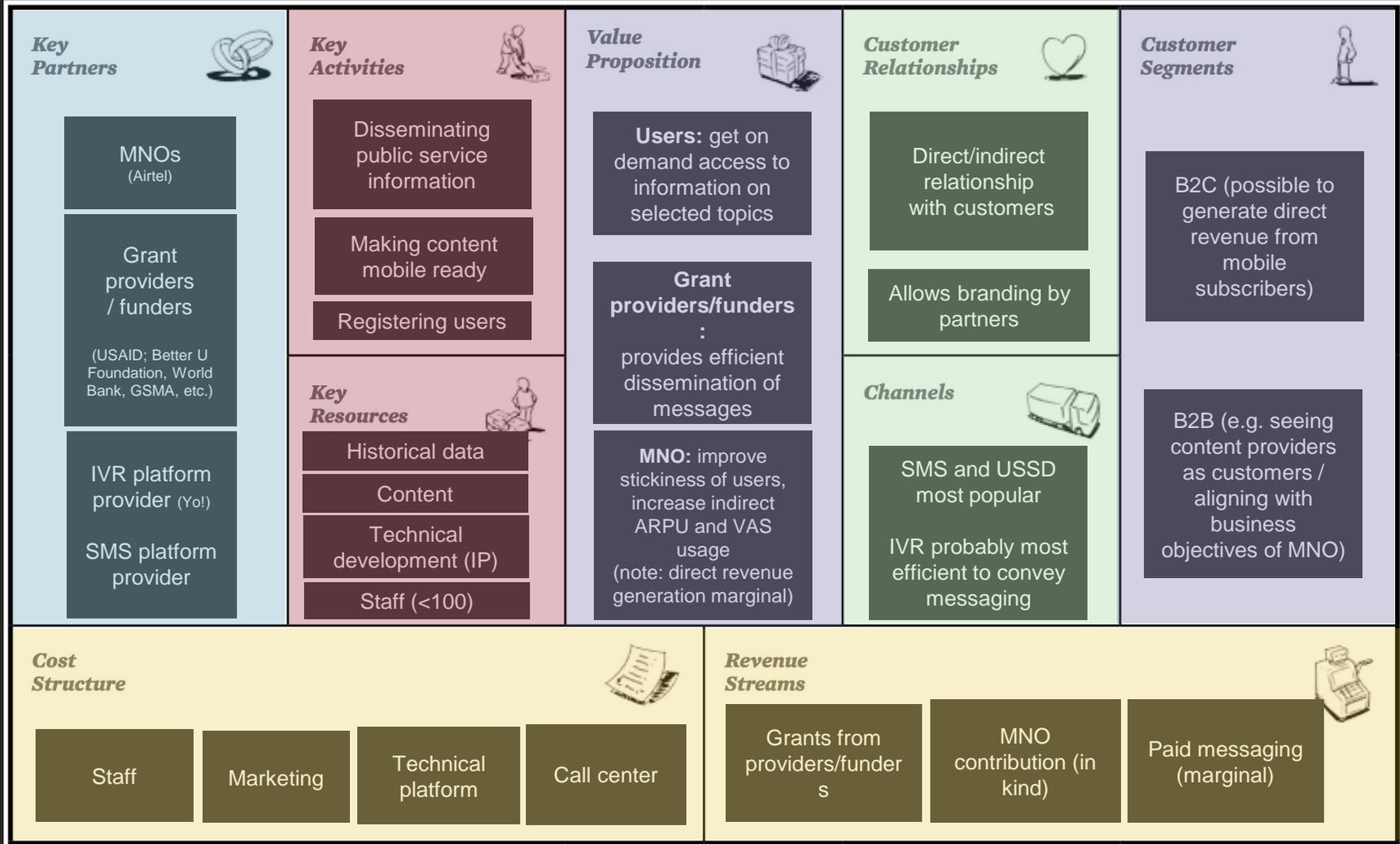


# Business Model Snapshot:

Documenting 3-2-1 usage will be the cornerstone of HNI's business model



# An overview of the 3-2-1 model



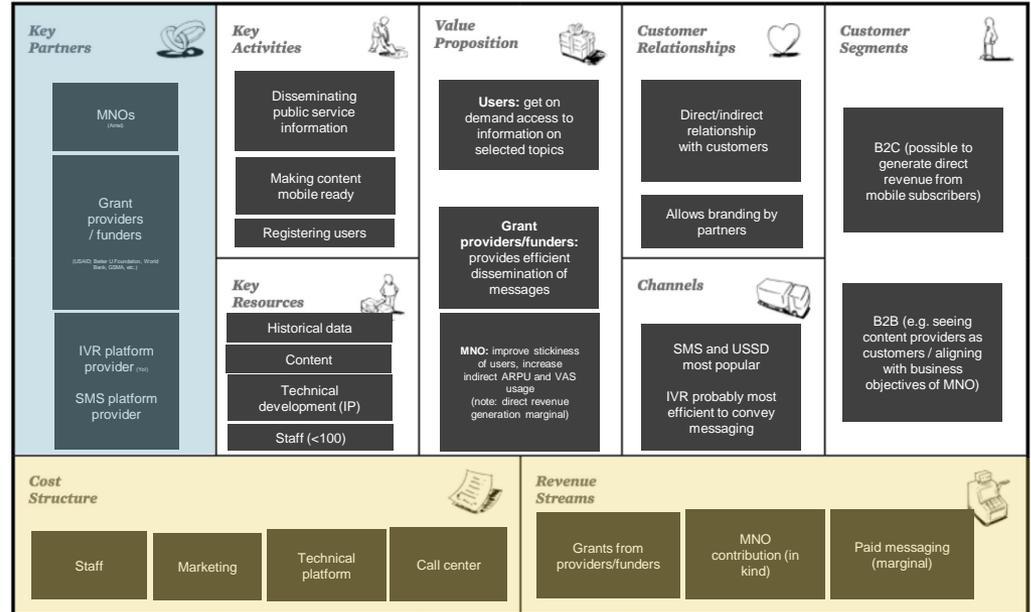
# 3-2-1 provides cost-efficient message generation and dissemination



1

## 3-2-1 leverages two types of partners

- Funders **interested in large-scale information dissemination** on specific topics and paying for the service, e.g. GSMA for gender content, the World Bank on microfinance, USAID on water & sanitation
- A mobile network operator hosting the service for free with a view to **boost loyalty among its users**, to motivate its subscribers to use VAS, and to engage in CSR



2

## Costs are very low due to a cost-efficient content generation model

- **Content is provided for free** either by the funders themselves or by animated sessions with stakeholders like ministries, civil society organizations, etc..
- **Costs are mostly fixed** and correspond to the core HNI team and technical cost related to the platform (not covered by the MNO)

# Marketing and user knowledge could be improved

3

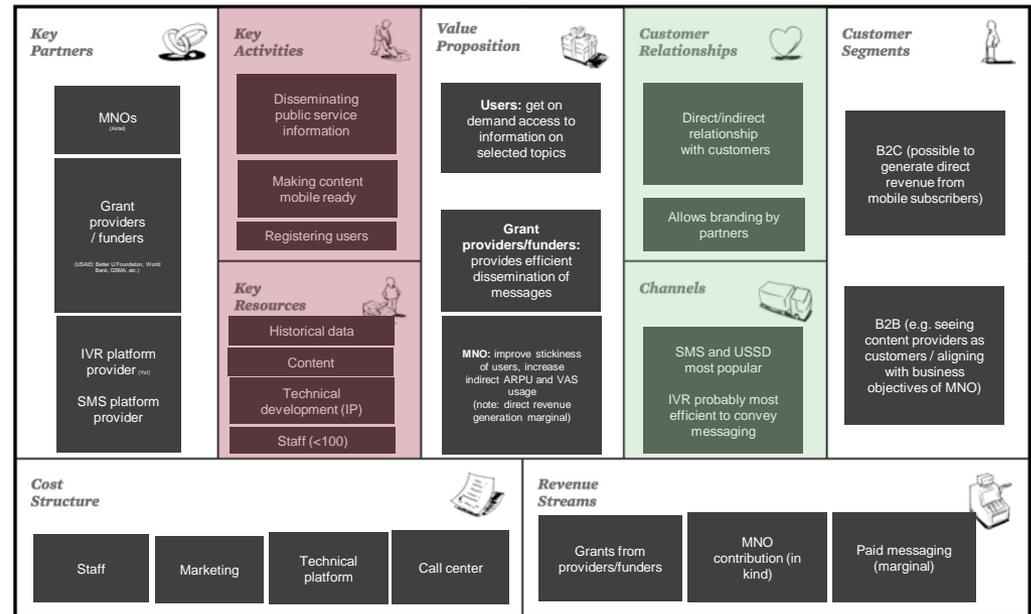
Marketing efforts could be better coordinated with MNO, customer access channels little understood

- Marketing activities have been **mostly conducted by Airtel** via push e-mails, presence on the STK menu, radio spots and posters but **with little coordination with HNI**
- HNI promotes the service mostly by **organizing events**
- HNI has a limited understanding at present of the **engagement through different channels** for the service

4

Efforts focused on content generation rather than on understanding existing usage data

- HNI teams **moderate working groups among stakeholders** to get ahold of content
- Once content is ready, it is **aggregated to feed the various channels**
- HNI operates a small call center** to provide support to the service but does not have direct relationship with its users otherwise and **miss information on usage**



# 3-2-1 value proposition is strong but needs further substantiation

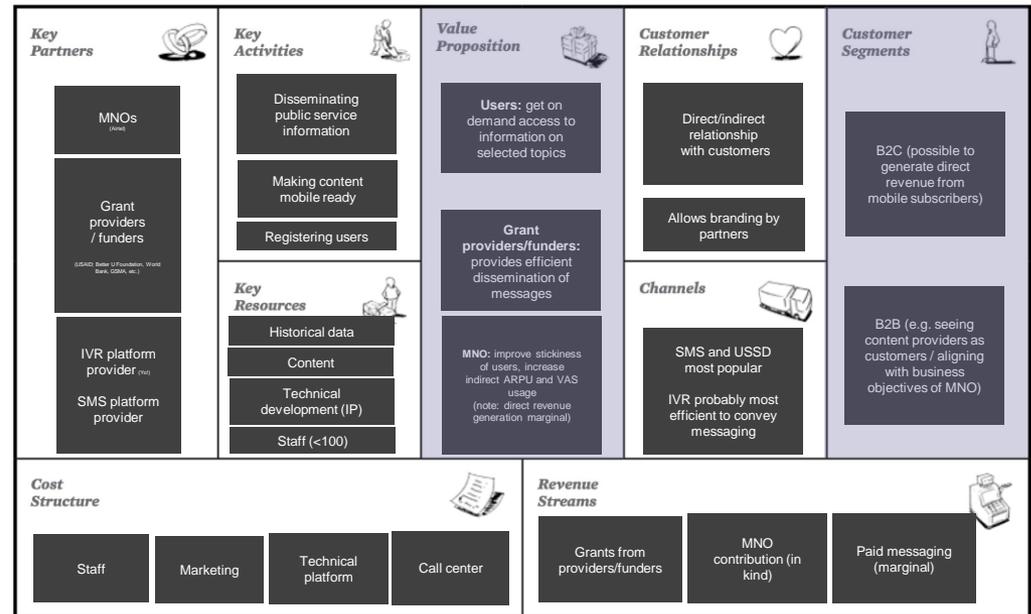
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## HNI value proposition is strong

- Currently, 3-2-1 is one of the **most cost efficient channels to disseminate information at large** in Madagascar
- More than 3m users, prestigious funders and an MNO satisfied with the relationship** make the service successful so far

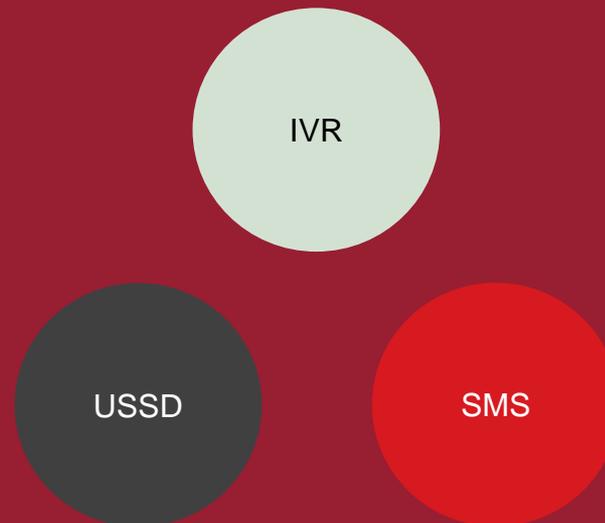
... but missing pieces are needed to make the service sustainable

- Important information that HNI could leverage are still missing to fully **demonstrate the value proposition to the funders**, e.g. are 3-2-1 users actually listening to messages? What types of users are they?
- More data analytics could also **strengthen the case with the MNO**
- KPIs based on data-analytics** should be developed and followed to best substantiate value to funders and Airtel



# Exploring channels of access:

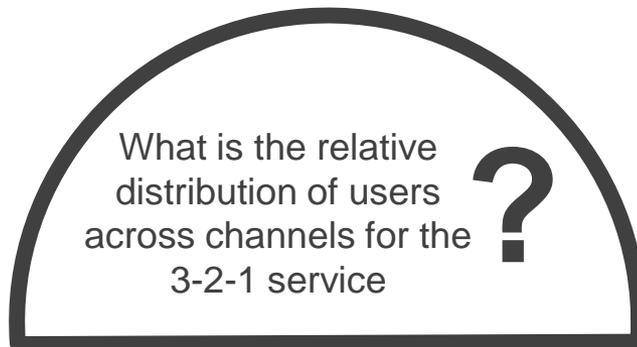
IVR is the richest channel, though single-channel users tend to use SMS/USSD



# Channels have various pros and cons for users

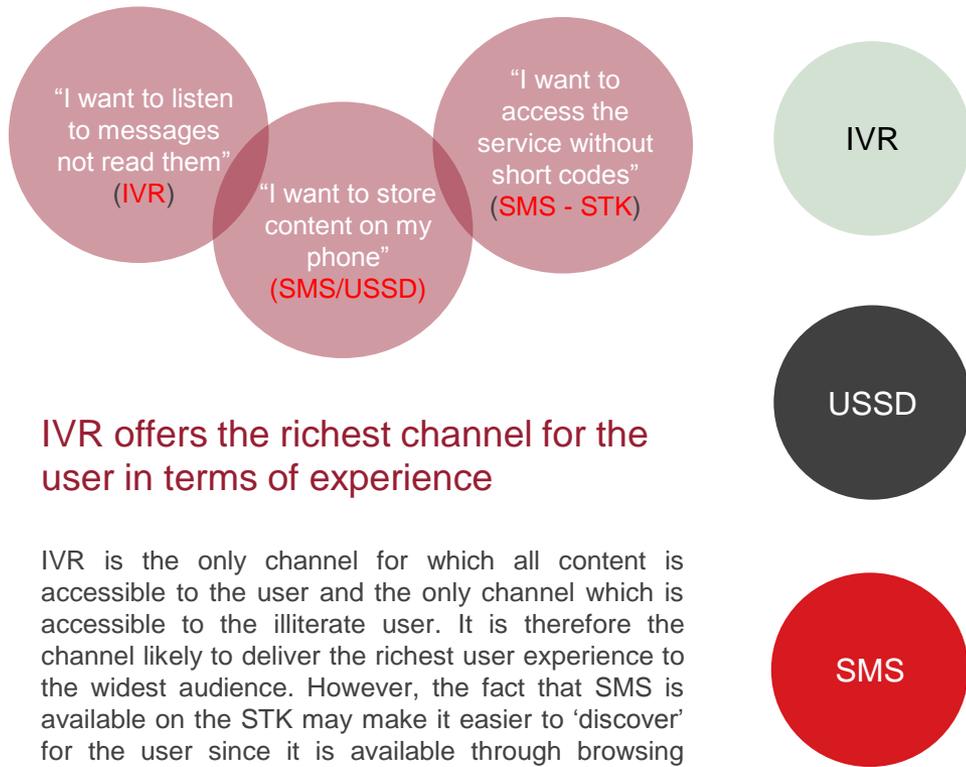
We consider why users might prefer different channels of access to the 3-2-1 service

This will likely relate to factors around usability, discoverability, the literacy level of the user and their requirements around content storage



# Channels have various pros and cons for users

It is worth considering why users might prefer different channels of access to the 3-2-1 service



**IVR offers the richest channel for the user in terms of experience**

IVR is the only channel for which all content is accessible to the user and the only channel which is accessible to the illiterate user. It is therefore the channel likely to deliver the richest user experience to the widest audience. However, the fact that SMS is available on the STK may make it easier to 'discover' for the user since it is available through browsing 'Airtel Services' on the SIM.

✓ Pros	✗ Cons
<ul style="list-style-type: none"> <li>Access to all content areas</li> <li>Accessible to illiterate users</li> </ul>	<ul style="list-style-type: none"> <li>Cannot store messages</li> <li>Content takes time to access</li> <li>Only 4 free calls per month</li> </ul>
<ul style="list-style-type: none"> <li>Access to half of content areas</li> <li>Completely free</li> </ul>	<ul style="list-style-type: none"> <li>Not suitable for illiterate users</li> <li>USSD interface may be less intuitive for users</li> </ul>
<ul style="list-style-type: none"> <li>Easy to discover (at present) through Airtel service on SIM</li> <li>Completely free</li> <li>Can store messages</li> </ul>	<ul style="list-style-type: none"> <li>STK access has least content available</li> <li>Not suitable for illiterate users</li> </ul>

# 71% of users access a single channel, SMS/USSD users have access to less content

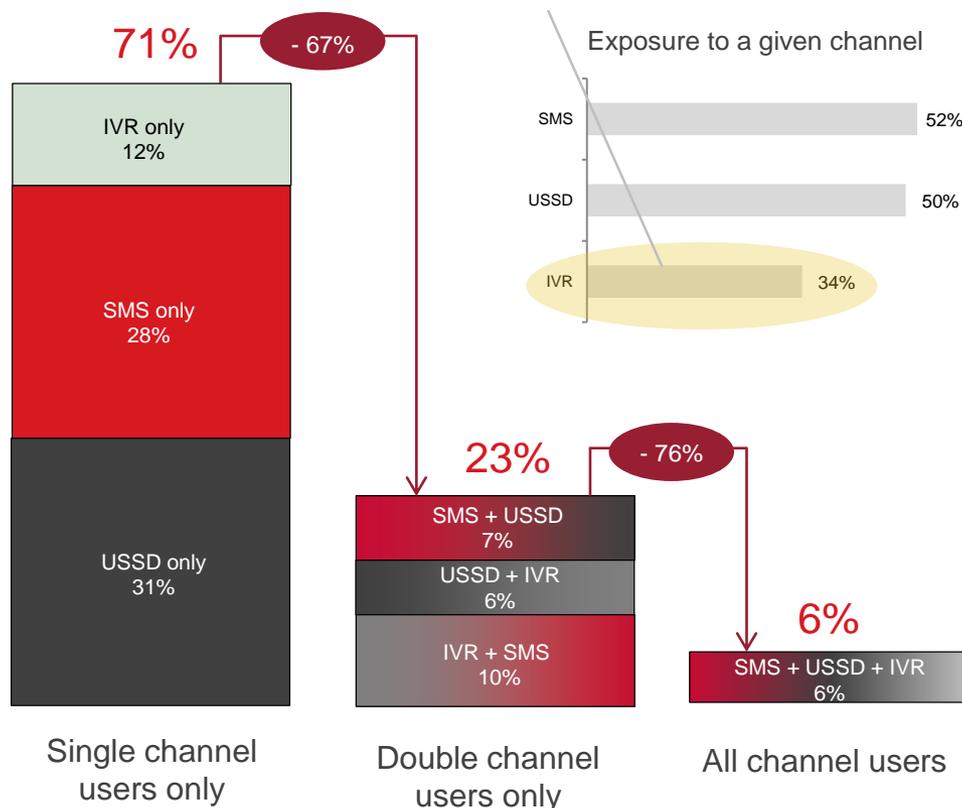
Given the relative pros and cons of channels it is worth investigating the channel preferences across users



Single channel use dominates, IVR of later interest, while channel exposure is fairly even

- 71% of users have used one channel only, yet many will likely constitute 'one off' users of the service
- While IVR is less common single channel use case than USSD/SMS, it is a more prevalent double channel use case than USSD, implying that the IVR use case may be more likely to be discovered later in the customer journey
- This is also reflected in the general exposure to given channels, where we see that IVR quickly catches up with SMS and USSD categories

IVR has potential to increase overall for the user base



- Segmentation of users by channels based on June-Nov. 2014 service traffic

# Spikes in IVR/USSD traffic mark key events and behavior



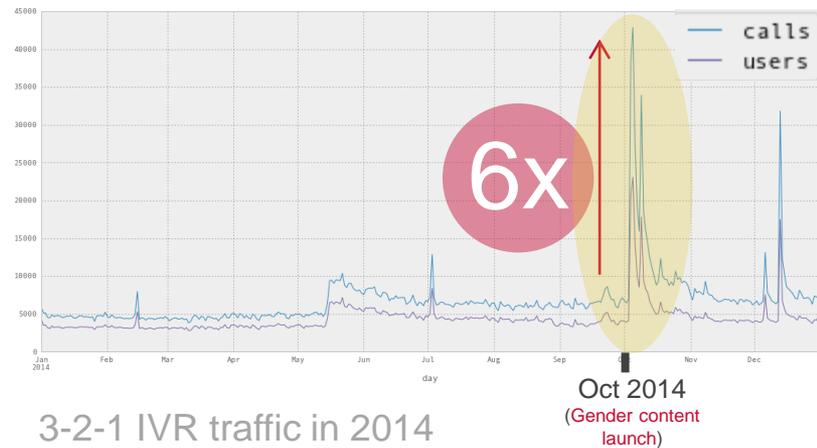
## Gender launch triggered ~6x spike in IVR and USSD

The launch of the gender menu had a massive impact on the 3-2-1 IVR traffic with the number of calls jumping from c. 5,000 daily to 28,000 daily, same for USSD from <10,000 sessions to >40,000 sessions.

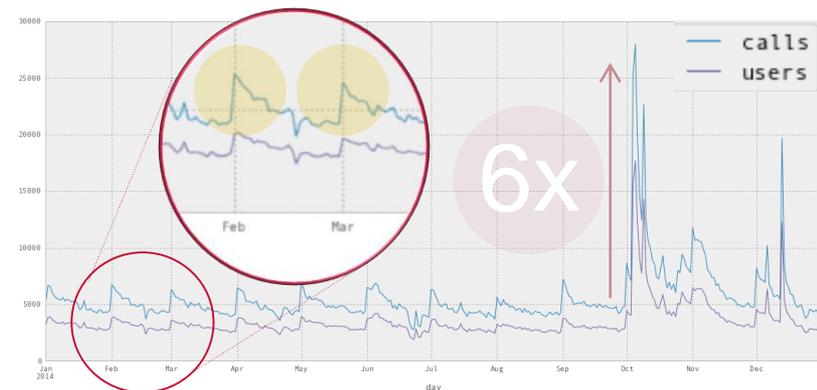
## IVR data reveals the 'free call' effect

Spikes in IVR traffic at the beginning of each month show the users' sensitivity to a 5<sup>th</sup> call being charged on the IVR, we do not see this pattern in the USSD. This suggests users are sufficiently aware and cost conscious around the 'paid for' element of the 3-2-1 service

3-2-1 USSD traffic in 2014



3-2-1 IVR traffic in 2014



# IVR is often a more “usable” channel in the eyes of users

Users that preferred IVR pointed to the fact that they often trusted the automated calls more than if they had received a messages. For many it was also an easier method for digesting the information

I prefer to call because it is easier for me to follow the instructions

I like listening to the calls because it is less effort

Because I can hear a voice I trust calling more than reading the messages

# SMS usage is driven by the STK & limited to two topics

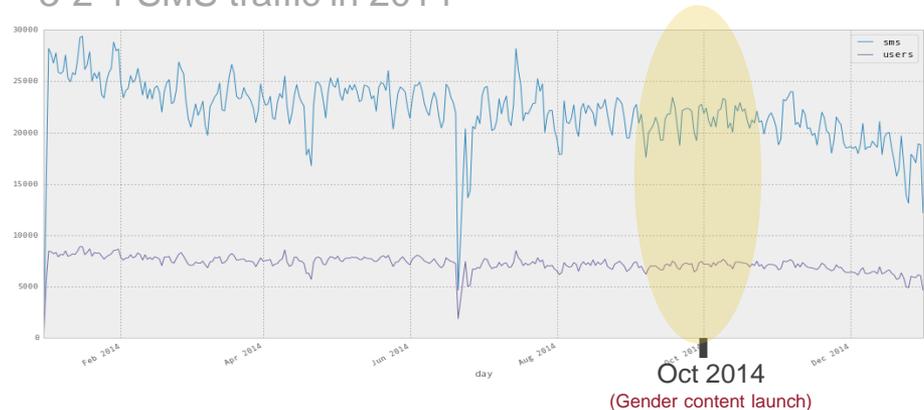


The SMS channel was not impacted by gender launch because STK application drives use

Only menus embedded on the STK (i.e. for users who access content through 'Airtel services' on their phone) have generated sizeable SMS traffic. Users are accessing multiple SMS's in general, reflected in the greater gap between unique users and SMS traffic than for IVR/USSD:

- Average SMS's traffic per day (<20,000) is more than a 2x increase over unique users (>10,000) per day
- Health and Agriculture access dwarf Gender and Water & Sanitation (by a 1000x scalar), while Health is accessed 4x more than Agriculture
- It is likely that many users discover the application on their STK by chance, given that over 50% of user base has been exposed to SMS, the significance of this phenomenon should not be discounted

3-2-1 SMS traffic in 2014



# Batch SMS impacted IVR and USSD traffic more than radio and TV

## We can also assess marketing effects on traffic from channels

The gender menu content launch had a big effect on channel traffic in response to batch SMS marketing campaigns

- Both IVR and USSD channels were effected by batch SMS in a similar way
- IVR response was higher to radio and TV than USSD, though still comparatively lower than batch SMS effects
- SMS has not been impacted by marketing activities (caveat: gender not included in STK menu)

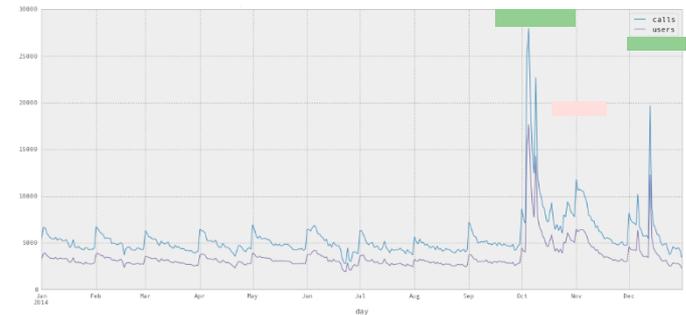
Marketing activities key:

Batch SMS

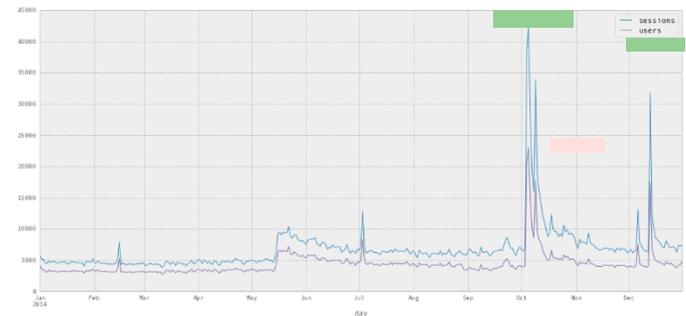
Radio + TV

Other activities correspond to: Flyers (small numbers), conferences, other

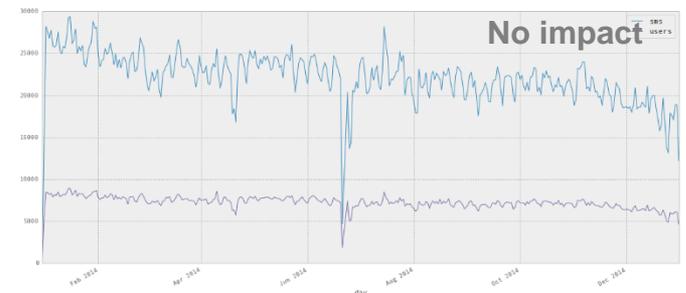
IVR Traffic (2014)



USSD Traffic (2014)

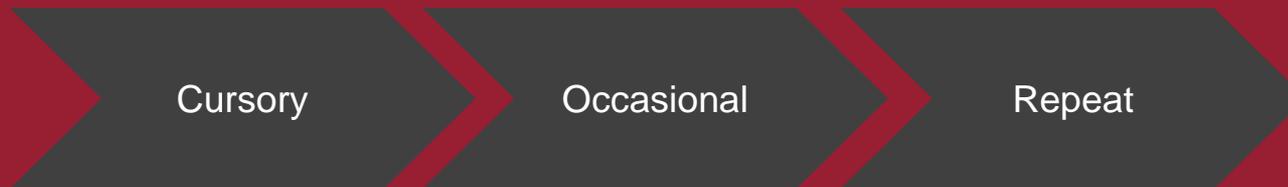


SMS Traffic (2014)



# Mapping the Customer Journey:

Only one third of IVR calls end up in actual message delivery



# A basic customer journey is mapped across 5 categories

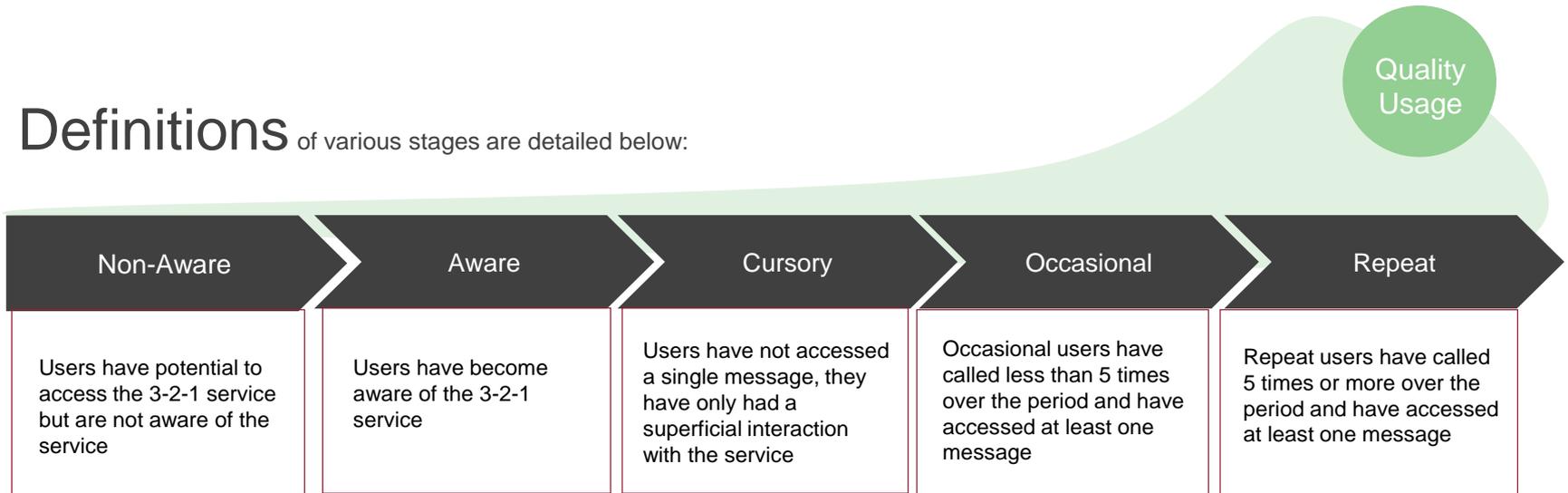
We formulated a customer journey similar to those already used by the GSMA

The GSMA has used a similar model of the customer journey to analyse the quality of user bases across different service types including mobile agriculture information services, mobile money services, and mobile insurance products. In each case we map the progression of customers from a state of low awareness to quality (or engaged) use of the mobile service

We have data for later stages of the journey across channels for the 3-2-1 service

Awareness and earlier stages of the journey are harder to quantify using available data. We will focus on understanding different kinds of use later on in the customer journey

## Definitions of various stages are detailed below:

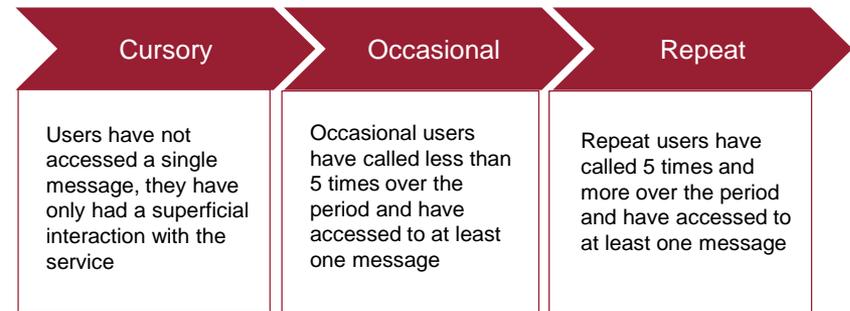


# We focus on 1 channel, 2 time periods & 3 stages of the journey

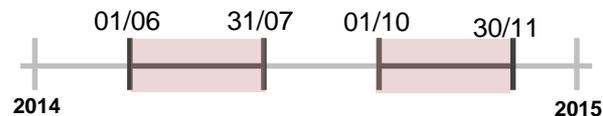
IVR is the best channel to analyse



We focus on later stages of the user journey



Use data from 2 time periods



Assess “engagement”

A user dials the IVR and accesses a message...

... but does she listen to over 75% of the message ?

# Reasoning for analytics setup and focus areas

## IVR is the best channel to analyse

Our analysis is mainly focused on IVR usage because:

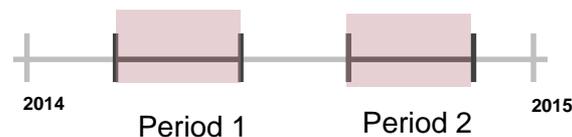
- this channel gives access to all 7 menus
- it is the richest in terms of reaching a wide audience
- It is the only channel for which “quality of usage” can be assessed in terms of understanding whether 3-2-1 users have listened to the whole message



## Time periods were selected on the basis of data quality

Due to changes in the IVR tree, we selected periods for which we knew the menu structure and messages were consistent.

This ensured we were able to map the IVR usage data onto the right menu structure, and so calculate the listening ratio for messages accordingly, i.e. how many users have listened to 75% of a given message



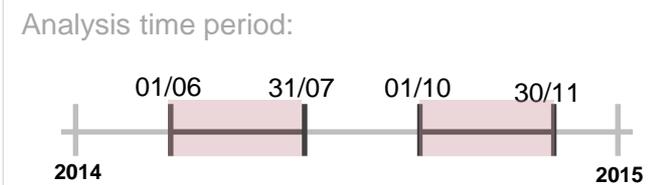
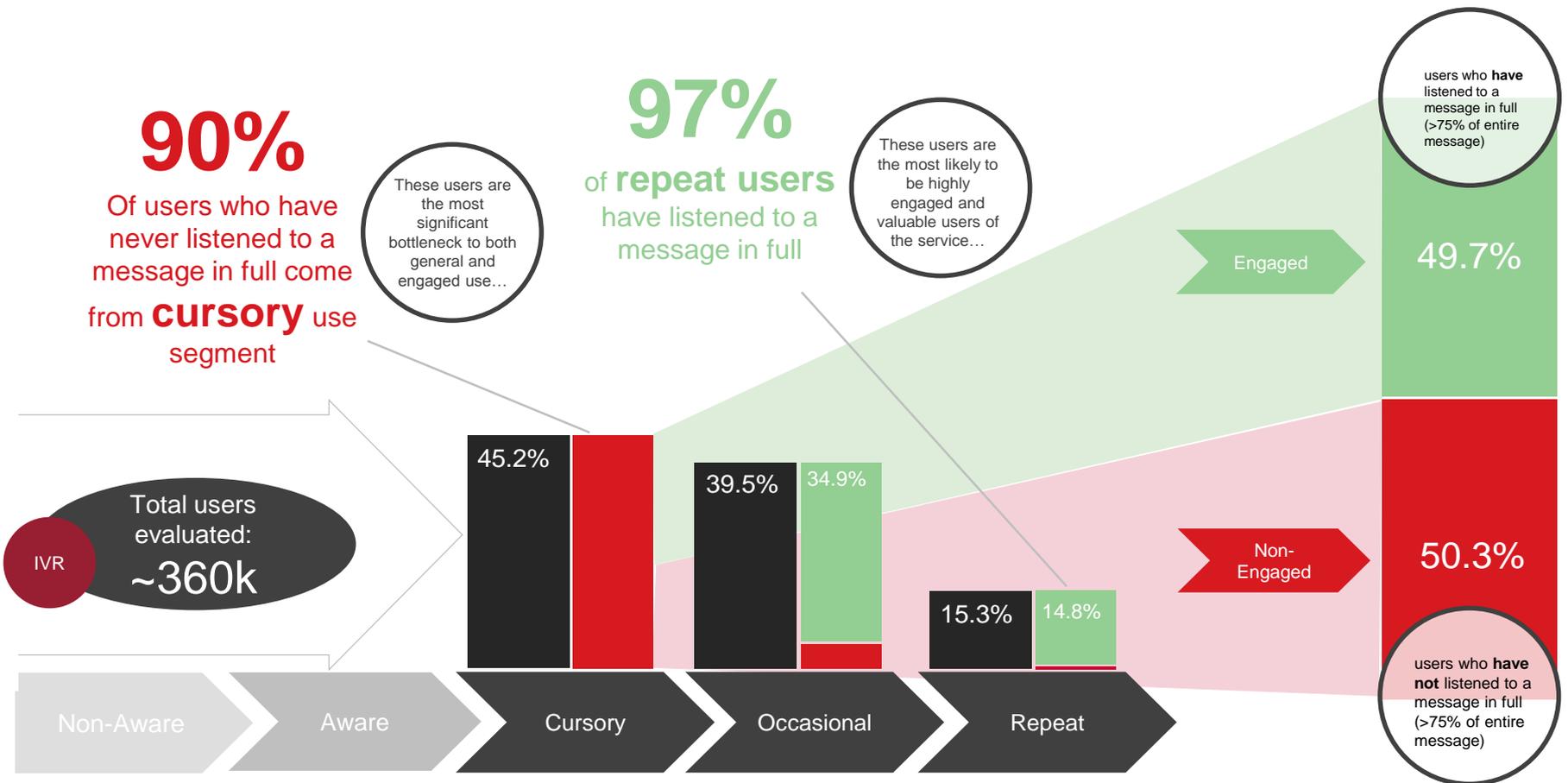
## We focused on later stages of the user journey

With 3 million subscribers to the HNI service, the clear focus for HNI is to understand its existing user base and how to drive greater usage. We therefore focus on 3 phases:

- **Cursory** – how many users never even listened to a message?
- **Occasional** – how many users came back to the service a few times?
- **Repeat** – how many users came back repeatedly, and what was their quality of use?



# 49.7% of users have listened to messages in full



# Higher quality usage increases along the journey as expected

Non-Engaged

Propensity to be **non-engaged**,  
i.e. not listen to a message in full  
(>75%)

Quality usage increases later on in the customer's journey, while cursory use is a serious bottleneck

- Cursory users, i.e. those who never even access a message, still make up the majority (45%) of the base and create the largest bottleneck in the journey to quality usage
- Occasional use represents the next biggest bottleneck, meaning only 15.3% of the user base has made more than 5 calls in the period
- Repeat users are more likely to be engaged than occasional users

Engaged

Propensity to be **engaged**,  
i.e. to listen to a message in full  
(>75%)

# To Do: Calculate ARPU implications across segments

In order to demonstrate value to the MNO, more work needs to be done with data analytics

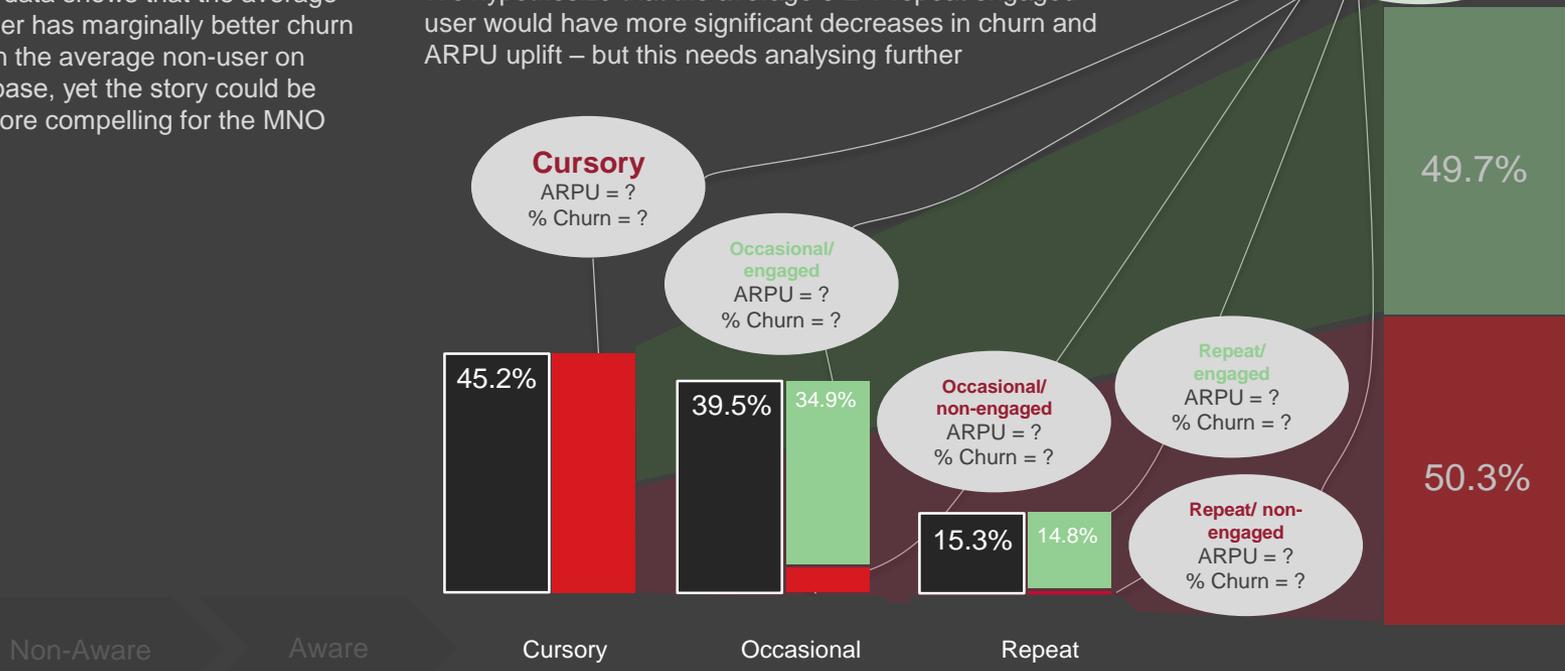
Existing data is not conclusive

Existing data shows that the average 3-2-1 user has marginally better churn rate than the average non-user on Airtel's base, yet the story could be made more compelling for the MNO

But it could be across customer segments...

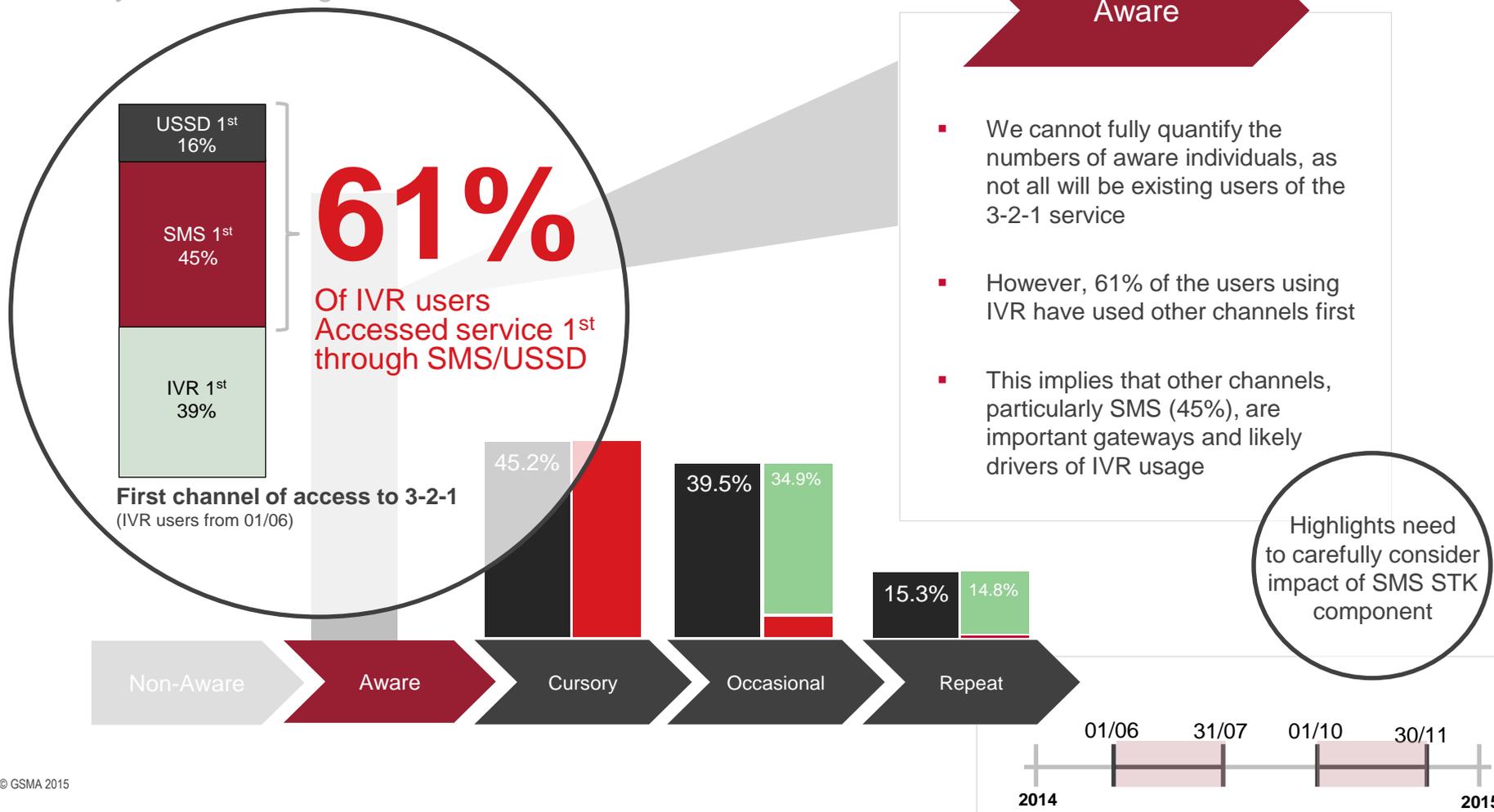
We hypothesize that the average 3-2-1 repeat engaged user would have more significant decreases in churn and ARPU uplift – but this needs analysing further

For users who have engaged fully with the service, or used the service more, are they higher value subscribers for the MNO?



# Other channels are “awareness gateways” for most IVR users

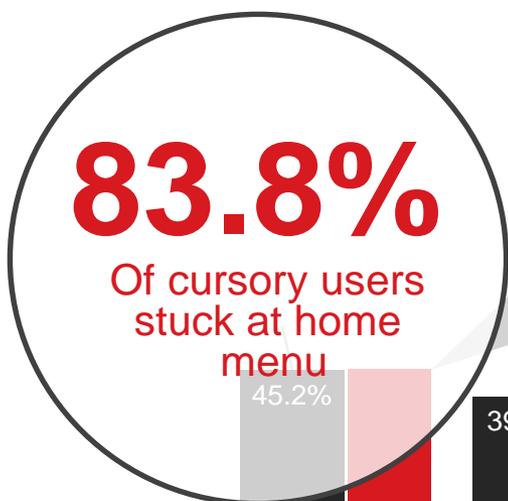
Extra data analytics around certain journey stages serves to clarify nature of usage



# Cursory use clearly the primary barrier in the journey

Extra data analytics around certain journey stages serves to clarify nature of usage

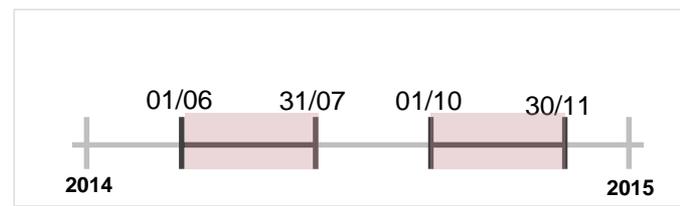
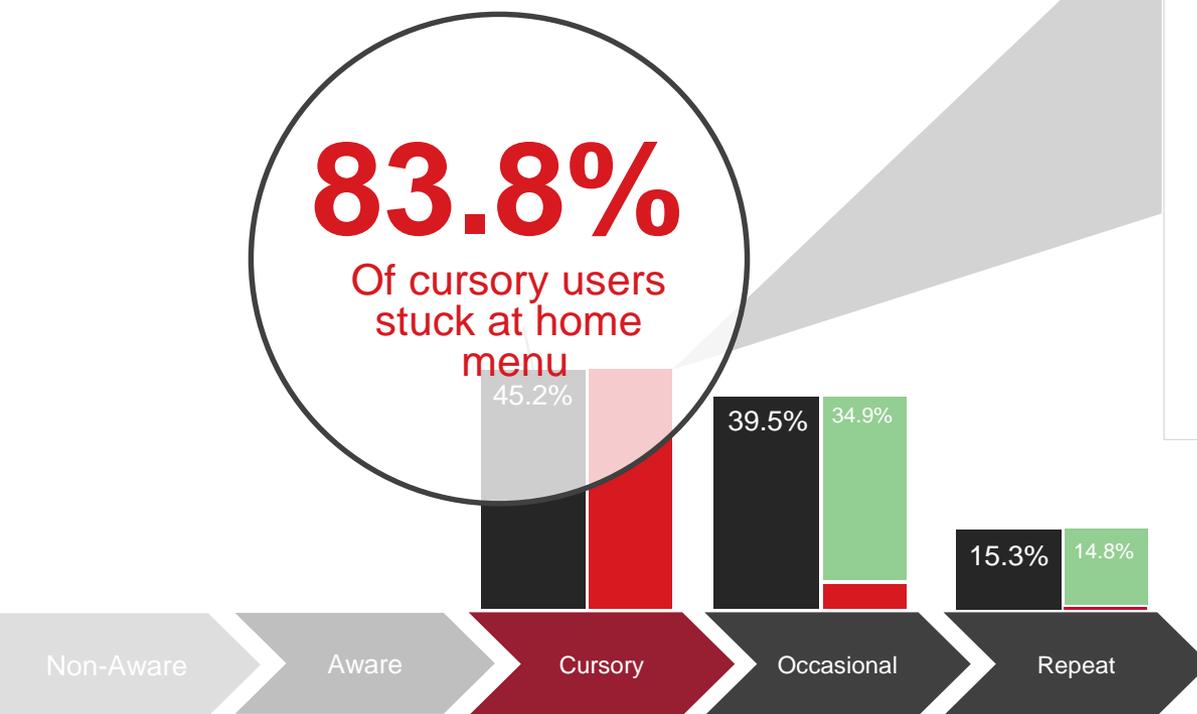
- Most of the users are at the cursory stage, 83.8% are exiting at the home menu, showing that this is the likely driver for this bottleneck



Cursory

- 83.8% of the calls exit at home, 5.2% in the gender tree, 4.7% in health, 2.5% in family planning
- 19.5% of paying users are in this segment (probably by mistake)

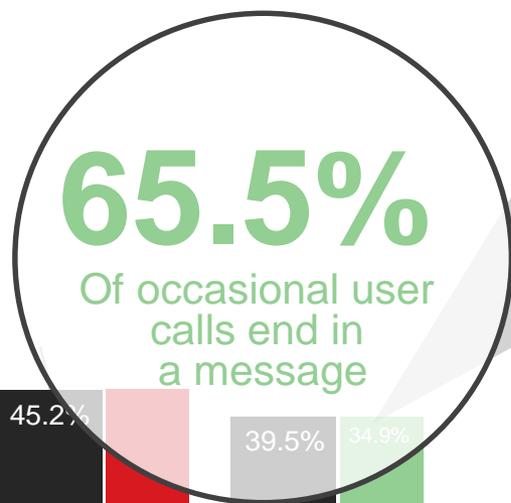
Highlights need to look at home menu in further detail



# Users quickly become engaged, and listen to full messages

Extra data analytics around certain journey stages serves to clarify nature of usage

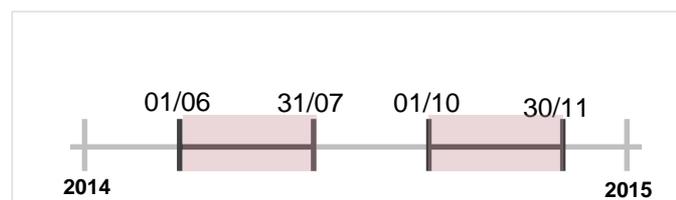
- Occasional use creates strong quality engagement, with users more likely to end up in a message from a call than repeat users (though not as frequently), and with a good listening ratio (0.90)



## Occasional

- 65.5% of the calls by occasional users end up in a message
- Message listening ratio average is 0.90
- Main exit topics : 24.6% gender, 19.7% health, 10.4% family planning

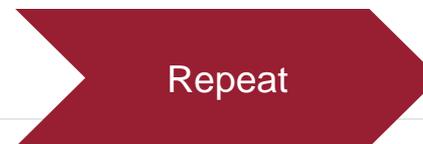
Highlights that users start to become engaged quickly



# Repeat users have the highest listening ratio

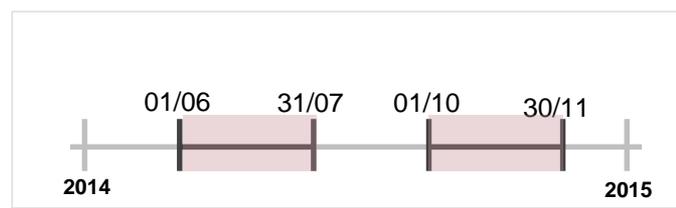
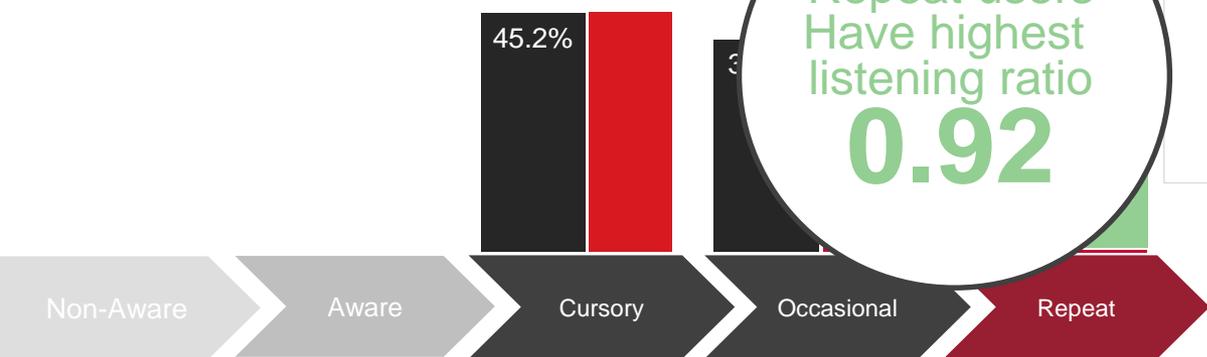
Extra data analytics around certain journey stages serves to clarify nature of usage

- Repeat users are less likely to end in a message from a call than occasional, but their propensity to be engaged is higher, with 92% of final messages being listened to in full (>75% listening ratio)



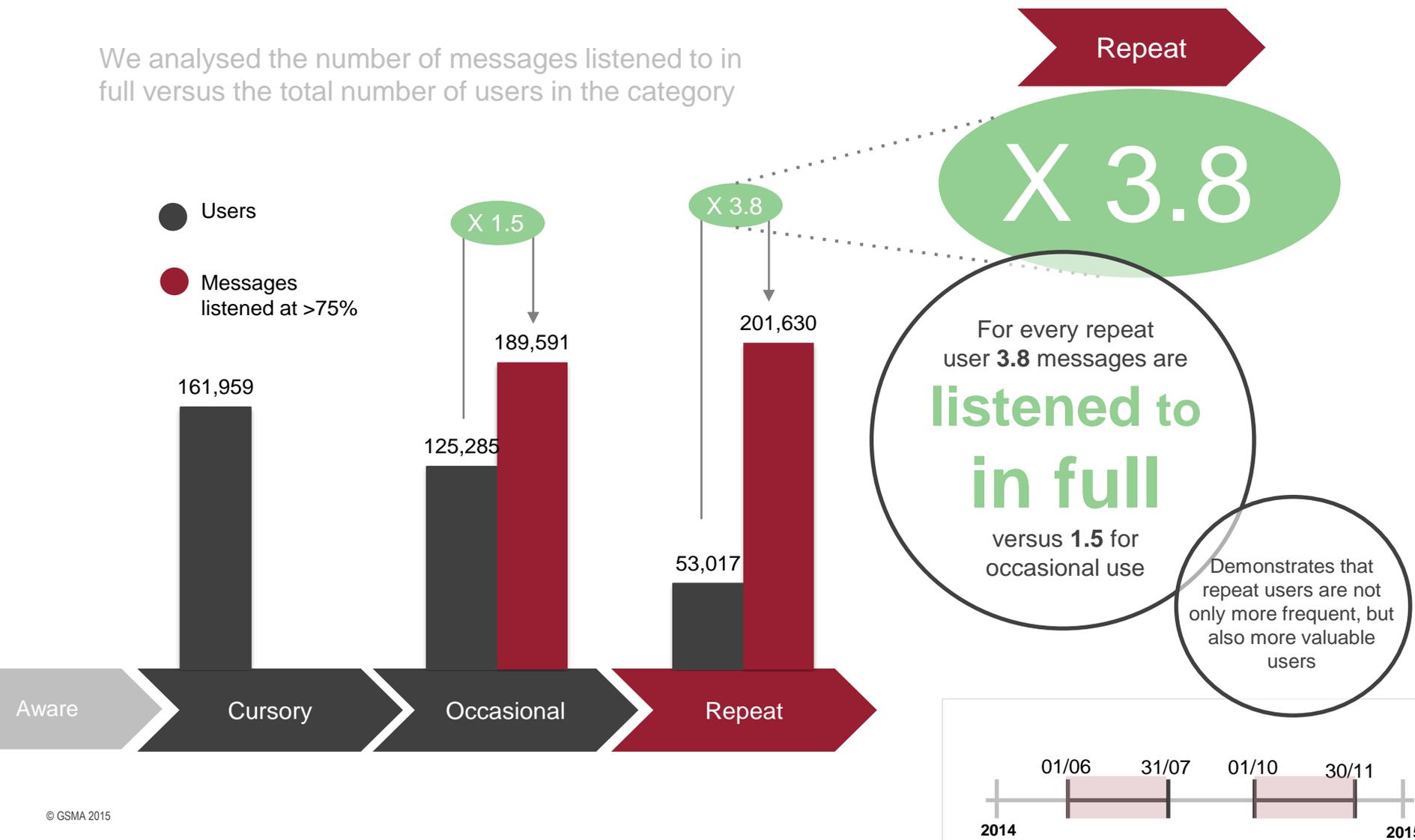
- 51.4% of the calls by repeat users end up in a message
- Message listening ratio average is 0.92
- Main exit topics : (32.9% home), 18.8% gender, 16.9% health, 11.3% family planning
- 16.7% have paid for usage
- 58.9% also use SMS channel
- 46.4% also use USSD channel

Repeat users  
Have highest  
listening ratio  
**0.92**



# Message to user ratios further highlight value of repeat users

We analysed the number of messages listened to in full versus the total number of users in the category



# Customer journey summary



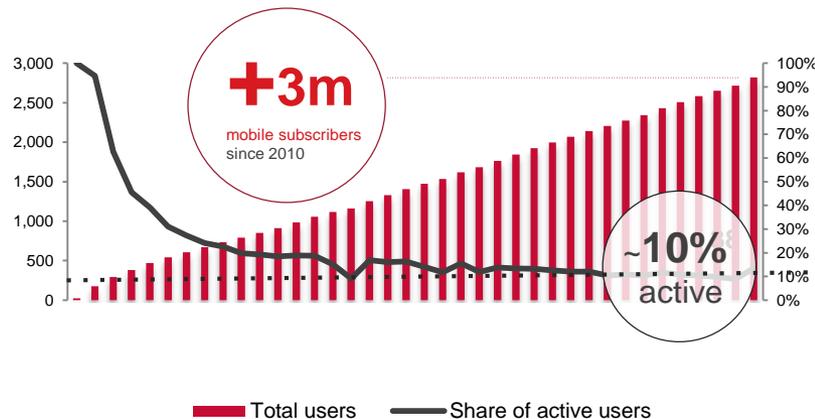
Segment / Stage	% base	Key issues	Priorities
<p>Repeat Engaged</p>	14.8%	<ul style="list-style-type: none"> <li>Close to one third of calls made by repeat users do not pass the home menu</li> <li>51.4% of calls made by repeat users end up in a message (a figure close to occasional users)</li> </ul>	<p>Medium / Low</p> <ul style="list-style-type: none"> <li>✓ Improve IVR tree design and content</li> </ul>
<p>Repeat Non-Engaged</p>	0.5%	<ul style="list-style-type: none"> <li>Only 46.4% of calls made by repeat users end up in a message listened to at over 75%</li> </ul>	<p>Medium</p>
<p>Occasional Engaged</p>	34.9%	<ul style="list-style-type: none"> <li>65.5% of calls made by occasional users end up in a message</li> </ul>	<p>Medium</p> <ul style="list-style-type: none"> <li>✓ Boost repeat behavior</li> </ul>
<p>Occasional Non-Engaged</p>	4.6%	<ul style="list-style-type: none"> <li>Chances to listen to a message in full is less than half of repeat users</li> </ul>	<p>Medium</p> <ul style="list-style-type: none"> <li>✓ Improve IVR tree design and content</li> </ul>
<p>Cursory Non-Engaged</p>	45.2%	<ul style="list-style-type: none"> <li>83.8% of the calls exit at home</li> <li>19.5% of paying users are in this segment (probably by mistake)</li> </ul>	<p>High</p> <ul style="list-style-type: none"> <li>✓ Educate about the service</li> <li>✓ Improve IVR home menu</li> </ul>

# Guard against vanity metrics and measure what matters

## A warning against vanity metrics

This picture of the data also clearly shows how looking at user numbers, or even active rates (which are far better), is not always sufficient to understand quality engagement. Consider that:

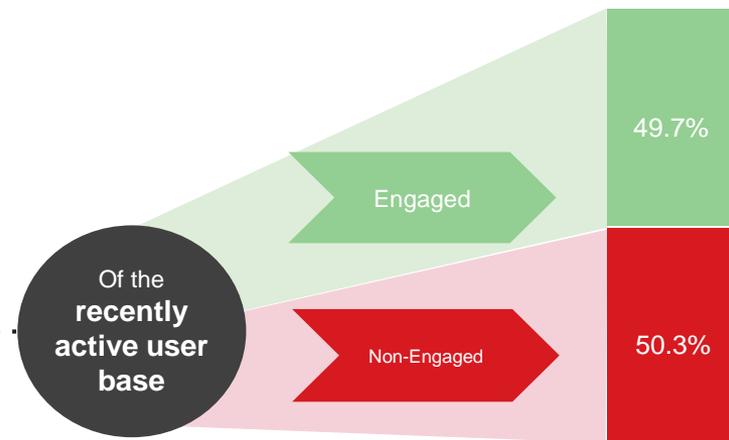
- All users across cursory, occasional and repeat categories will be registered (in the given period) as active customers
- Yet of these active customers, 15% (repeat) drive most of the valuable usage
- So “share of engaged users” (i.e. >75% listening) make up an even smaller proportion of the overall customer base than is shown on the below for active customers



## Focusing on the metrics that matter

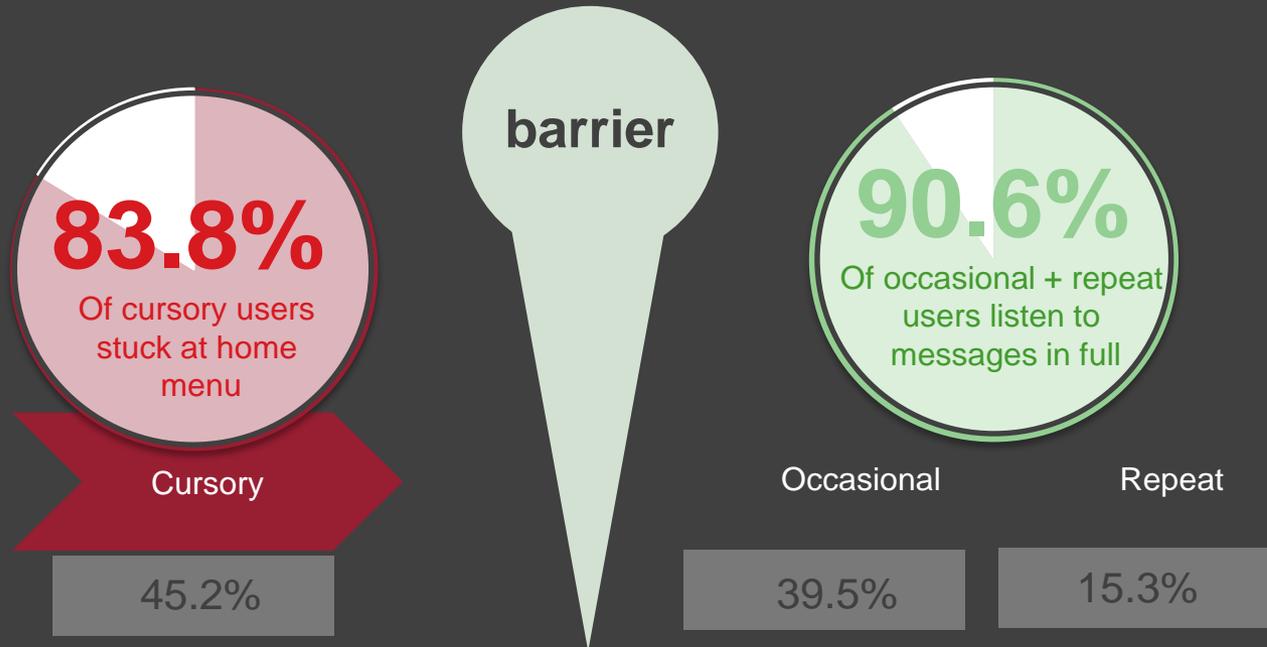
By focusing on the listening behavior of users and determining how many are ‘engaged’, i.e. who have listened to a message >75%, we can assess how many users in the base have used the service in a way that could create real value

- It is a logical pre-condition of behavior change – in social impact terms – that the user must have listened to a message in full, therefore only ‘engaged users’ should be expected to exhibit the relevant changes in behavior
- The good news is that engagement rates for HNI are high, with almost half of the users in a position to act on the information heard



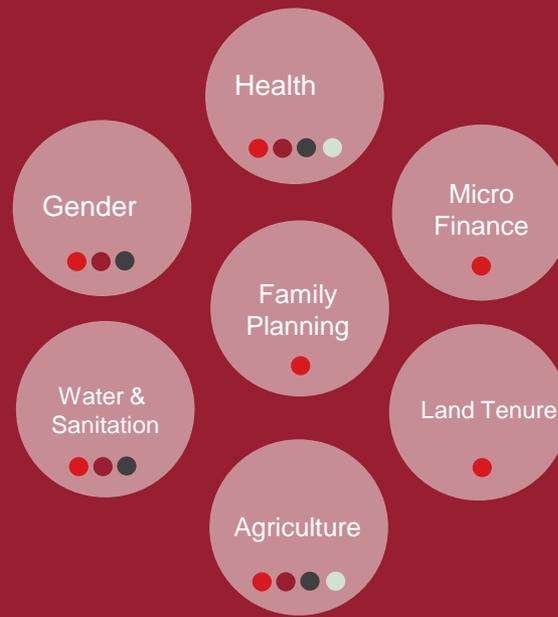
# Cursory stage is the main barrier

Too many users at the 'cursory' stage of the journey are **stuck at the home menu** – the good news is that users later in the journey appear **highly engaged**

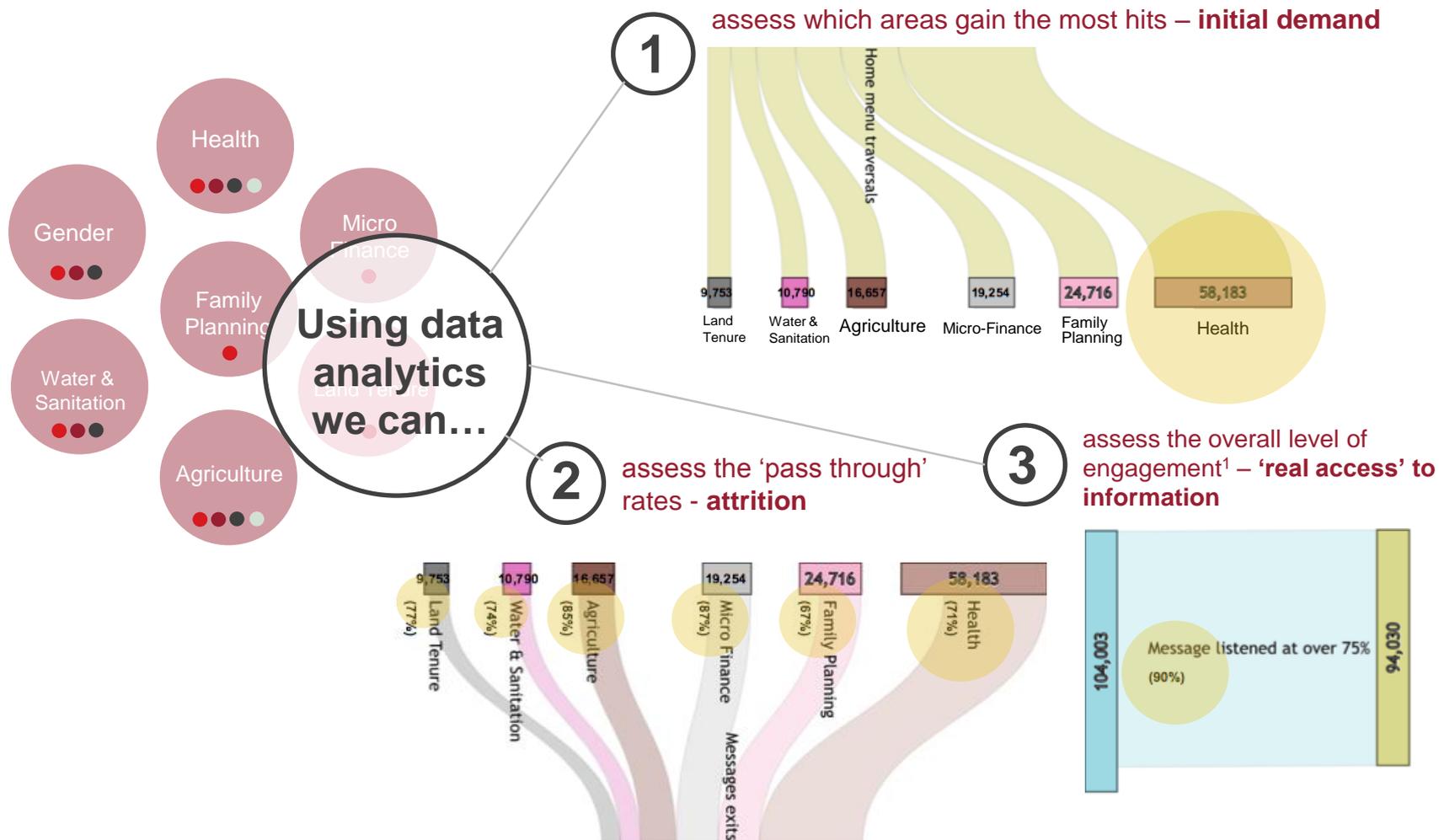


# Mapping content access trends:

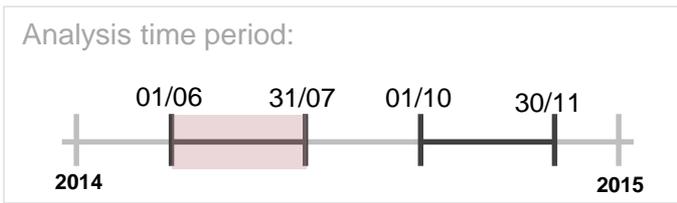
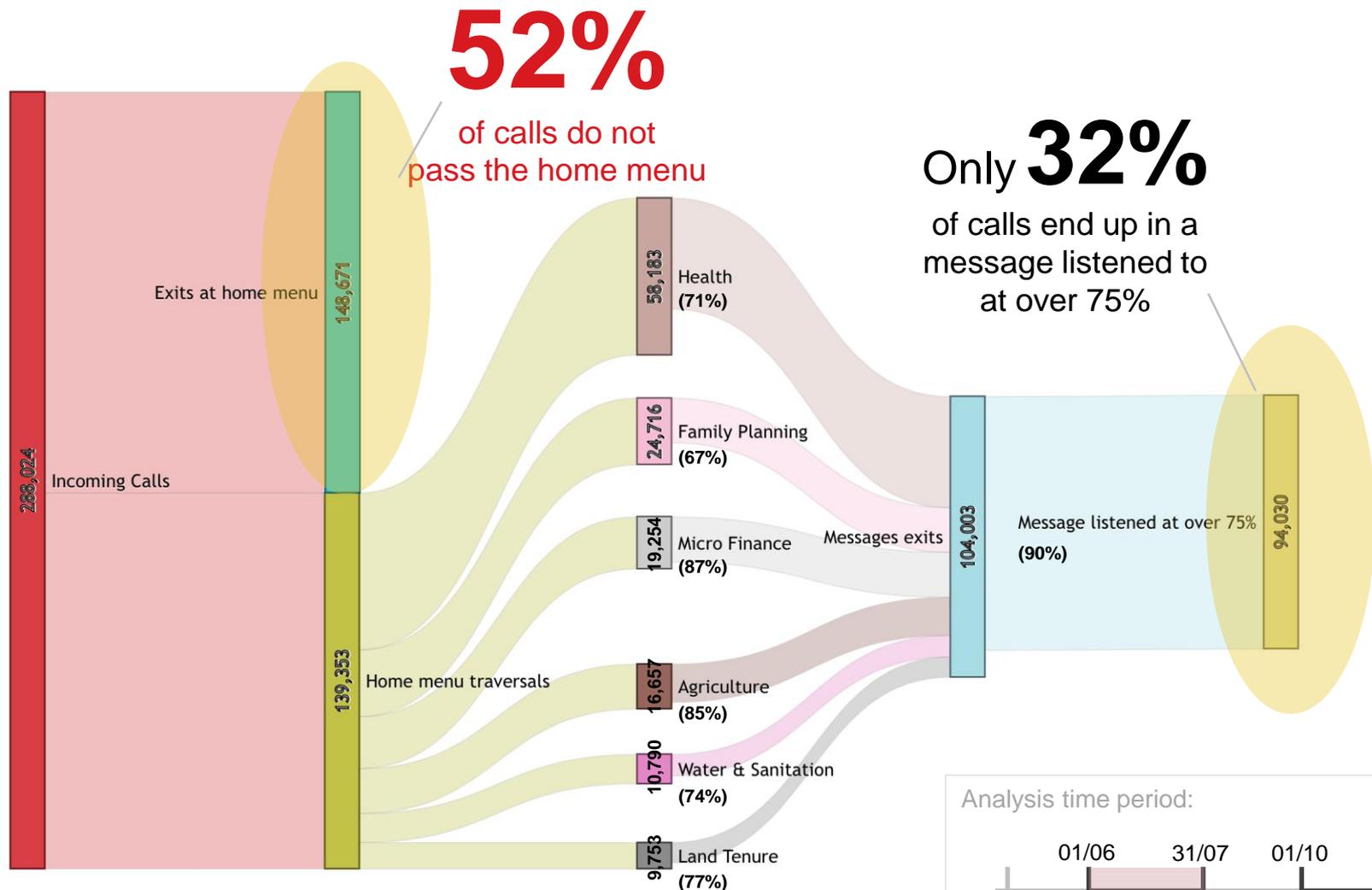
Creating data driven evidence around the engagement with content from users



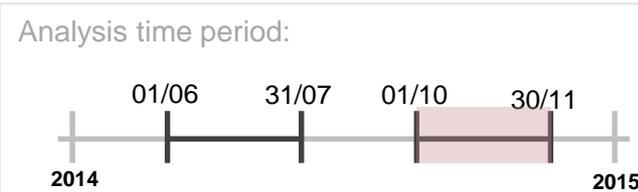
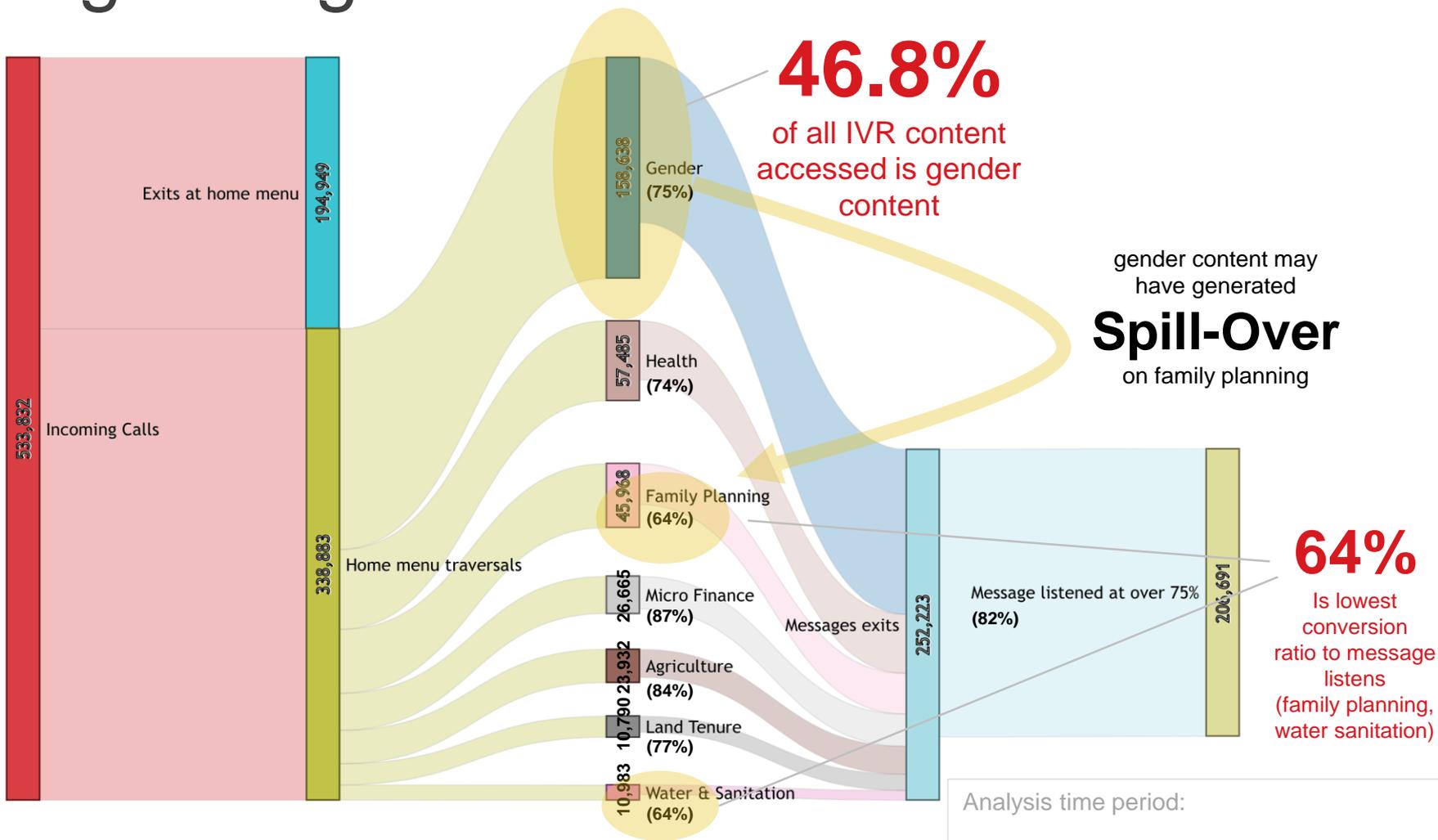
# We investigate access trends and engagement across content areas



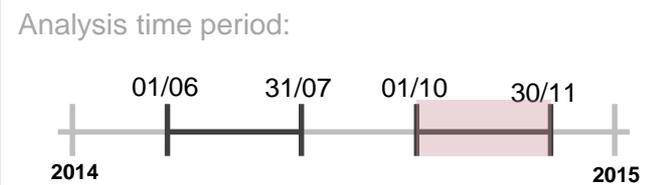
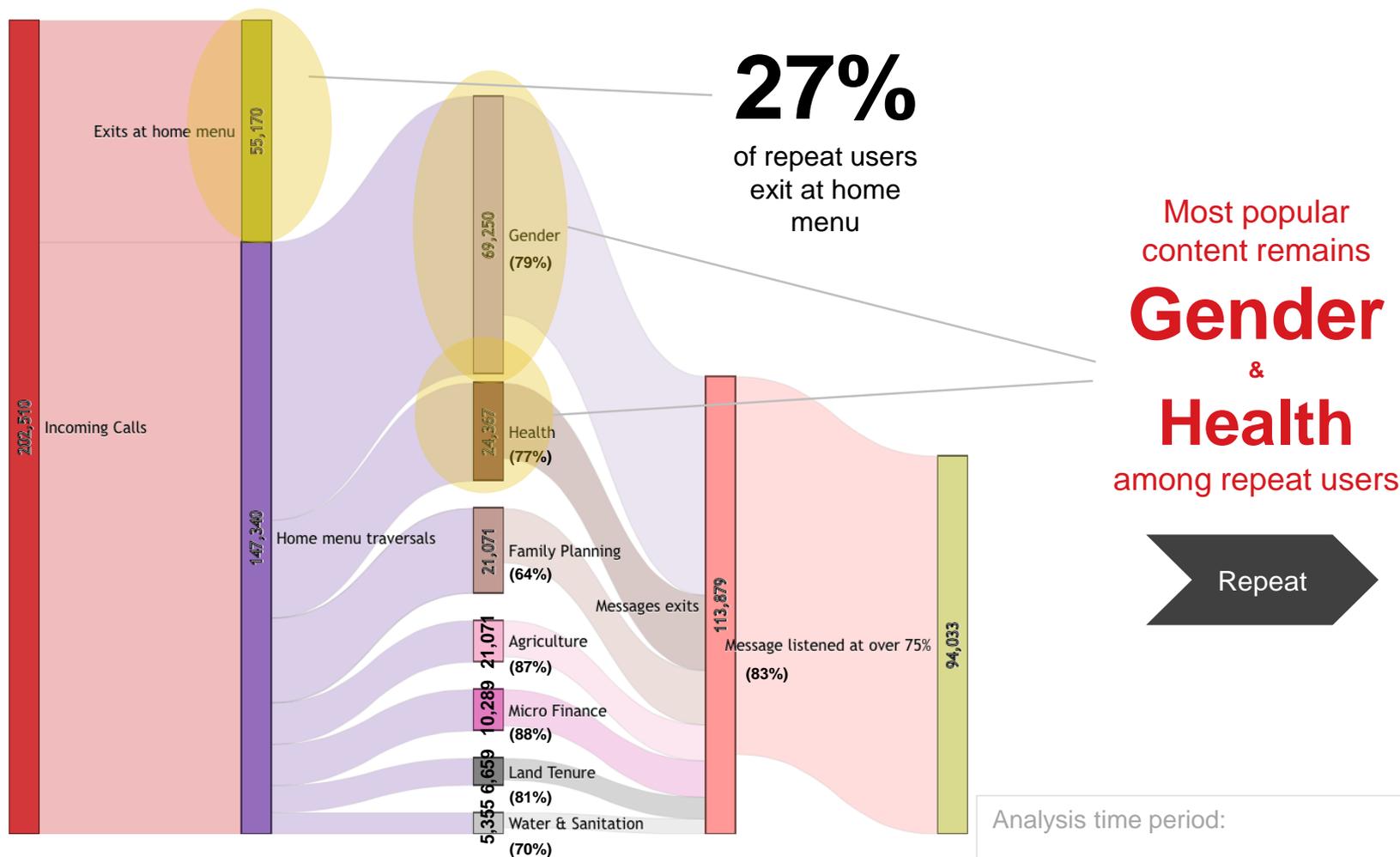
# Home menu is the main roadblock on the customer journey



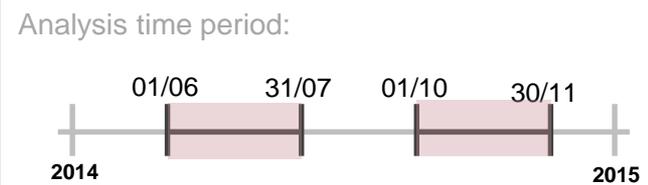
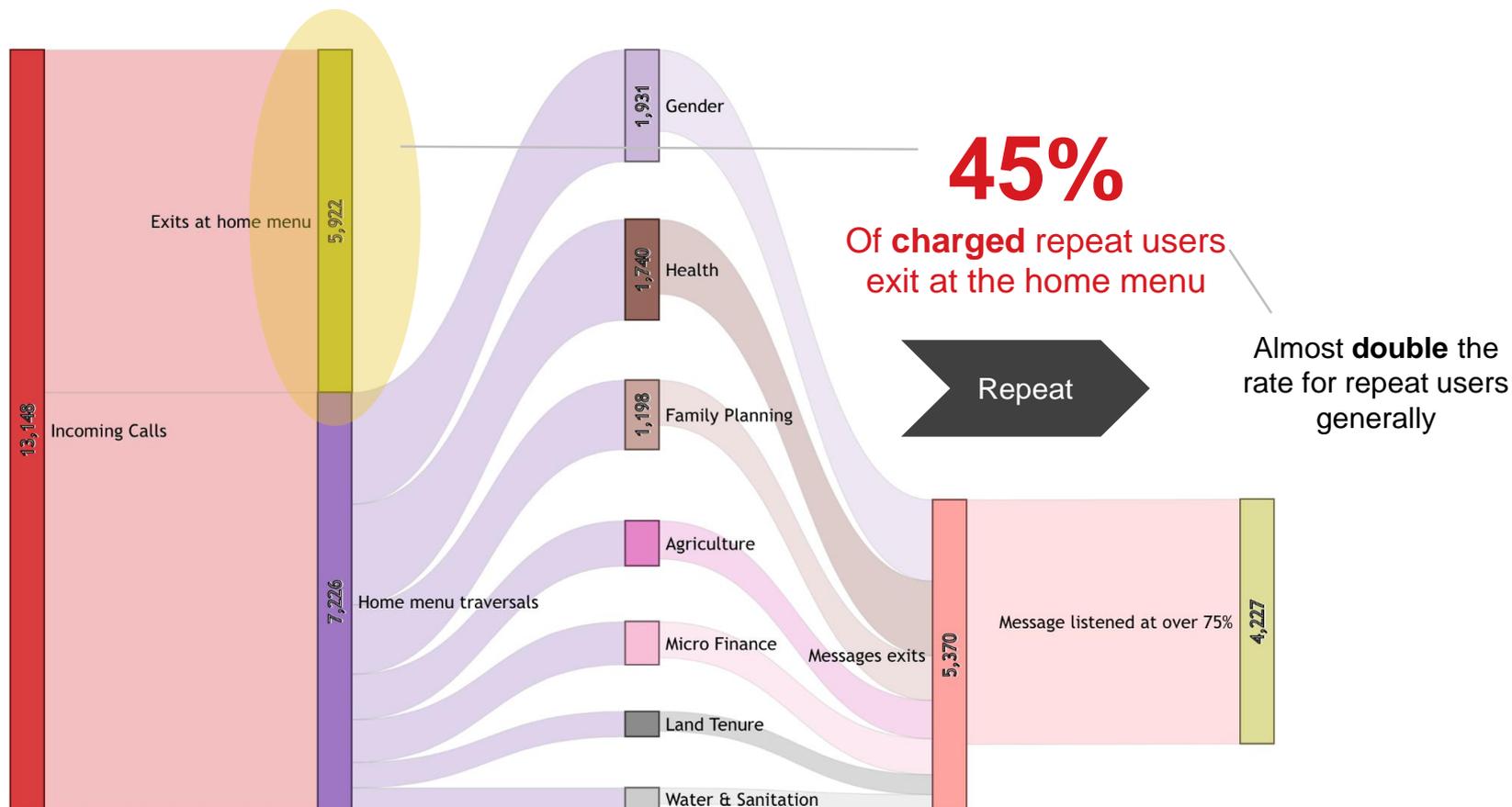
# The gender content has generated high usage



# Repeat users better at reaching menus and messages

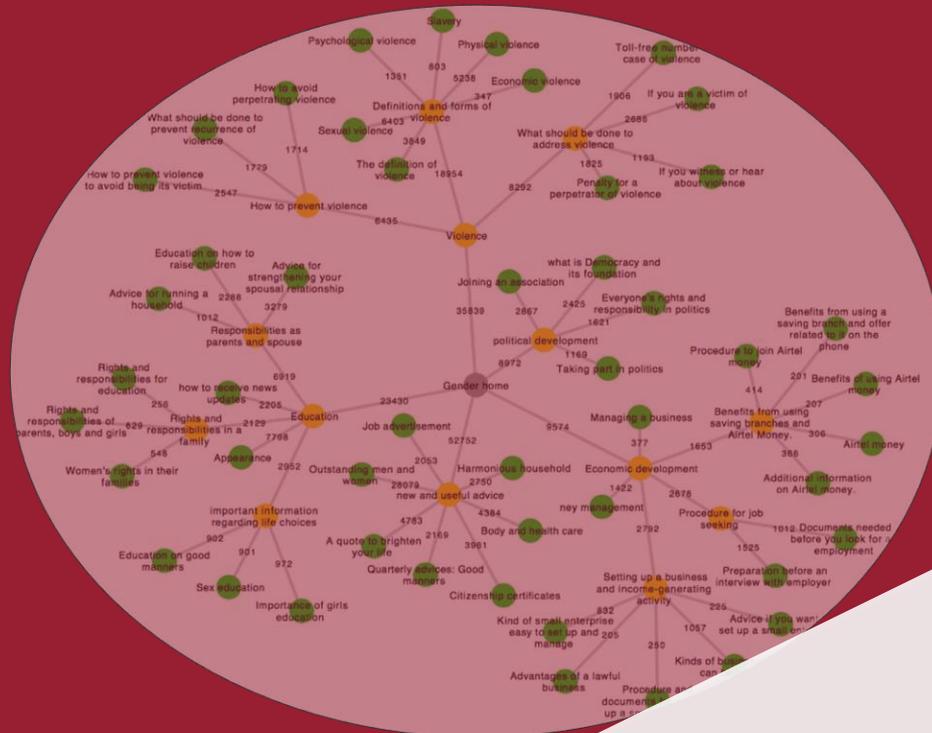


# Charged calls show a high percentage of exit at home



# In-depth Gender Area Focus:

Access to gender menu in focus, with analysis that can be replicated across content areas to powerful effect



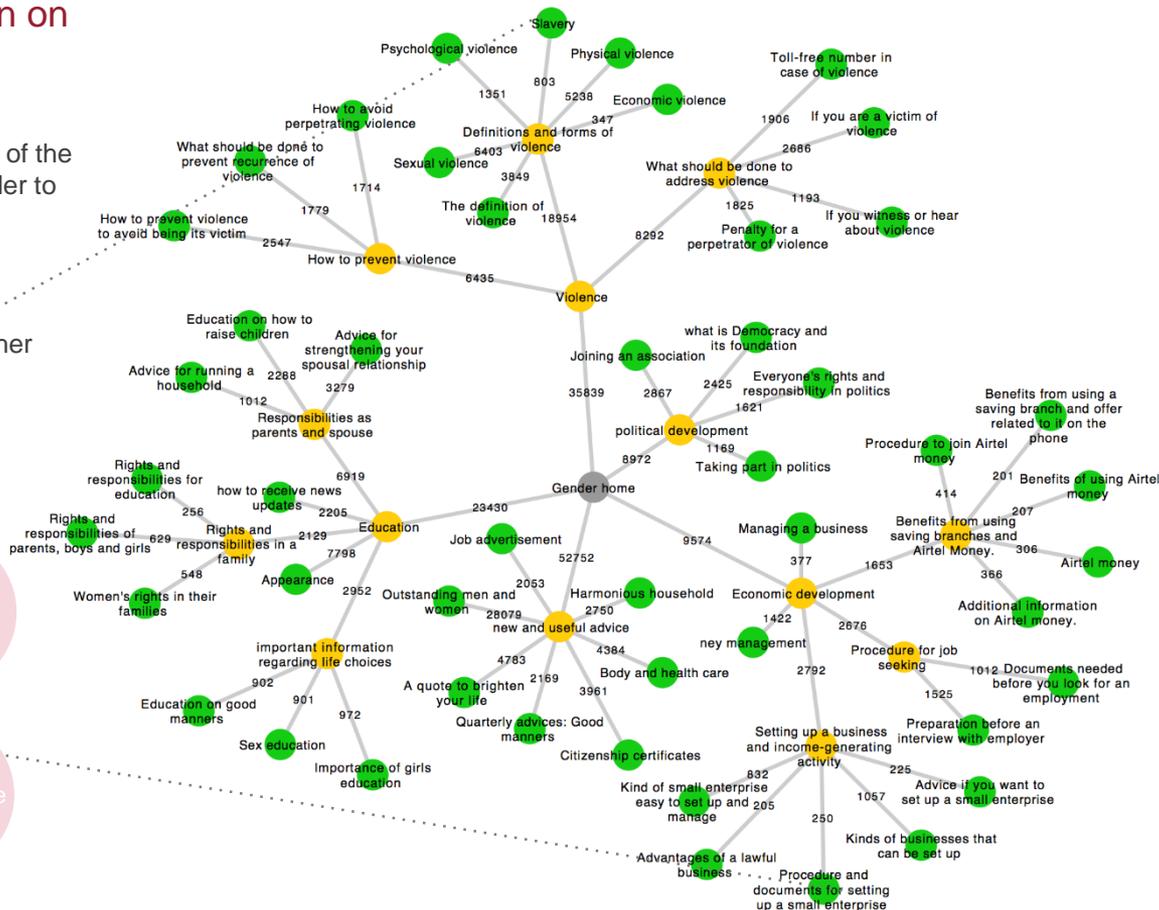
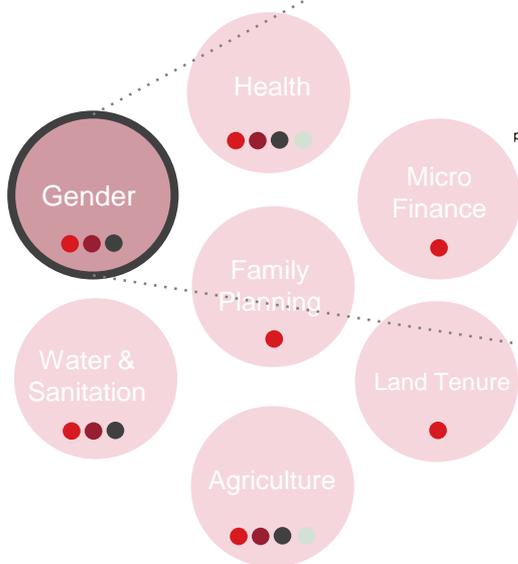
# We further focus on data from the gender content area

Each content area has an associated view of the IVR tree that we zoom in on

This tree is broken into two key components:

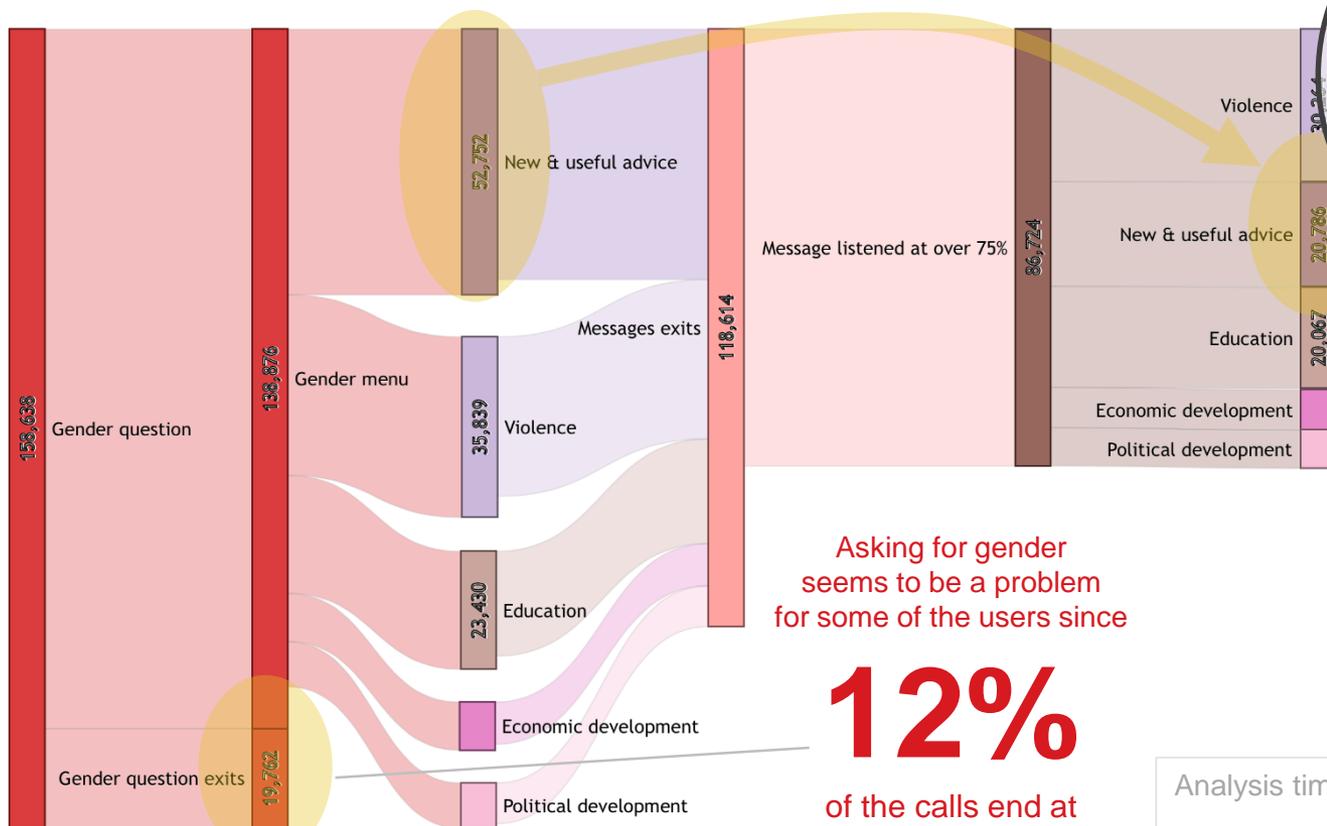
**Sub-menus** – which are further areas of the content area the user can select in order to access content

**Final messages** – are the pieces of information that we want to determine whether users access, and if so, whether they listen to the content in full



# Gender question is a barrier, and access and demand mismatch

● We first take data at the sub-menu level to examine which areas users are hitting/listening to most



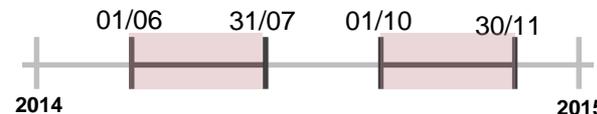
Traffic matches the order the menu appears in to the user, but does not reflect the same order of user engagement

**“New & Useful advice”**  
**39%**  
 engagement only

Asking for gender seems to be a problem for some of the users since

**12%**  
 of the calls end at this question

Analysis time period:



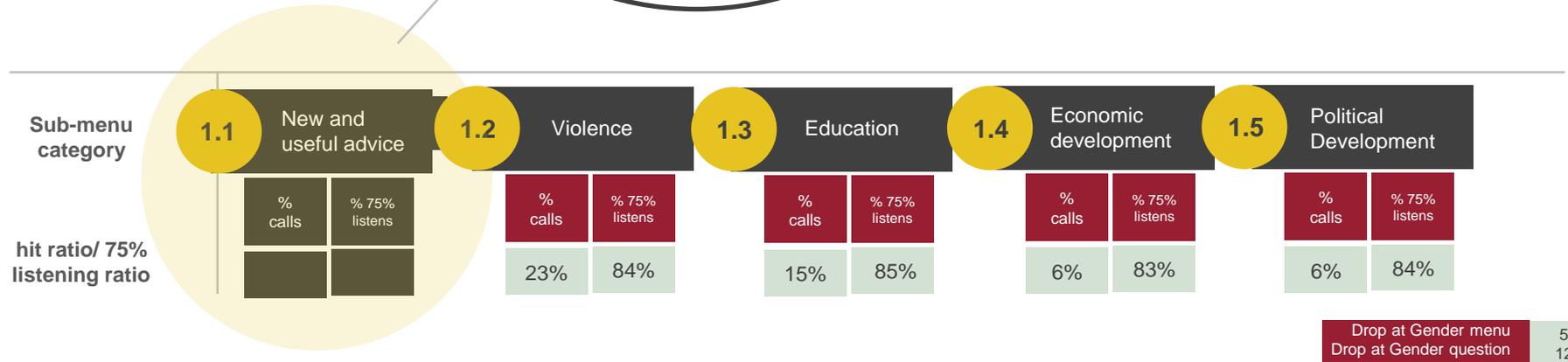
# The menu in pole position shows significantly lower engagement

The most popular content area is option 1, likely driven by its priority placement in the menu structure and its title since it has by far the lowest quality engagement at

**39%**

The other 4 subtopics are closely grouped around

**84%**



Drop at Gender menu 5%  
Drop at Gender question 12%

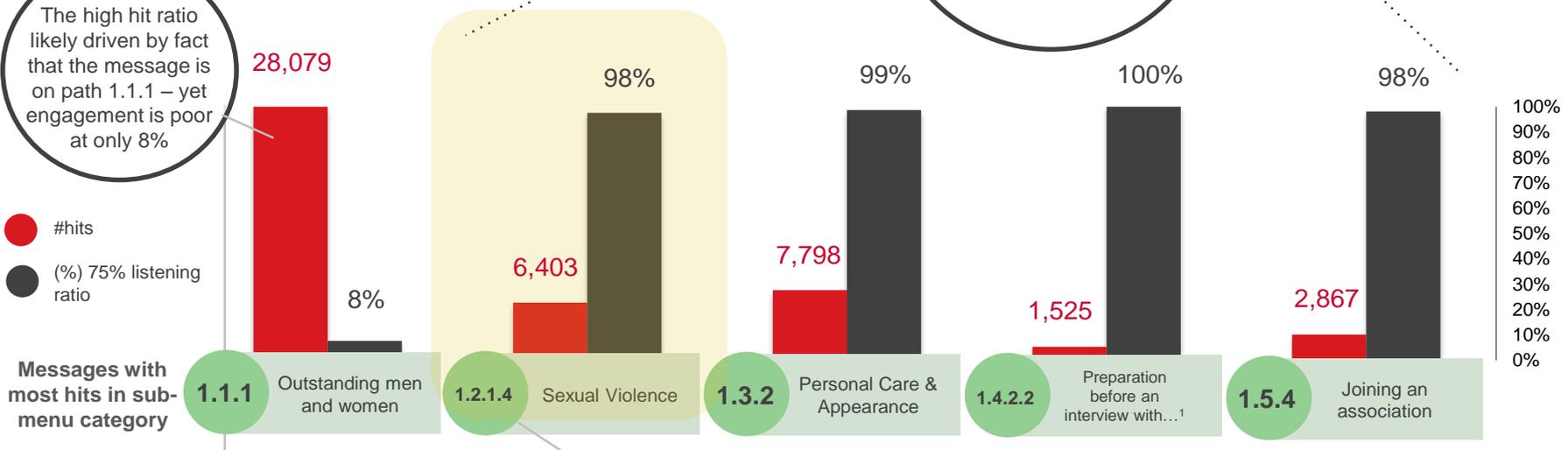
# The same pattern holds more starkly at the message level

Taking data at a granular level we can examine performance of individual messages

Though 'deeper' menus receive less hits, the **quality of engagement is much higher**

The high hit ratio likely driven by fact that the message is on path 1.1.1 – yet engagement is poor at only 8%

● #hits  
● (%) 75% listening ratio



“Sexual violence is unwanted sexual touching or taking advantage (...) Even within the conjugal relationship, sexual violence is wrong (...)”

Snapshot of message content

(1) Actual #1 message was 'Job advertisement' but this very short message (4.6s) just says that there is no content here

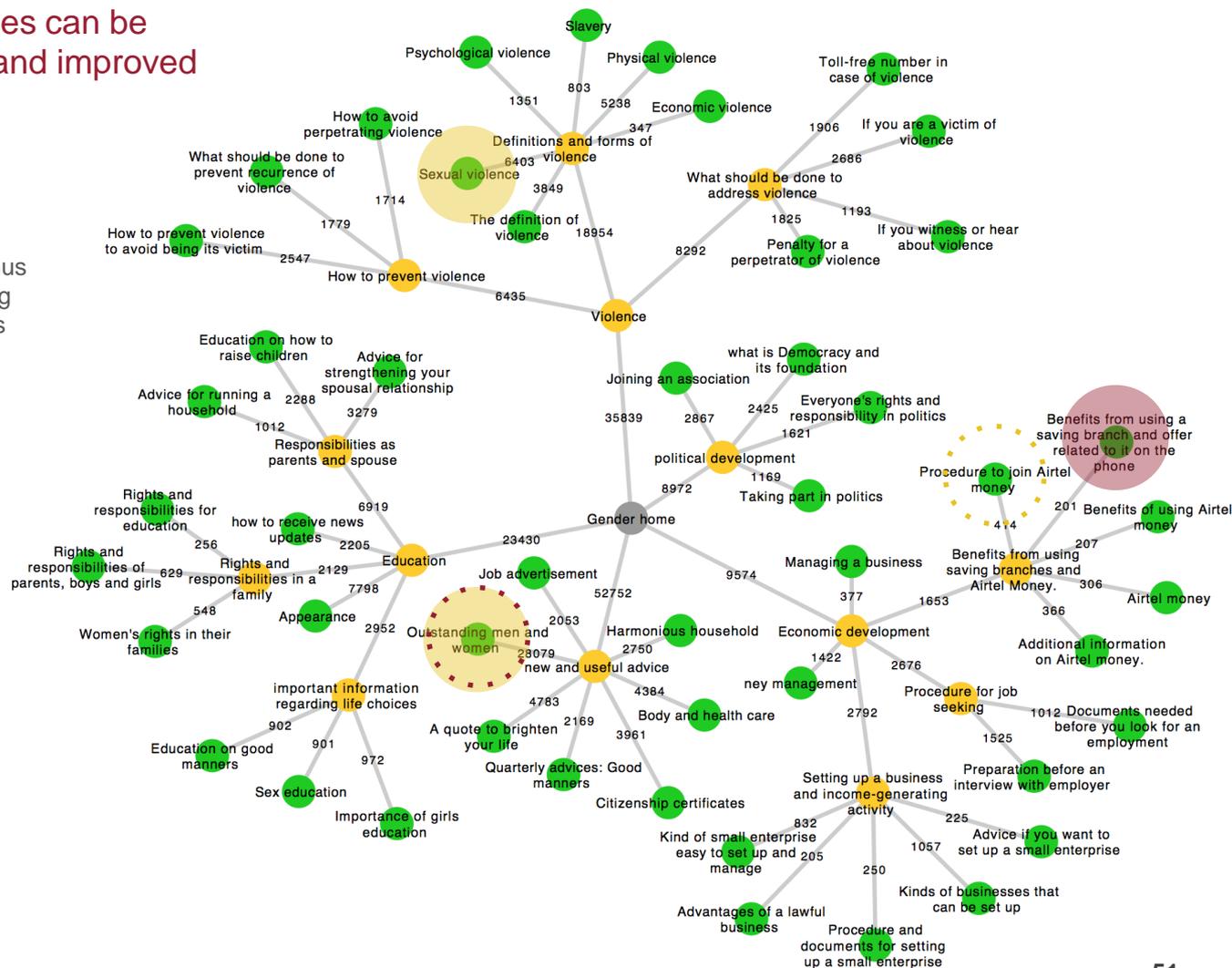
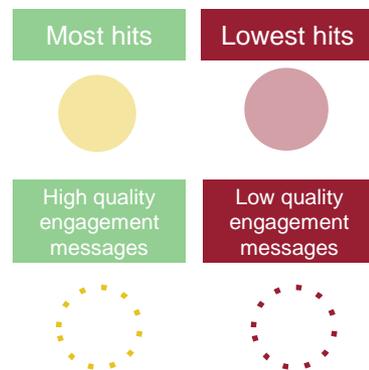
# Using this technique, nodes can be isolated for investigation

The IVR tree and messages can be systematically examined and improved

The lowest hit messages are at the same level as the highest hits in the gender menu

The IVR tree mapping highlights where low/high performing sub-menus and messages lie in the tree allowing for corrective actions and quick fixes of technical issues

## Key





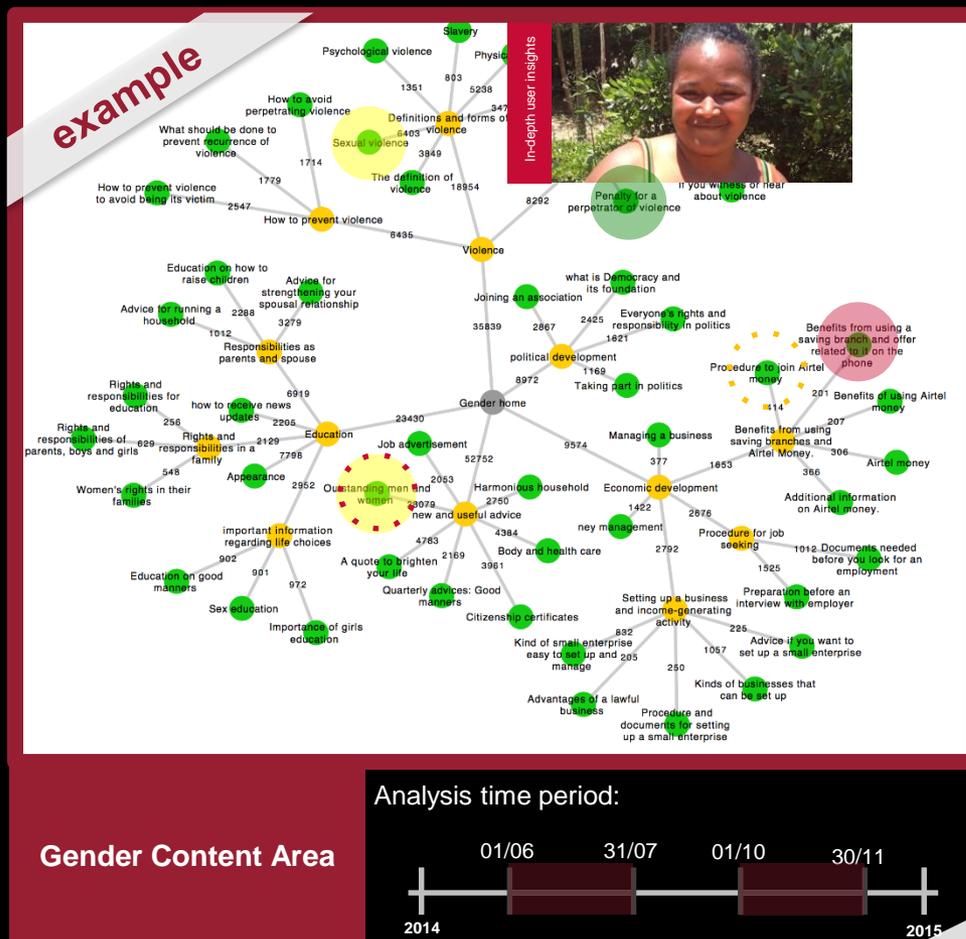
# This could be the basis of “insights dashboard” to content sponsors

A B2B value proposition to content area funders

Create a replicable approach to producing content dashboards to content funders so they can track the performance and make improvements to the content areas

## Key

Most hits	Lowest hits	
High quality engagement messages	Low quality engagement messages	In depth user insights

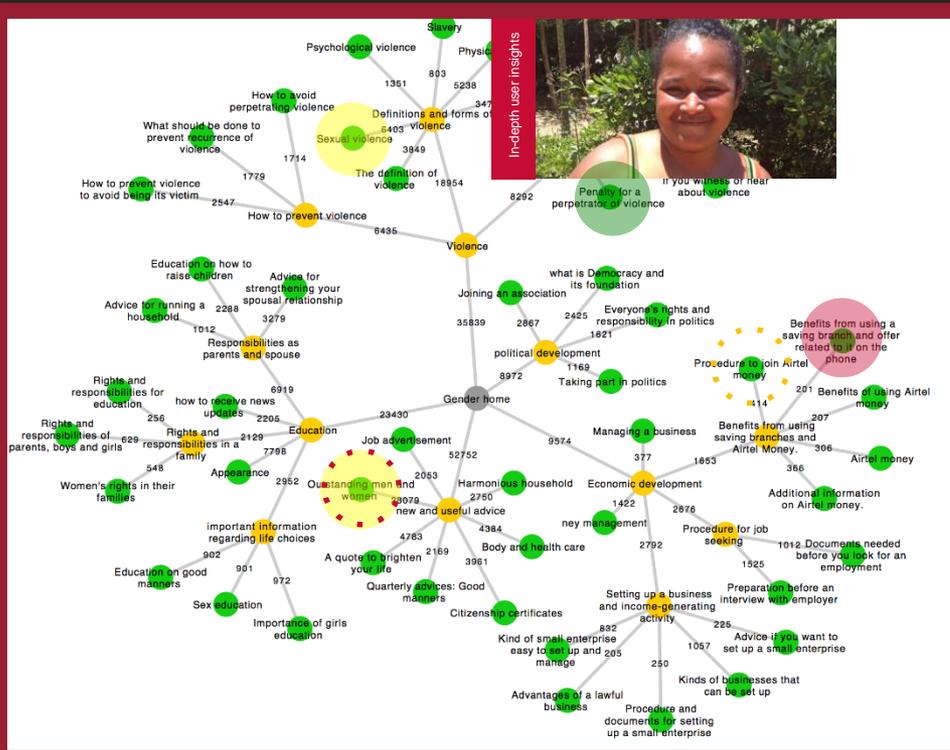


# Along with recommendations to content sponsors

example

## Implementation actions

- ✓ Try ordering menu options differently to assess potential of content since traffic. So far traffic exactly matches the order of appearance
- ✓ New and useful advice section to be revamped because of poor quality engagement
- ✓ Investigate high engagement gender messages (e.g. "sexual violence") with qualitative research to understand possible behavior change

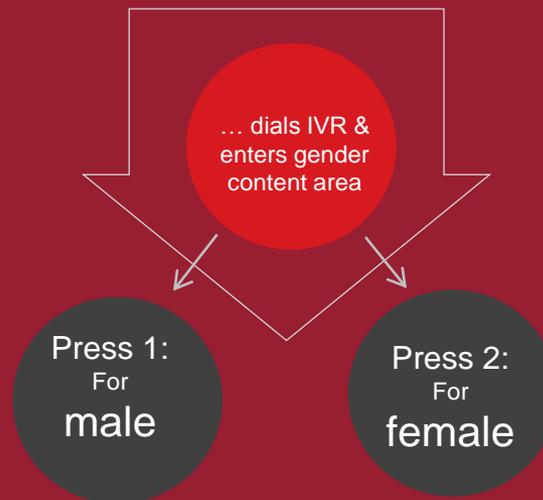


Analysis time period:



# Specific Customer Insights:

The lack of willingness to pay flagged, and the flip-flopper problem assessed



# User interviews often showed a willingness to pay

This was most striking where users clearly linked messages around their needs for otherwise hard to get information, especially around health content

My parents are always absent, and so I was never told about things like the menstrual cycle, this service has answered a lot of questions for me

- Female user, 15
- Using the service for a number of months
- Very invested in the health content
- Stated that 200 Ar is a reasonable charge per message

This service saved my baby's life, I listened very carefully to the messages so I could treat my baby when she had malaria

- Male user, 30
- Started using health content in 2013
- Happy to pay for content as he values the health messages
- Prefer to pay a one off payment rather than for each call

# Yet data analytics cast doubt on users' willingness to pay

Paid for content

Flip Flopper problems

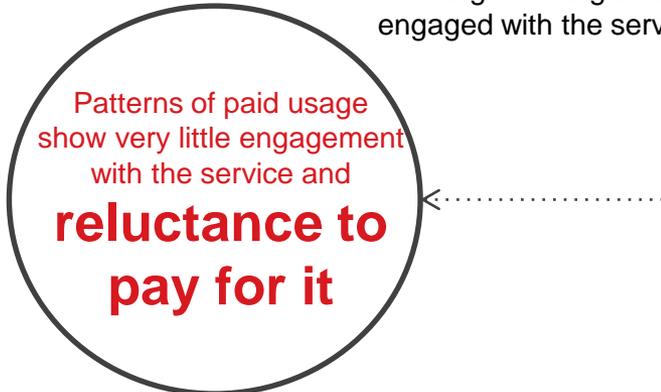
The price for the service is considered reasonable by the audience

The mechanism of a 200 MGA charge per call starting the 5<sup>th</sup> call in a given month in 2014 will be changed to 100 MGA after 8 calls. In qualitative research conducted by HNI, users often reported that they would be willing to pay for further calls.



But data analytics attest of the presence of major barriers

- IVR traffic shows spikes at the beginning of each month when users haven't exhausted their quota of calls for the month
- Only 9,177 repeat users have had a paying usage
- Attrition at the home page reaches 45.0% of paid calls made by repeat users suggesting a high number of users hanging up potentially in fear of being charged
- 19.5% of paying users are occasional users not listening to a single message in full, i.e. not really engaged with the service



# Outlining the “flip-flopper” problem, users register gender both ways

Paid for content

Flip Flopper problem

Since gender content launch (Oct. 14), users are systematically asked for their gender each time they access the gender content

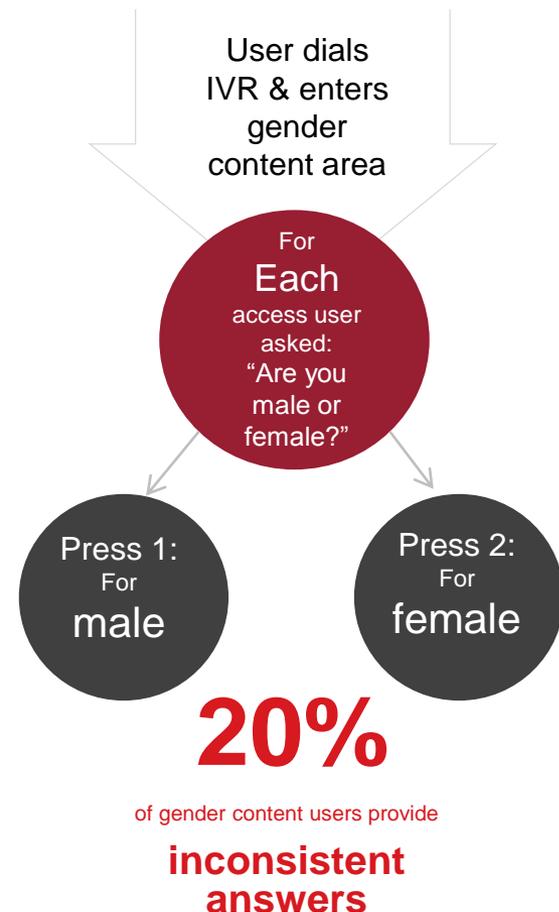
## Problem

Around 20% of the gender content users do not provide consistent data across multiple access

## Question asked



## Gender Content User...



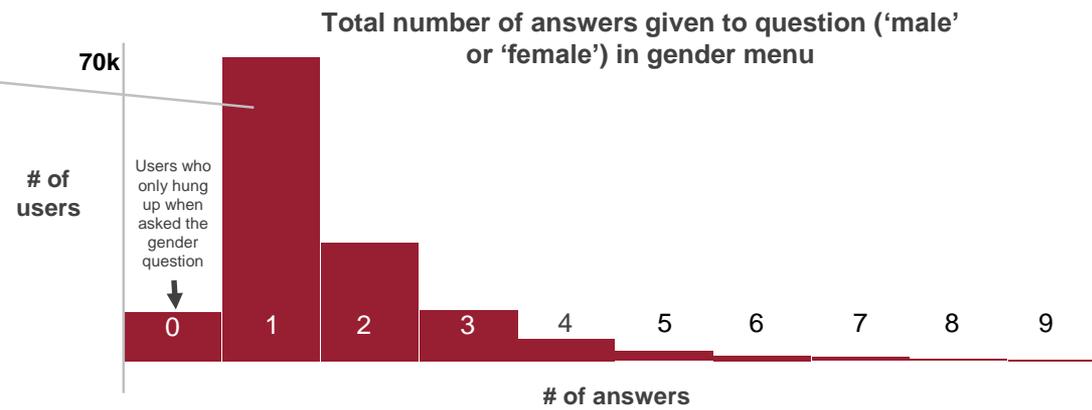
# Unfortunately data cannot be fully conclusive

Paid for content

Flip Flopper problem

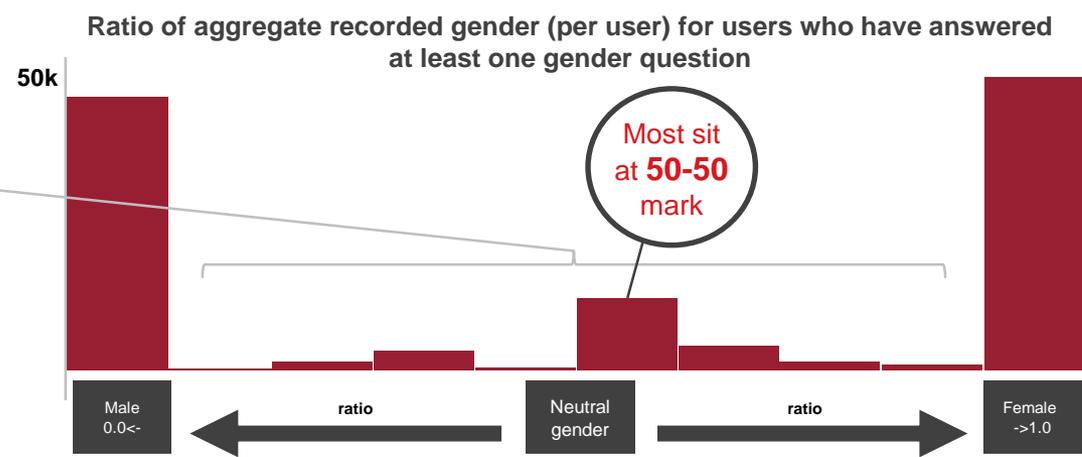
Most users have only entered their gender once using the IVR

**53.4%**  
of users answered once only



For multiple answers, inconsistency rate is 20%, with a high number of 50/50

**20.1%**  
Of users in the gender section\* are flip-flopers



(\* ) having answered at least once to the gender question

# The topic of gender is a new concept for many users

## Curiosity may be a strong driver for choice in gender selection

Amongst those interviewed, users between the ages of 15–19 were the **most curious** about the differences between men and women

Selecting male and female was often mistaken for a category that offered different information depending on your gender

I listened to the gender content to see if men and women really were equal

I wanted to learn about the differences between the rights of men and women

I pick the female and my sister picks the male so we can hear the difference

I thought there would be less rights for women but I learnt they were the same as men

**Curiosity**

# Further qualitative research highlighted potential drivers to flip-flopping

Paid for content

Flip Flopper problem

While data analytics does help clarify one key barrier around capturing gender data

## Data



Barrier

- 12% of the calls are lost at the stage of asking the gender question, a higher drop out rate than at the gender menu itself (only 5%)

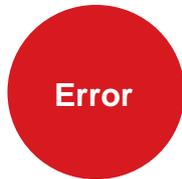
Further qualitative work highlighted that curiosity and errors appear the main drivers

## Hypotheses



Curiosity

- Some flip floppers interviewed quoted a misunderstanding that selecting a different gender will show different content, and expressed their **interest in the content related to the opposite gender**



Error

- Though seldom quoted in the qualitative research, some users reported difficulties dealing with phones, and errors in entering gender could occur

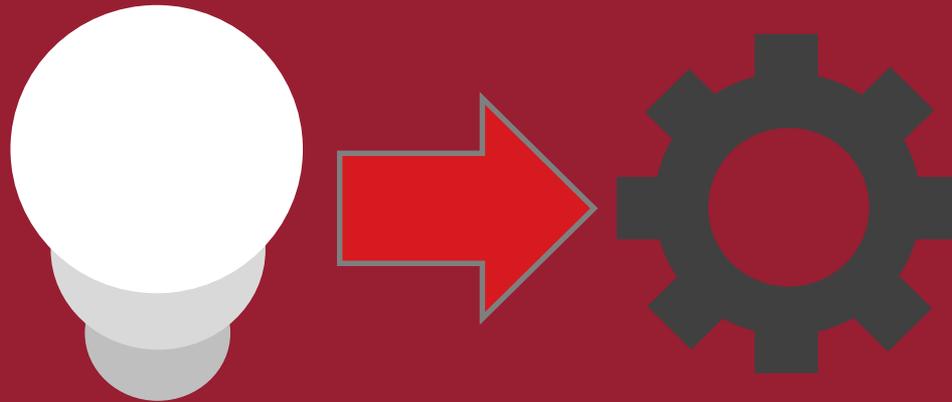


Device sharing

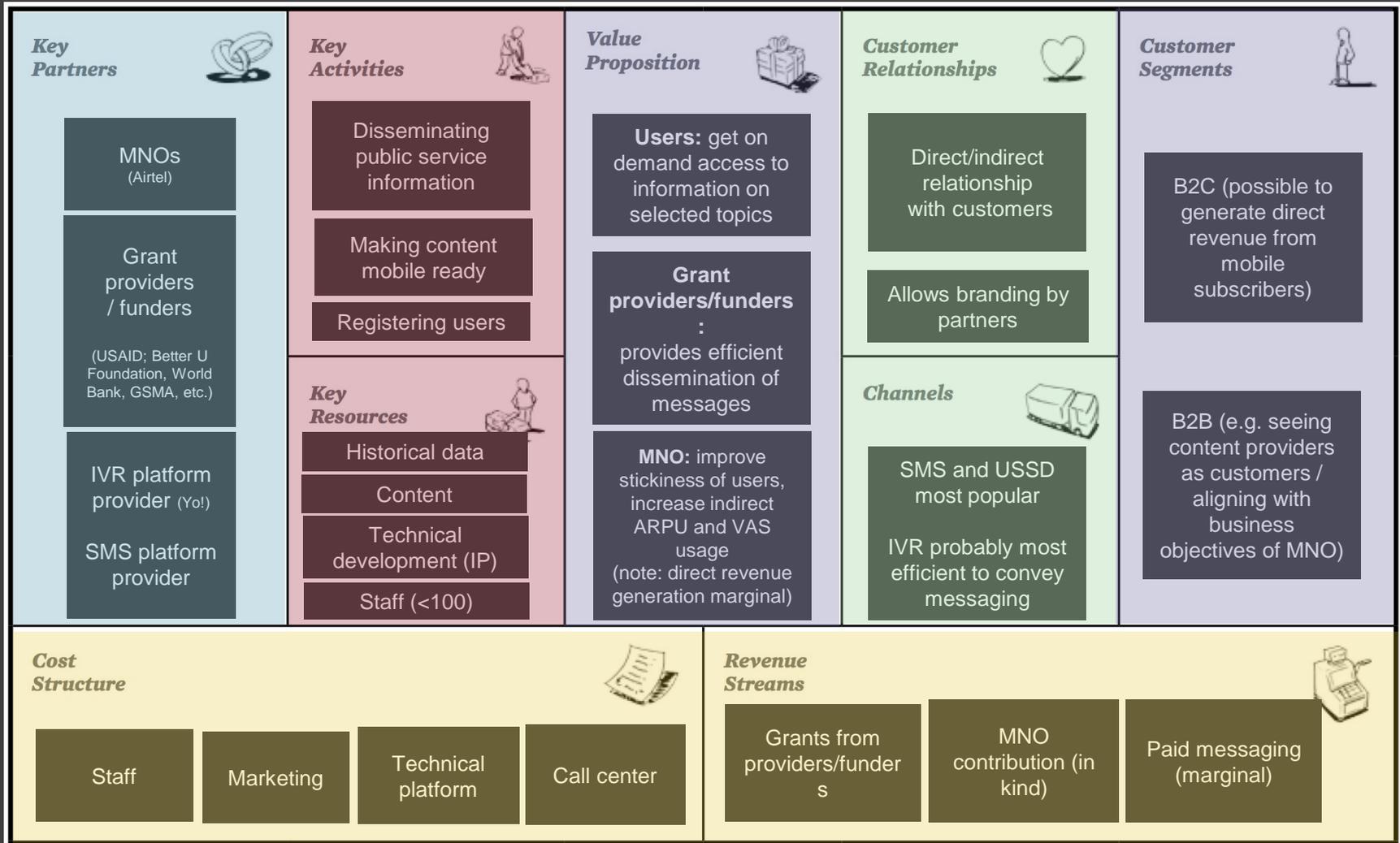
- Most interviewees reported **not borrowing nor sharing their phone** when it comes to accessing the gender content

# Recommendations:

Strengthen partnerships, increase understanding of users, and monitor performance in real time



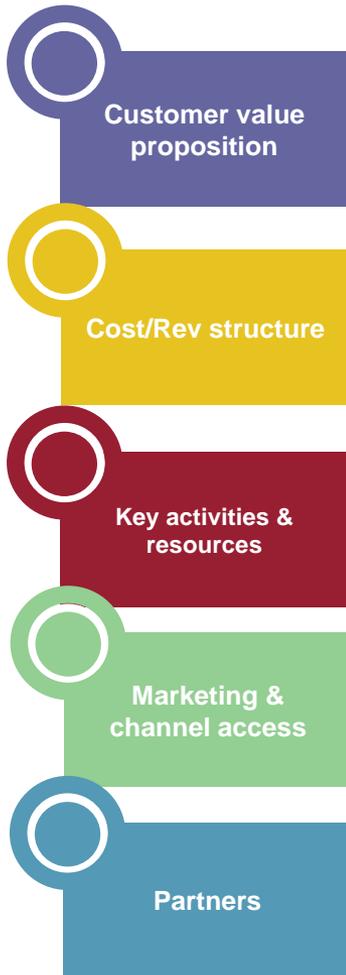
# Recap of the 3-2-1 model



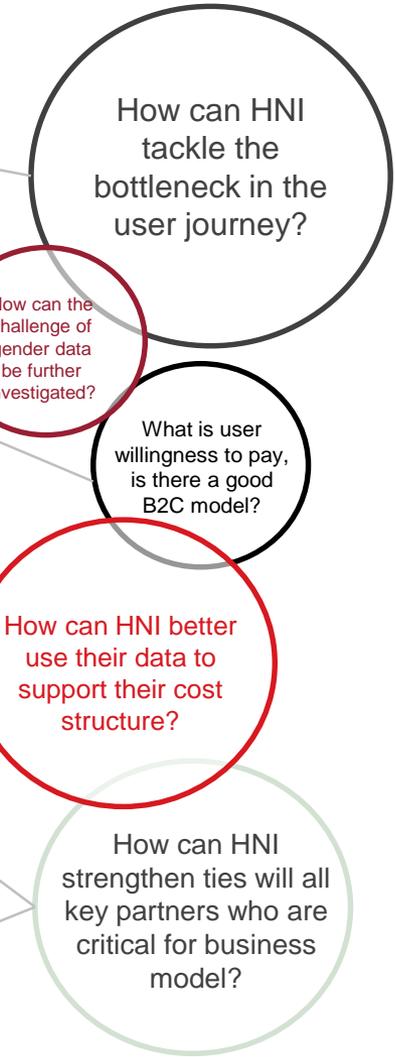
# Key recommendations summary



## Recommendations



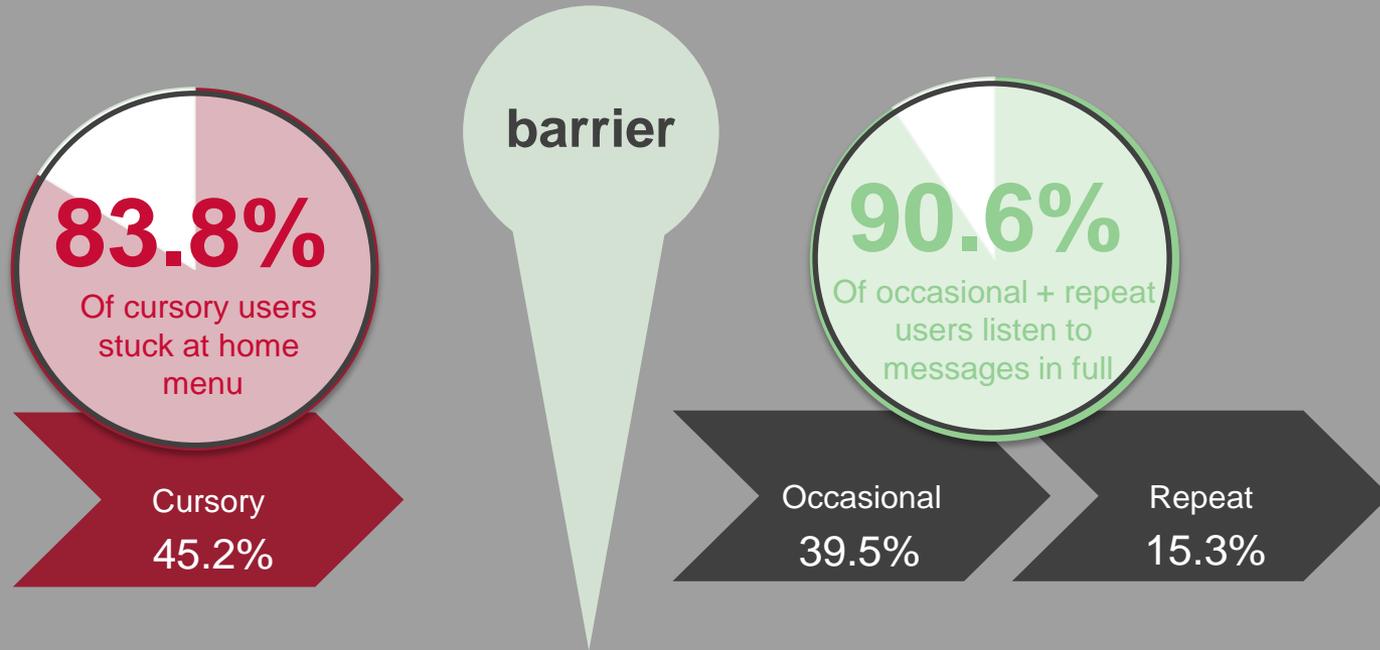
- Improve user experience by addressing biggest bottleneck to users becoming engaged
- Investigate and improve the service experience across gender category
- End users not a good target in short (& likely medium) term as revenue source – focus elsewhere
- Determine feasibility of covering fixed cost model on basis of a potential B2B model
- Use the data to create a new monetisable value proposition
- Continue investigation of methods to best disaggregate gender
- Create case for continued access to mobile channel that is attractive to MNO
- Align with key partner KPIs/ objectives to strengthen relationships



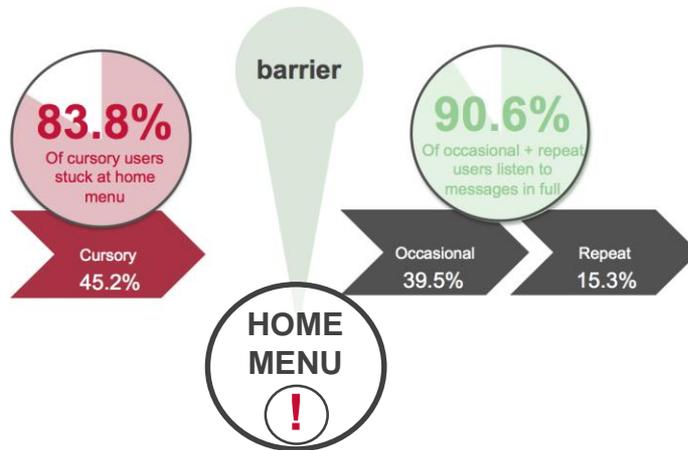
# Where in the user journey are the barriers to valuable repeat use?

Customer Value Proposition

Improve user experience by addressing biggest bottleneck to users becoming engaged



# Address the home menu barrier and users stuck at cursory use stage



## The service bottleneck from the user perspective is the home menu

- User journey bottleneck is at the home menu with close to half of calls not passing the home menu overall
- The main contributor to this is users in the cursory stage of the journey – 84% get stuck at the home menu
- The issue also prevails among repeat users with 27.2% attrition rate at the home menu as well as among charged calls with a high 45.0% attrition rate

Customer Value Proposition

Improve user experience by addressing biggest bottleneck to users becoming engaged

## There are a few competing hypotheses as to what creates the barrier

Error

Users calling the service by mistake, for instance by mixing up the 3-2-1 service with the '123 service' focused on AIDS prevention

Cost Sensitivity

Users may be unwilling to pay and thinking that by hanging up they would not be charged

Home Menu Design

Issue with the design of the home itself, potentially too long, user is confused about next action

No Interest

Users find no interest in any content areas mentioned, or do not think they can find what they expect, so hang up

# Test hypotheses around the barrier, design service changes carefully

Customer Value Proposition

Improve user experience by addressing biggest bottleneck to users becoming engaged

## Test using multiple techniques

different hypotheses best explored with different techniques, e.g., test home menu design with user testing, test cost sensitivity with ethnographic in-depth interviews

## Make sure you re-measure

You need to know whether the situation has improved – hopefully linking this to your implemented actions

## Be careful

With changing the pricing model of the service to users, any change should be supported by as much testing and user research as possible – changes of this kind are very hard to reverse

## Implementation actions

- ✓ Conduct further user interviews (qualitative research + user testing) to assess barriers at home menu
- ✓ Make changes based on findings, and re-measure using customer journey technique
- ✓ Further educate the audience about the benefits of the service and on the charging mechanism through marketing messaging
- ✓ Potentially make the service free of charge for users irrespective of the number of calls

# What is user willingness to pay, is there a B2C revenue model?

Cost/Rev  
structure

End users not a good target in short (& likely medium) term as revenue source

User  
Testimonials

200 Ar is very  
reasonable

but...

Patterns of paid usage show  
very little engagement with the  
service and

**reluctance to  
pay for it**

# Don't focus on revenue generation directly from customers now (or soon)

Cost/Rev structure

End users not a good target in short (& likely medium) term as revenue source

## Customer willingness to pay is not evident

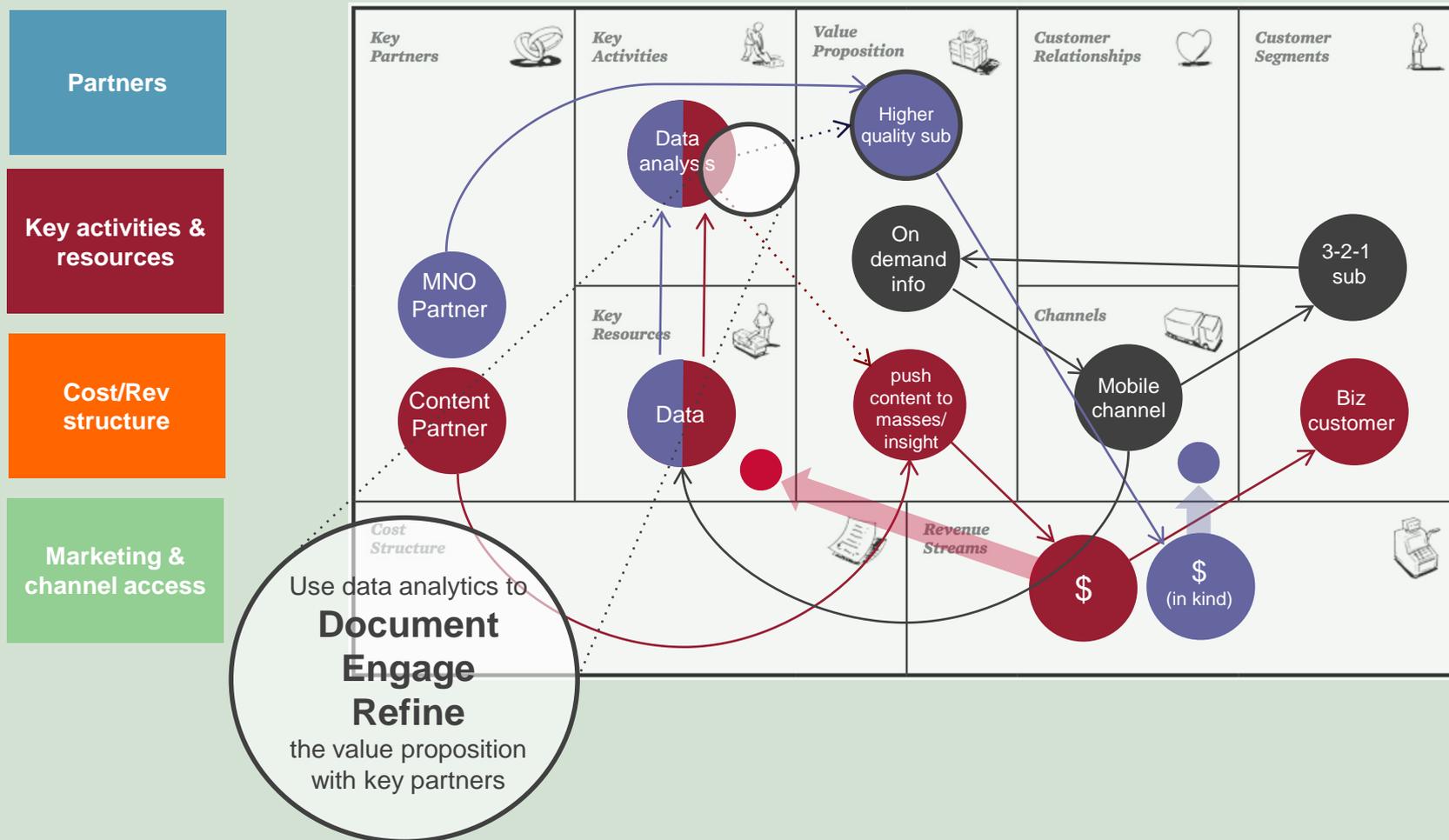
- Data suggests that usage is predicated – in the user's mind – on the basis of content being free
- We see significant risk in implementing sudden 'charging models' into the data – the IVR charged calls data is an early indication of this, since we see opposite behavior than expected
- Revenue generated by users has remained low (less than \$1k/month) and cannot be considered as a benefit to the MNO
- Option would be to focus on a freemium style model, with revenue generation for HNI coming from (essentially) B2B model, likely from content providers
- In a context of low willingness to pay, optimizing costs becomes a necessity.

direct revenue contribution doesn't look like a good bet  
**focus on other aspects of the model**

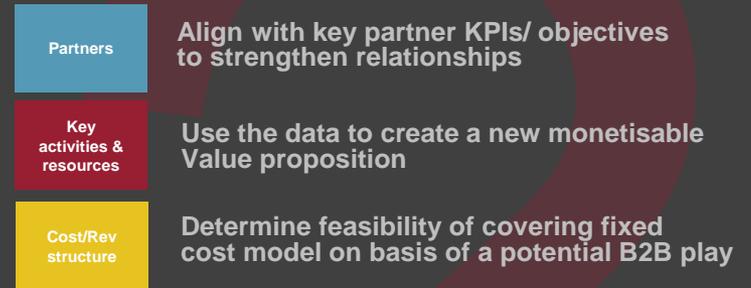
## Implementation actions

- ✓ Focus on business planning around different cost structures, likely B2B model
- ✓ Optimize media spend as well as message length according to full content delivery

# How can 3-2-1 usage data be the cornerstone of the business model?



1



What can be done with

Content Partners

# Develop and monetize a content engagement analysis model

Document and analyse customer content engagement in line with interest of content partners

**Higher subscriber content engagement** is little understood at present, but there is huge potential to refine and adapt content areas based on data analytics, which can also be offered as a monetised value added service to content partners

IVR data monetisable proposition

**Data in IVR channel alone** demonstrates the potential to gain deep insights into user behaviour with respect to content engagement, these insights add significantly more detail, and are based on much larger sample sizes (i.e. entire populations!) than these organisations would otherwise have access to

Find benchmarks for business case

By **benchmarking against the costs such organisations may incur in conducting M&E** on 'communication outreach work' of this nature, HNI can start to build a business case for the sustainability of the 3-2-1 service, considering whether this monetisation channel would be able to support their operations, which largely represent fixed costs in nature

Partners

Align with key partner KPIs/ objectives to strengthen relationships

Key activities & resources

Use the data to create a new monetisable Value proposition

Cost/Rev structure

Determine feasibility of covering fixed cost model on basis of a potential B2B play



Recurring revenue model

note: if engagements with these (B2B) content generating clients are on-going, this analytics model has the advantage of a **recurring revenue model** (e.g., monthly reports, based on a subscription fee)



Chance to layer extra services

note: there is potential to build **further expertise** (that is monetisable in a similar way) to help clients refine their existing content to improve engagement metrics

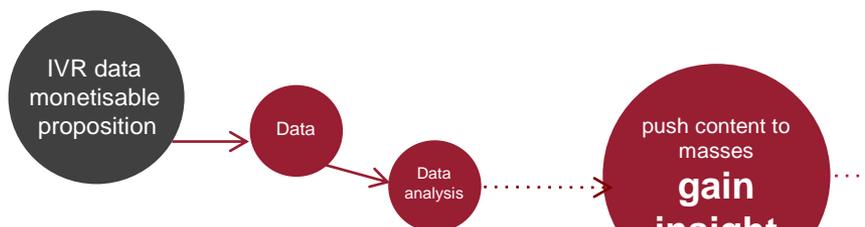
Content Partner

Support partners in measuring and clarifying their social impact metrics

# Use examples from our analysis as a foundation

We show how existing IVR data can be used to create granular insights – test value with funders

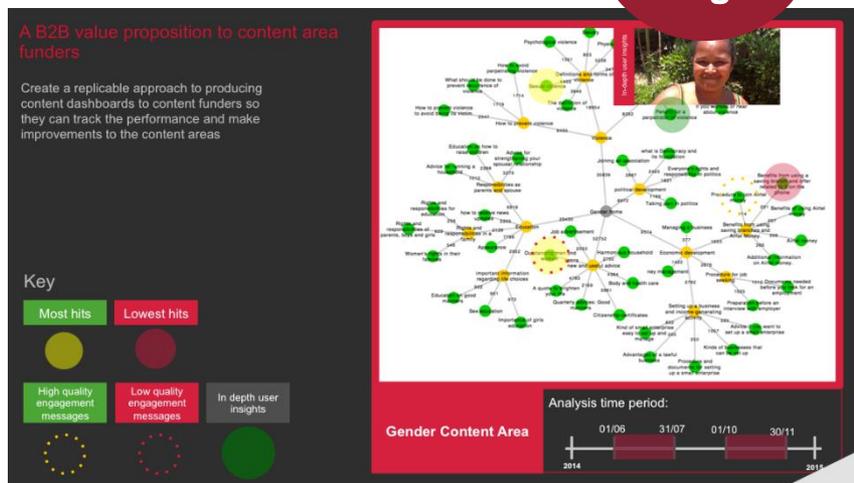
The slide below outlines analysis of content in the gender section, this could form the basis of a report that is passed back to content area funders, and is – in some form or other – monetised in future



- Partners** Align with key partner KPIs/ objectives to strengthen relationships
- Key activities & resources** Use the data to create a new monetisable Value proposition
- Cost/Rev structure** Determine feasibility of covering fixed cost model on basis of a potential B2B play

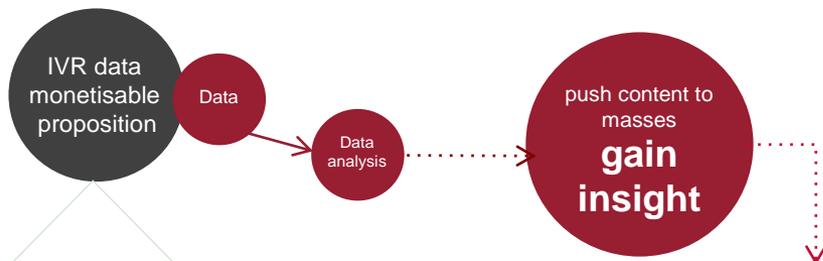
## Implementation actions

- ✓ Define and follow KPIs in near real time and at a very granular level to assess customer journey with a focus on traffic, menus, content, repeat behavior and messages listened in full – provide findings to content partners
- ✓ Using feedback from them develop a service offering that can be monetised (B2B value proposition)



**Content Partner** Support partners in measuring and clarifying their social impact metrics

# Example: recall gender specific content area recommendations...



- Partners** Align with key partner KPIs/ objectives to strengthen relationships
- Key activities & resources** Use the data to create a new monetisable Value proposition
- Cost/Rev structure** Determine feasibility of covering fixed cost model on basis of a potential B2B play

Support partners in measuring and clarifying their social impact metrics

**example**

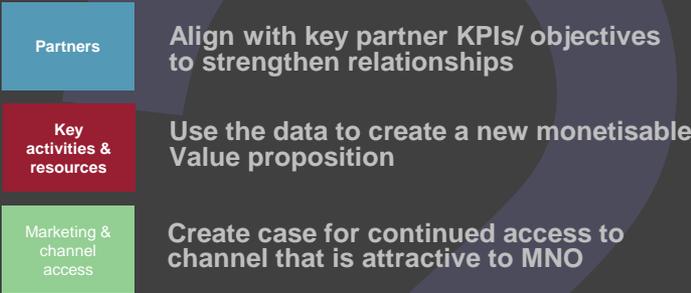
## Implementation actions

- ✓ Try ordering menu options differently to assess potential of content since traffic so far exactly matches order of appearance
- ✓ New and useful advice section to be revamped because of poor quality engagement
- ✓ Investigate high engagement gender messages (e.g. "sexual violence") with qual research to understand possible behavior change

**Gender Content Area**

Analysis time period: 01/06, 31/07, 01/10, 30/11

2



What can be done with

MNO  
Partners

# Prioritise evidence for MNO KPIs to ensure continued channel access

Given the level of dependence and in-kind support of MNOs around channel access, HNI should invest more into investigating user quality from a MNO view

**Higher MNO subscriber quality** is important to demonstrate since they will want to see demonstration of metrics that tell a good story from a revenue generating perspective (even if this is indirect)

- These metrics are complex to demonstrate, so target the easier areas to measure first – e.g., MNO sub monthly revenue
- Aggregated data provides a small talking point at present, but won't likely be enough longer term
- By analysing the 3-2-1 sub base across segments, you can isolate segments that are of higher MNO subscriber quality, and therefore align service development with the critical MNO (commercial) KPIs
- Another approach is to demonstrate that 3-2-1 users generate more revenue for the operator once they have used the service by comparing the usage and retention of cohorts or users over time
- Given the level of dependence the HNI service has on these MNO partnerships, we see further investment in this area of analytics as critical, whichever way the service business model develops
- This also important, since the more data driven insights that can show progress for the business objectives of the MNO, the more they will be willing to share data (potential virtuous cycle effect)

Partners

Align with key partner KPIs/ objectives to strengthen relationships

Key activities & resources

Use the data to create a new monetisable Value proposition

Marketing & channel access

Create case for continued access to channel that is attractive to MNO

## Implementation actions

- ✓ Negotiate access to more data from Airtel
  - ✓ Conduct analysis at the MSISDN level and build user profiling (including location data if possible)
- Share analytics with Airtel and funders

MNO Partner

**Pro-actively attempt to measure and track KPIs of interest to MNOs**

# Dis-aggregating gender

(and other demographic data)

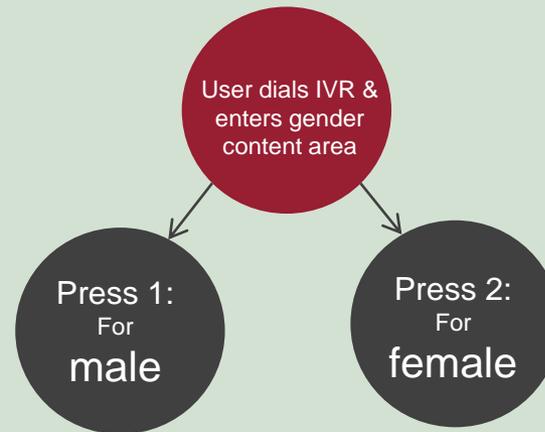


Customer  
Value  
Proposition

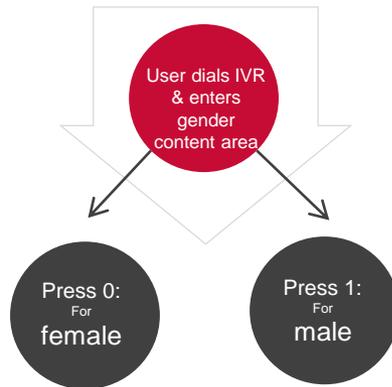
Investigate and improve the service  
Experience across gender categories

Key  
activities &  
resources

Continue investigation of methods to best  
disaggregate gender



# Continue to investigate challenging questions around gender



Customer Value Proposition

Key activities & resources

Investigate and improve the service Experience across gender categories

Continue investigation of methods to best disaggregate gender

The current 'gender question' does not work well to capture reliable gender data from users

**Digging deeper into gender and other demographic data**, given the interest of funders and MNOs alike to understand the user base not only by usage profile but also demographics, it is critical to address questions around the most effective methods to understand and match mobile use with demographic data

- Our data analytics around the existing 'gender question' further highlight the confusion with this question.
- Qualitative interview work gives some insights, but no clear actionable solutions going forward

## Implementation actions

- Invest in 'user testing approach' or 'experimental data analytics approach' as options to investigate problem further
- Potentially conduct a/b testing to test options for adjustment of the IVR tree
- Reposition the gender question after message listening, and parameter IVR so that it is asked only once, possibly take the opportunity to ask further questions then
- Try ordering menu options differently to assess potential of content since traffic so far exactly matches order of appearance
- New and useful advice section to be revamped because of poor quality engagement

# Try different approaches to get multi-dimensional understanding of issue

Suggestions on two different approaches for investigating the gender question outlined



Investigate and improve the service Experience across gender categories

Continue investigation of methods to best disaggregate gender



- Design mock-up solutions of the IVR menu (or USSD/SMS) that can either be paper prototyped, or mocked up on phone
- They will subtly differ from the existing 3-2-1 service, only insofar as they insert 'the gender question' at differing points, and with differing content/ design
- Bring in users for testing, and carefully record their experience with the service (ensure best practice, i.e., no leading actions that would lead them to the 'result you want'), documenting the reasons that led them to make certain decisions at the menu\*
- Once a solution that works has been documented, with enough user testing to ensure confidence, then implement service change



- Use call center data to generate a data set of reasonable sample size that disaggregates gender of users (e.g. through voice of caller). Notwithstanding issues around device/SIM sharing (though the qualitative research we saw indicates that this phenomenon was potentially less prevalent than expected), investigate other patterns in the usage behavior of users in the two groups, with a research question: "are there any patterns in usage behavior that appear to correlate with the gender data from the call center? (assuming this as a more reliable source)"
- The issue may well be that there aren't any behaviors that differentiate users successfully here, but insights from this work may prove useful to develop new solutions

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