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

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?

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

- How can HNI tackle the bottleneck in the user journey?
- What is user willingness to pay, is there a good B2C model?
- How can HNI better use their data to support their cost structure?
- How can HNI strengthen ties will all key partners who are critical for business model?

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**

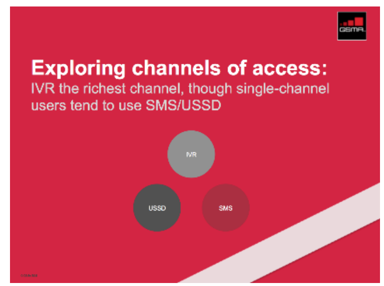
6 How do marketing/promotional activities impact 3-2-1?

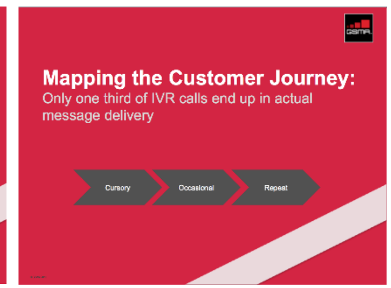
- **Batch SMS have impacted IVR and USSD traffic**, more than radio and TV

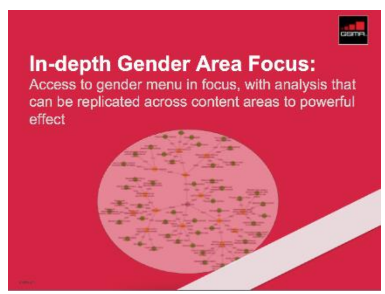
Our approach

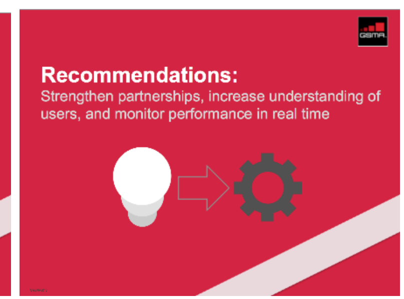
The following presentation details relevant insights and recommendations to tackle the aforementioned questions, using analytical techniques applied to mobile usage data sets, aggregating findings from millions of data points generated by the base of HNI’s +3million users of the 3-2-1 service

We divide the presentation of findings into the following sections:









Project & Organisation Overview:

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

HNI engages content providers + MNOs, reaching a mass audience

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

Organization Overview	Product Overview	Performance Overview	Key Problem Overview

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:

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

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

Deployment in new country (operator)

2014	2015
Malawi 3m users	Ghana Zambia Nigeria Mozambique Tanzania
Madagascar (Airtel) 3m+ users	Madagascar (Airtel) Malawi (Airtel)

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

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

3 Channels		With different features
IVR	IVR access by simply dialing 3-2-1	▪ Access to all 8 topics : Gender (launched in Oct. 2014), health, family planning, microfinance, agriculture, water & sanitation & land tenure ▪ First 4 calls are free of charge (8 in 2015) then 200 Ar (100 Ar starting 2015)
USSD	USSD access by dialing *3-2-1#	▪ Menus: gender (Oct. 2014), health, agriculture, water & sanitation ▪ Unlimited access, free of charge
SMS	SMS access by keywords SIM (STK) application	▪ Menus (keyword access) : gender, health, agriculture, water & sanitation ▪ Menus (STK access) : health, agriculture(1) ▪ Unlimited access, free of charge

Across 7 topic areas[2]

- Health
- Gender
- Micro Finance
- Family Planning
- Water & Sanitation
- Land Tenure
- Agriculture

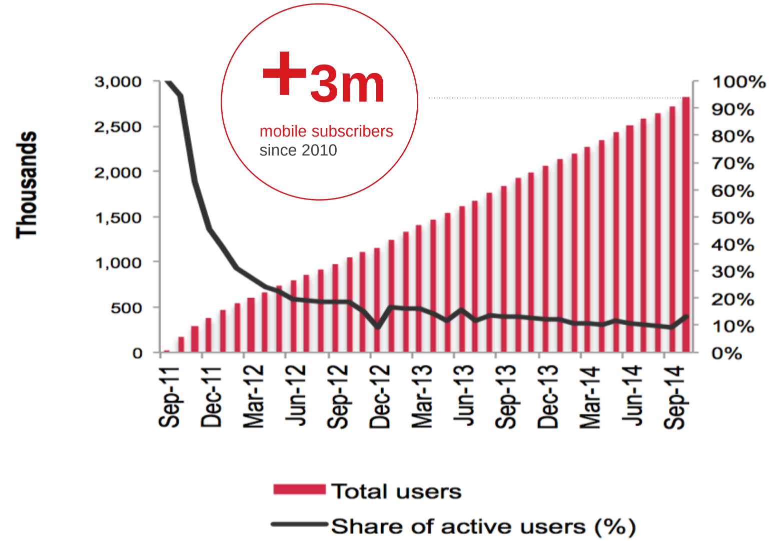
(1) Access to agriculture topic depends on the version of the SIM, Airtel having changed the STK application over time for size constraint
(2) Emergency (launched in Dec. 2014), but has been excluded from analysis in this report which covers a period of data pre Dec 2014

User acquisition is dynamic though users lifetime remains limited

Users active over the last ~6 months are relatively new to the service

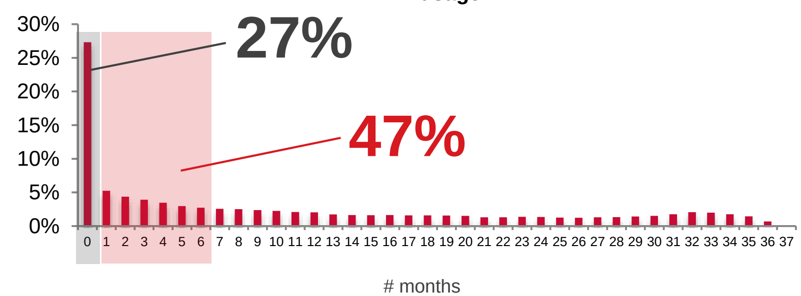
While the user base has steadily grown, active rates (i.e., proportion of monthly active users) have been slowly declining over the last 2 years. There are concerns around recurring usage of the service, as approximately half of users who have actively used the service in the last 6 months are very recent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



Looking at users active from the 1st 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

Distribution of recent users(1) by number of months since first usage



(1) Users being active after 1st 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?

Commercial

Higher quality MNO subs

Increased ARPU for 3-2-1 subs

Social

Well Informed Citizens

Relevant behavior change with stated dependence on access to 3-2-1 information

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.

What are the most effective content areas?

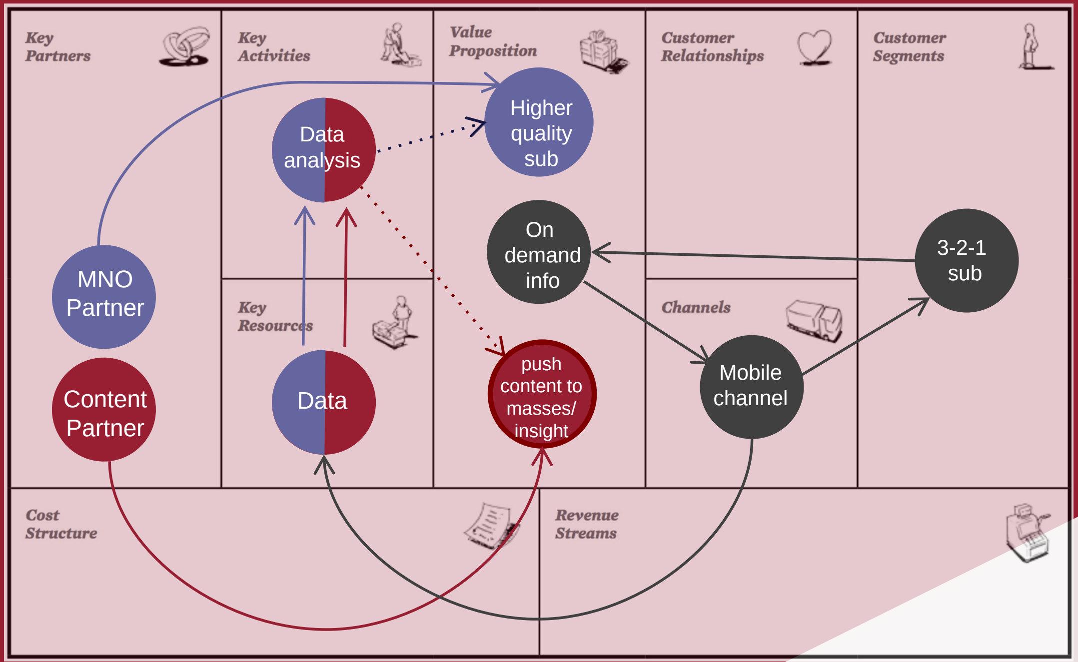
Who might be willing to pay for the service?

Who is most likely to exhibit positive behavior for he MNO?

Answers: to be data driven…

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

Key Partners

MNOs
(Airtel)

Grant providers / funders

(USAID; Better U Foundation, World Bank, GSMA, etc.)

IVR platform provider (Yo!)

SMS platform provider

Key Activities

Disseminating public service information

Making content mobile ready

Registering users

Key Resources

Historical data

Content

Technical development (IP)

Staff (<100)

Value Proposition

Users: get on demand access to information on selected topics

Grant providers/funders: provides efficient dissemination of messages

MNO: improve stickiness of users, increase indirect ARPU and VAS usage
(note: direct revenue generation marginal)

Customer Relationships

Direct/indirect relationship with customers

Allows branding by partners

Channels

SMS and USSD most popular

IVR probably most efficient to convey messaging

Customer Segments

B2C (possible to generate direct revenue from mobile subscribers)

B2B (e.g. seeing content providers as customers / aligning with business objectives of MNO)

Cost Structure

Staff

Marketing

Technical platform

Call center

Revenue Streams

Grants from providers/funders

MNO contribution (in kind)

Paid messaging (marginal)

Partners	Cost/Rev structure	Key activities & resources	Marketing & channel access	Customer Value Proposition

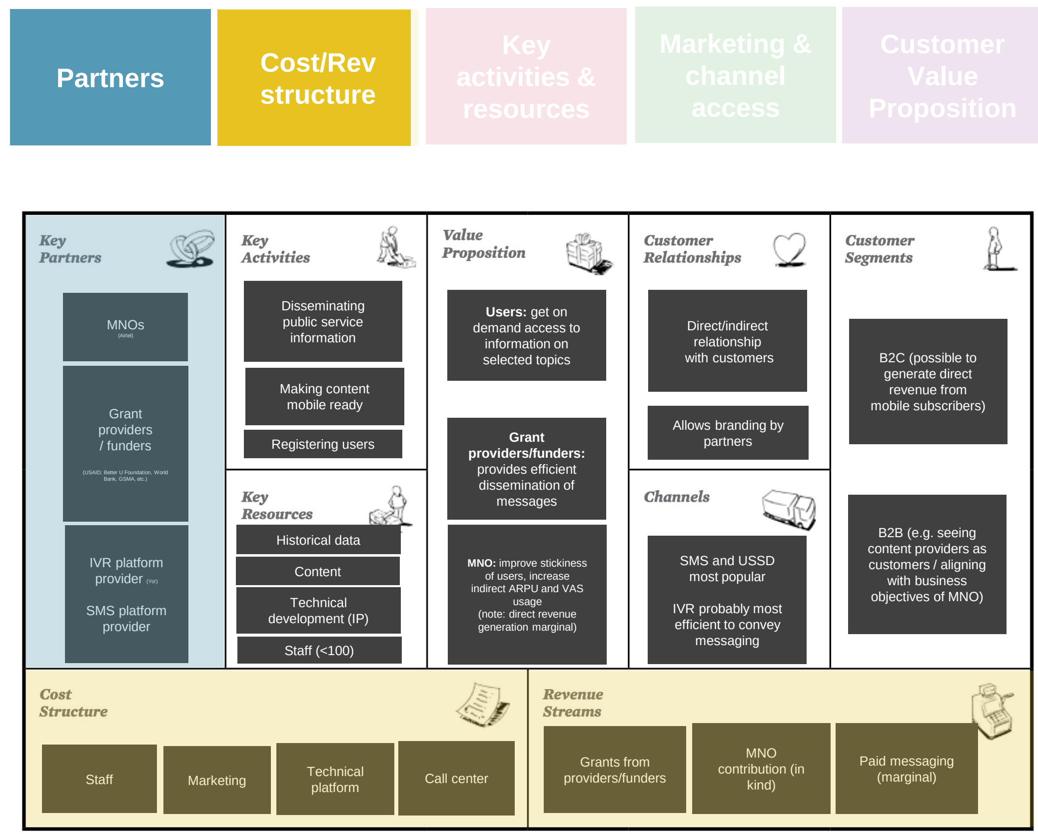
3-2-1 provides cost-efficient message generation and dissemination

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

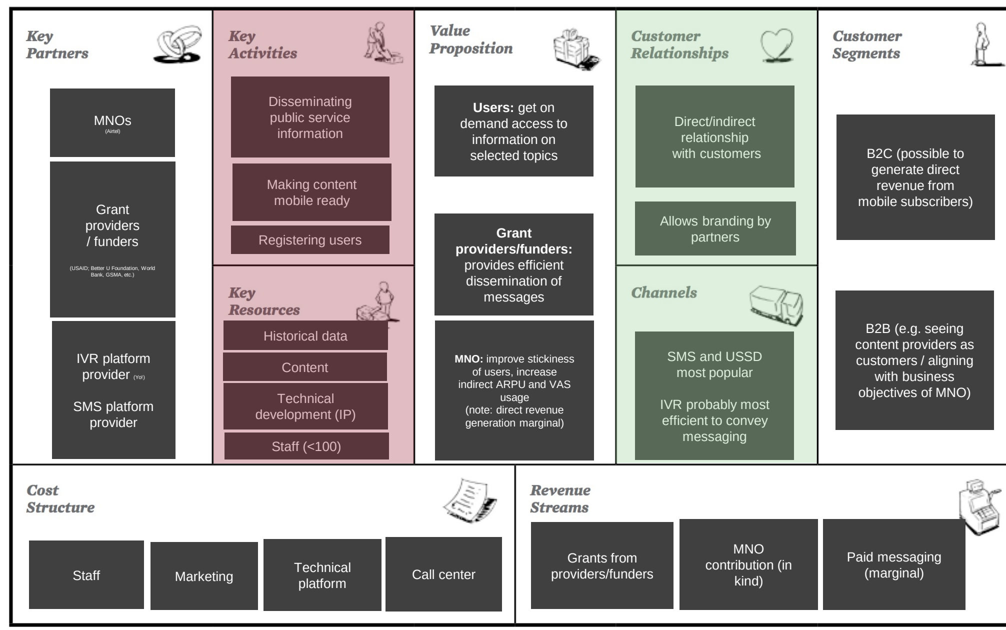
Partners | Cost/Rev structure | Key activities & resources | Marketing & channel access | Customer Value Proposition

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

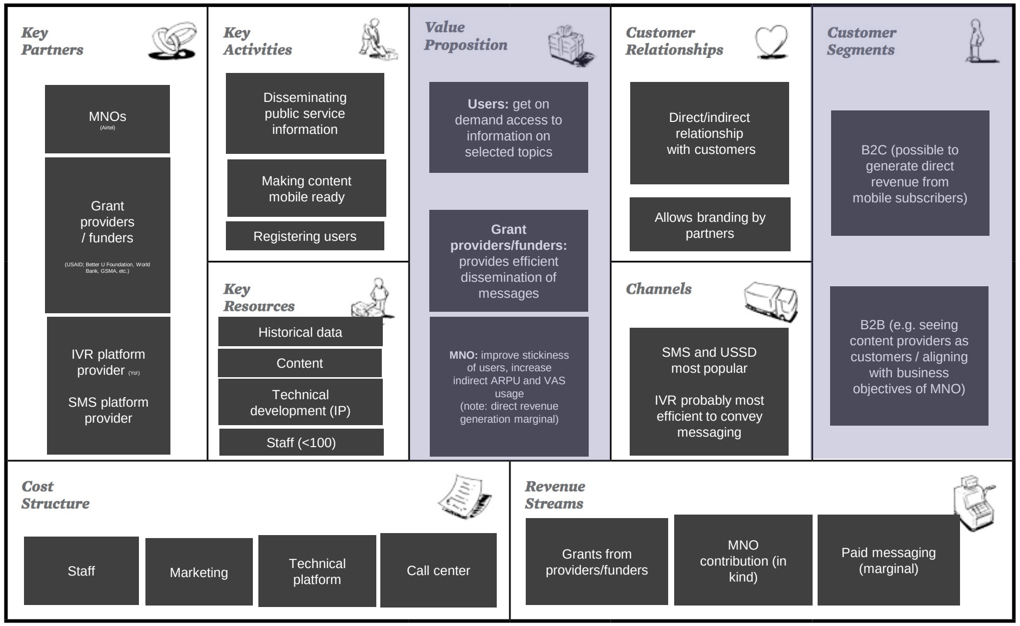
Partners | Cost/Rev structure | Key activities & resources | Marketing & channel access | **Customer Value Proposition**

5 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

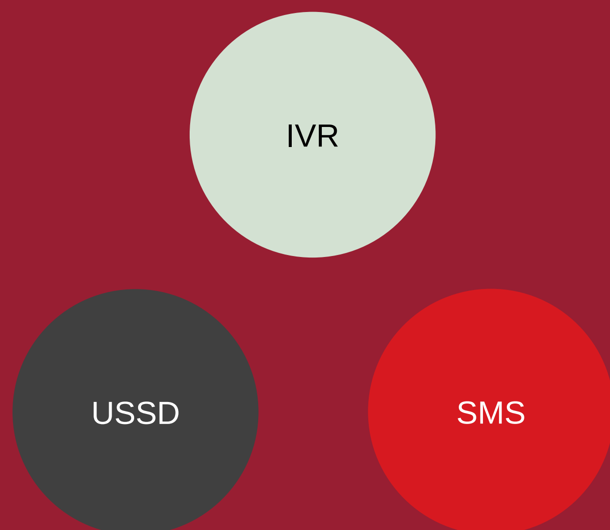
… but missing pieces are needed to make the service sustainable

- 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:

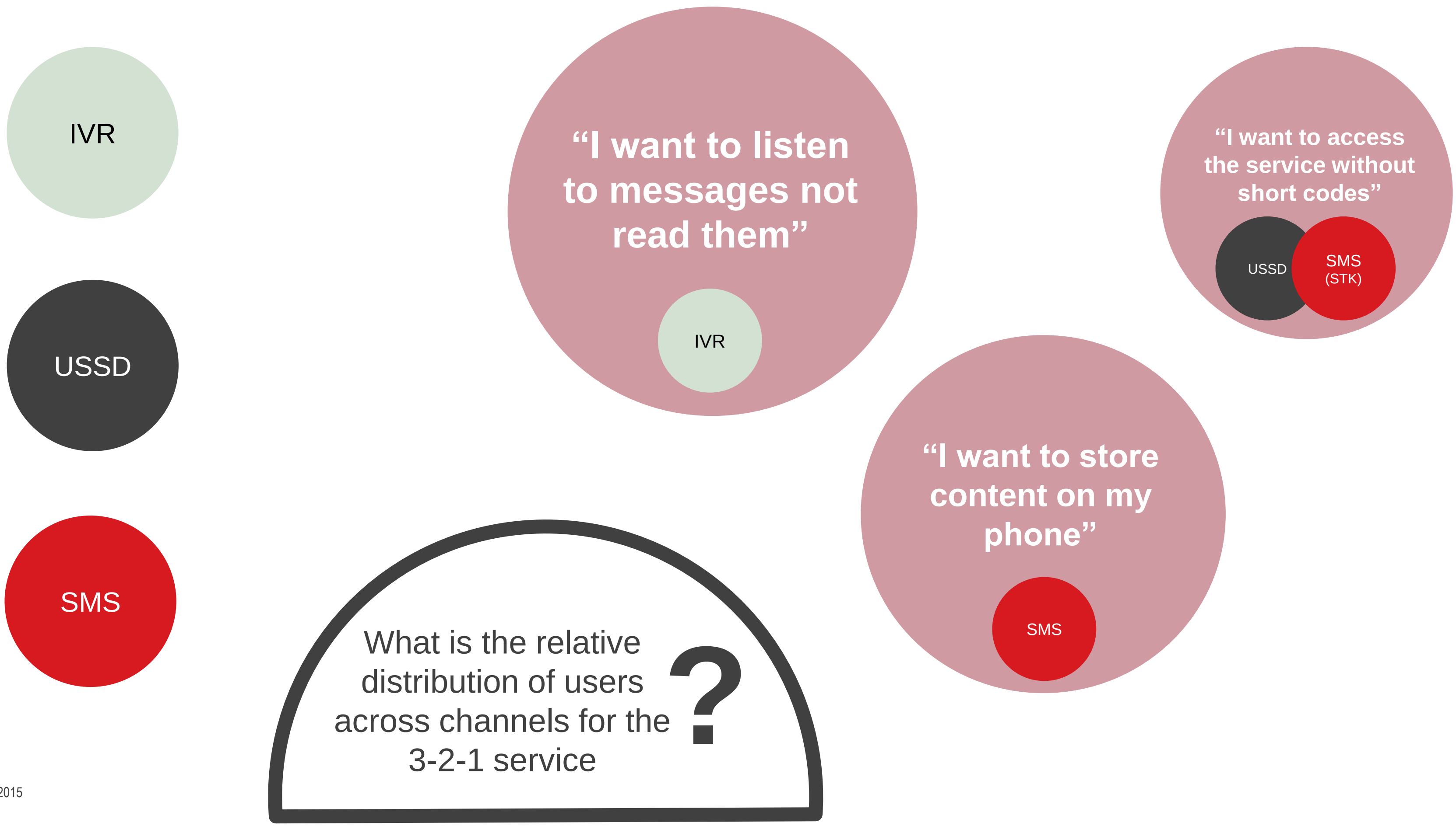
IVR is the richest channel, though single-channel users tend to use SMS/USSD



Channels have various pros and cons for users

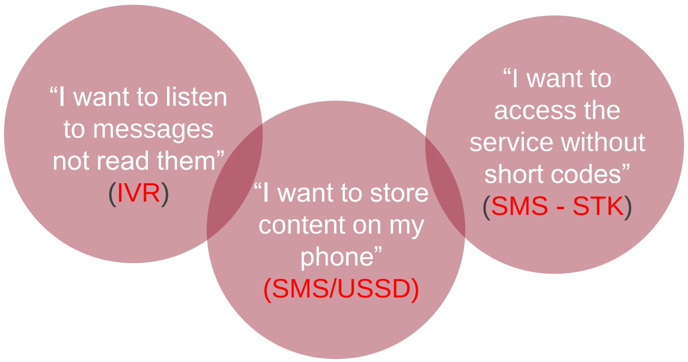
We consider why users might prefer different channels of access to the 3-2-1 service

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

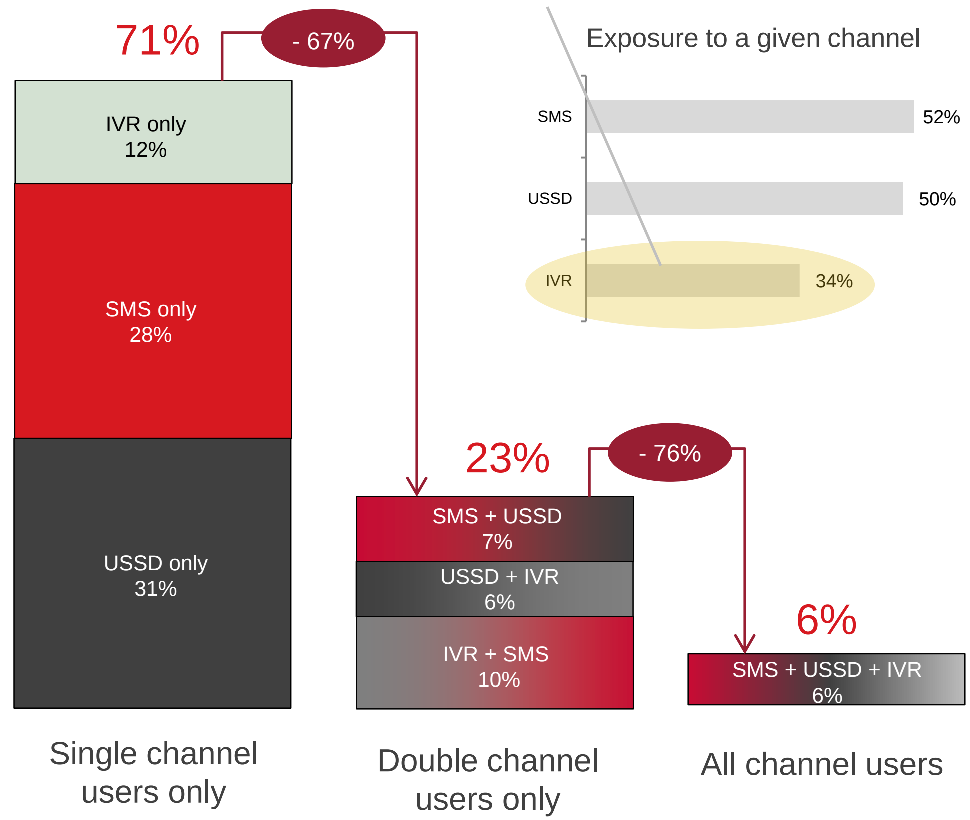
IVR is the only channel for which all content is accessible to the user and the only channel which is accessible to the illiterate user. It is therefore the channel likely to deliver the richest user experience to the widest audience. However, the fact that SMS is available on the STK may make it easier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

	✓ Pros	✗ Cons
IVR	▪ Access to all content areas ▪ Accessible to illiterate users	▪ Cannot store messages ▪ Content takes time to access ▪ Only 4 free calls per month
USSD	▪ Access to half of content areas ▪ Completely free	▪ Not suitable for illiterate users ▪ USSD interface may be less intuitive for users
SMS	▪ Easy to discover (at present) through Airtel service on SIM ▪ Completely free ▪ Can store messages	▪ STK access has least content available ▪ Not suitable for illiterate users

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

IVR has potential to increase overall for the user base



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

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

Spikes in IVR/USSD traffic mark key events and behavior

IVR

USSD

SMS

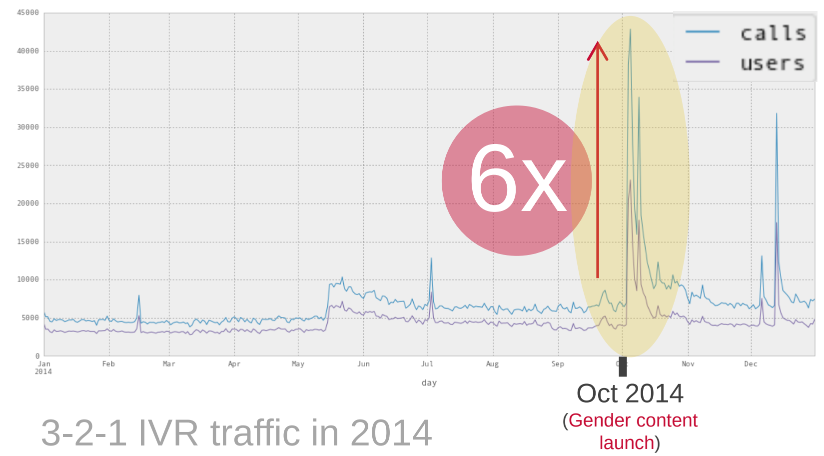
Gender launch triggered ~6x spike in IVR and USSD

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.

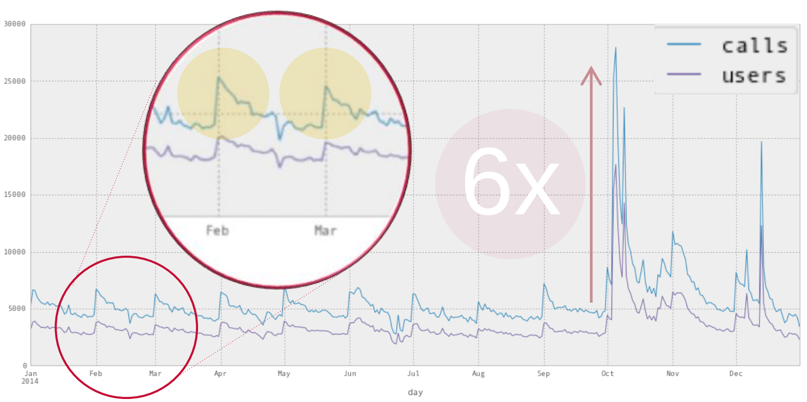
IVR data reveals the ‘free call’ effect

Spikes in IVR traffic at the beginning of each month show the users’ sensitivity to a 5th 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

- On the basis of 20 in depth user qualitative interviews, pictures not to be shared publically without express user consent

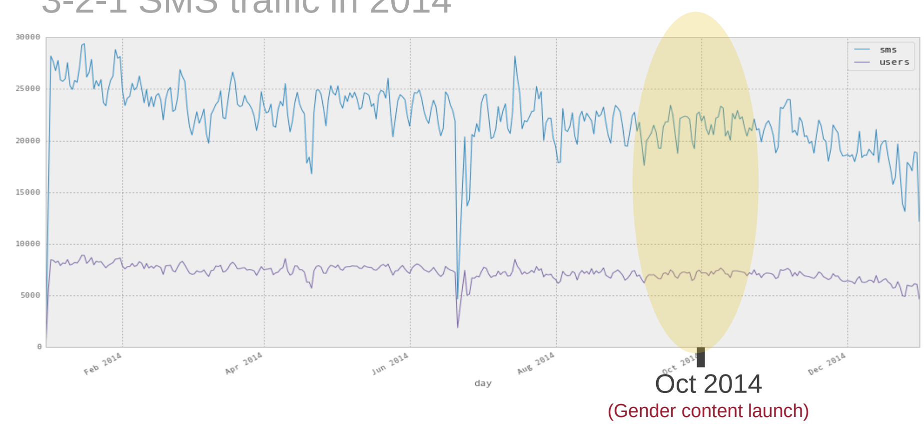
SMS usage is driven by the STK & limited to two topics

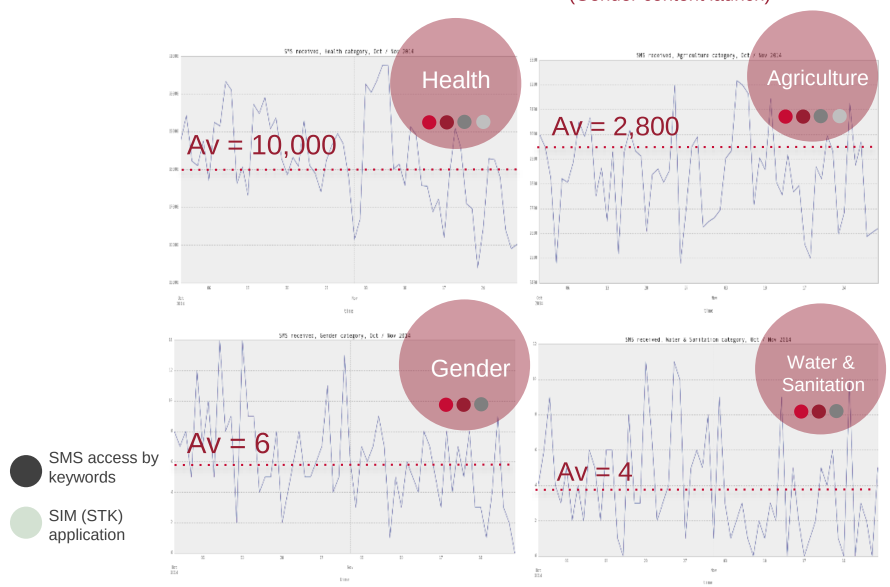
The SMS channel was not impacted by gender launch because STK application drives use

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 <u>not</u> been impacted by marketing activities (caveat: gender not included in STK menu)

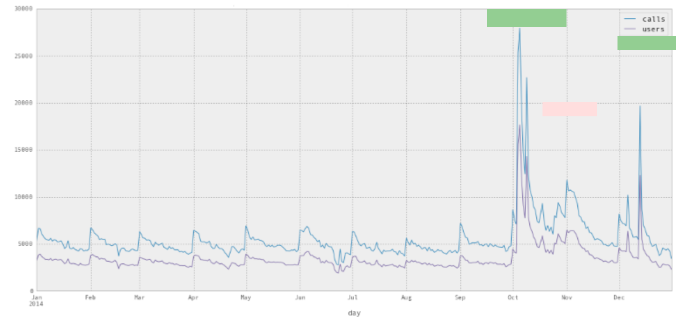
Marketing activities key:

Batch SMS

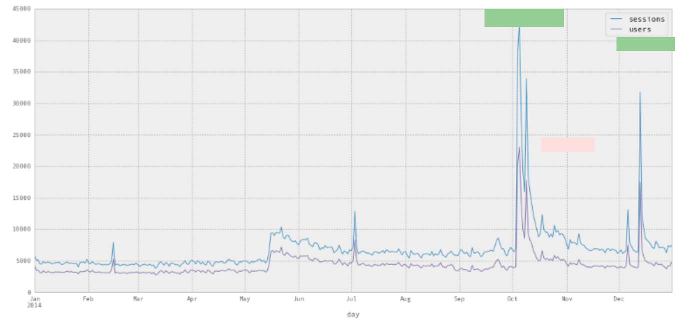
Radio + TV

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

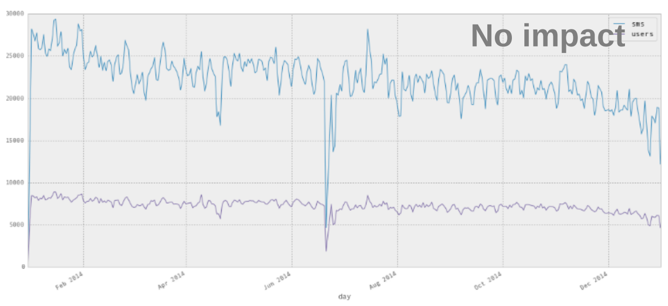
IVR Traffic (2014)



USSD Traffic (2014)



SMS Traffic (2014)



Mapping the Customer Journey:

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

Cursory → Occasional → Repeat

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

Quality Usage

Definitions of various stages are detailed below:

Non-Aware	Aware	Cursory	Occasional	Repeat
Users have potential to access the 3-2-1 service but are not aware of the service	Users have become aware of the 3-2-1 service	Users have not accessed a single message, they have only had a superficial interaction with the service	Occasional users have called less than 5 times over the period and have accessed at least one message	Repeat users have called 5 times or more over the period and have accessed at least one message

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

IVR is the best channel to analyse

IVR

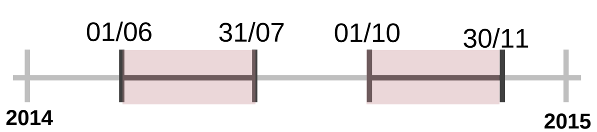
USSD

SMS

We focus on later stages of the user journey

Cursory	Occasional	Repeat
Users have not accessed a single message, they have only had a superficial interaction with the service	Occasional users have called less than 5 times over the period and have accessed to at least one message	Repeat users have called 5 times and more over the period and have accessed to at least one message

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

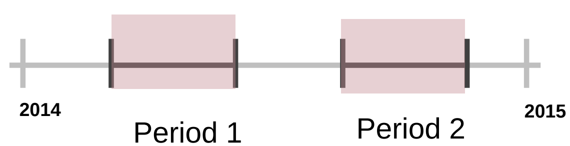
Our analysis is mainly focused on IVR usage because:

- 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.

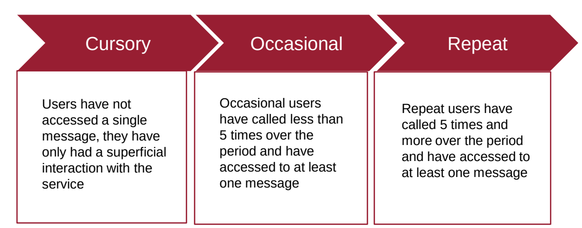
This ensured we were able to map the IVR usage data onto the right menu structure, and so calculate the listening ratio for messages accordingly, i.e. how many users have listened to 75% of a given message



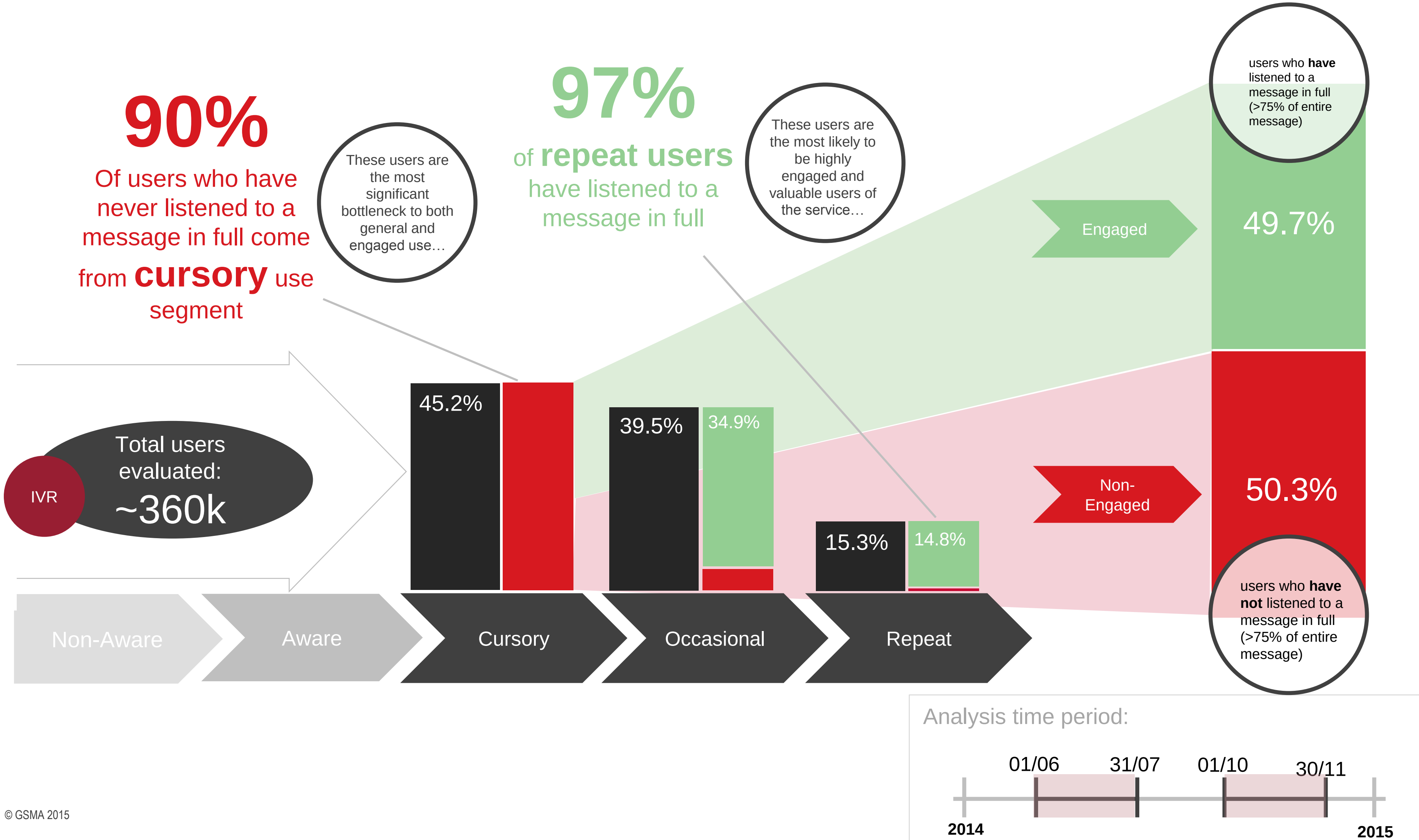
We focused on later stages of the user journey

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

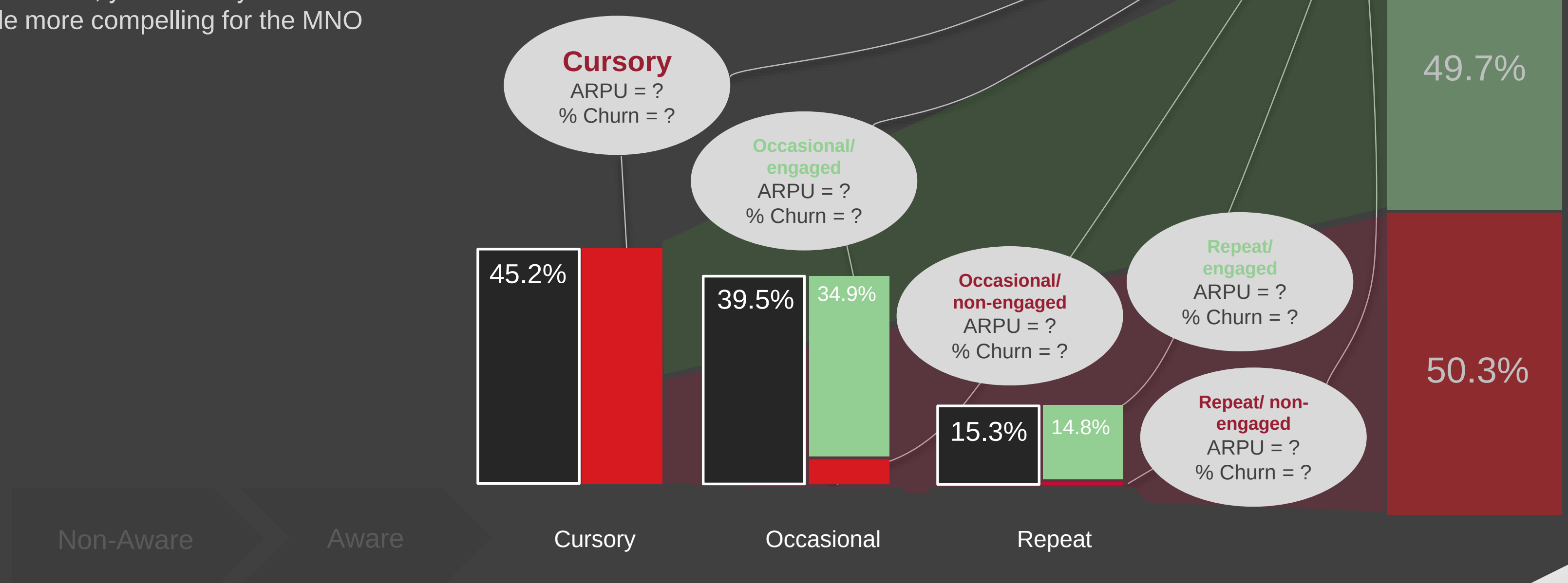
For users who have engaged fully with the service, or used the service more, are they higher value subscribers for the MNO?

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

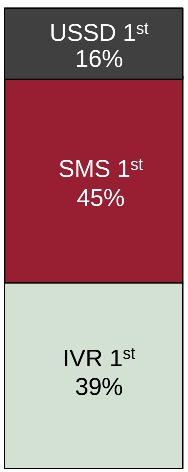
But it could be across customer segments…

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



Other channels are "awareness gateways" for most IVR users

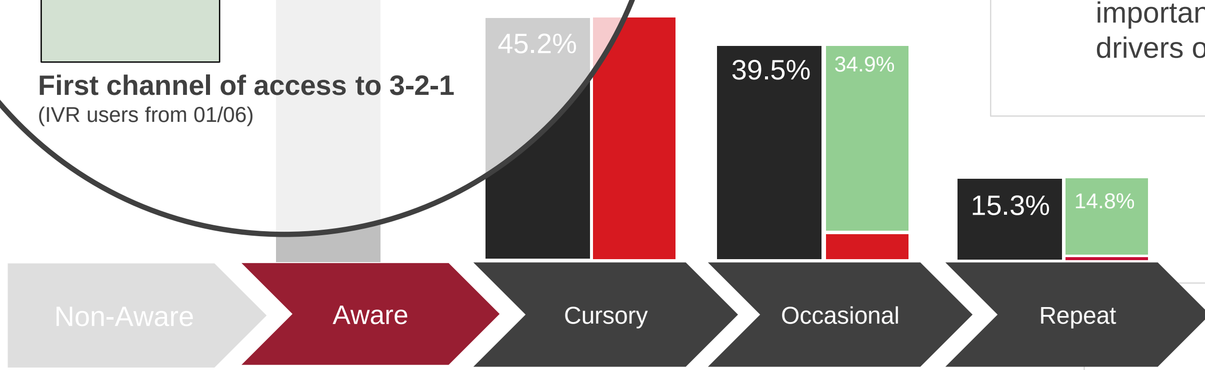
Extra data analytics around certain journey stages serves to clarify nature of usage



61%

Of IVR users
Accessed service 1st
through SMS/USSD

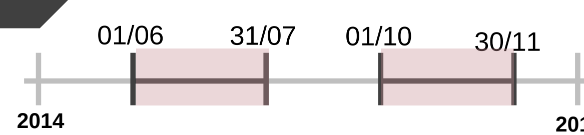
First channel of access to 3-2-1
(IVR users from 01/06)



Aware

- We cannot fully quantify the numbers of aware individuals, as not all will be existing users of the 3-2-1 service
- However, 61% of the users using IVR have used other channels first
- This implies that other channels, particularly SMS (45%), are important gateways and likely drivers of IVR usage

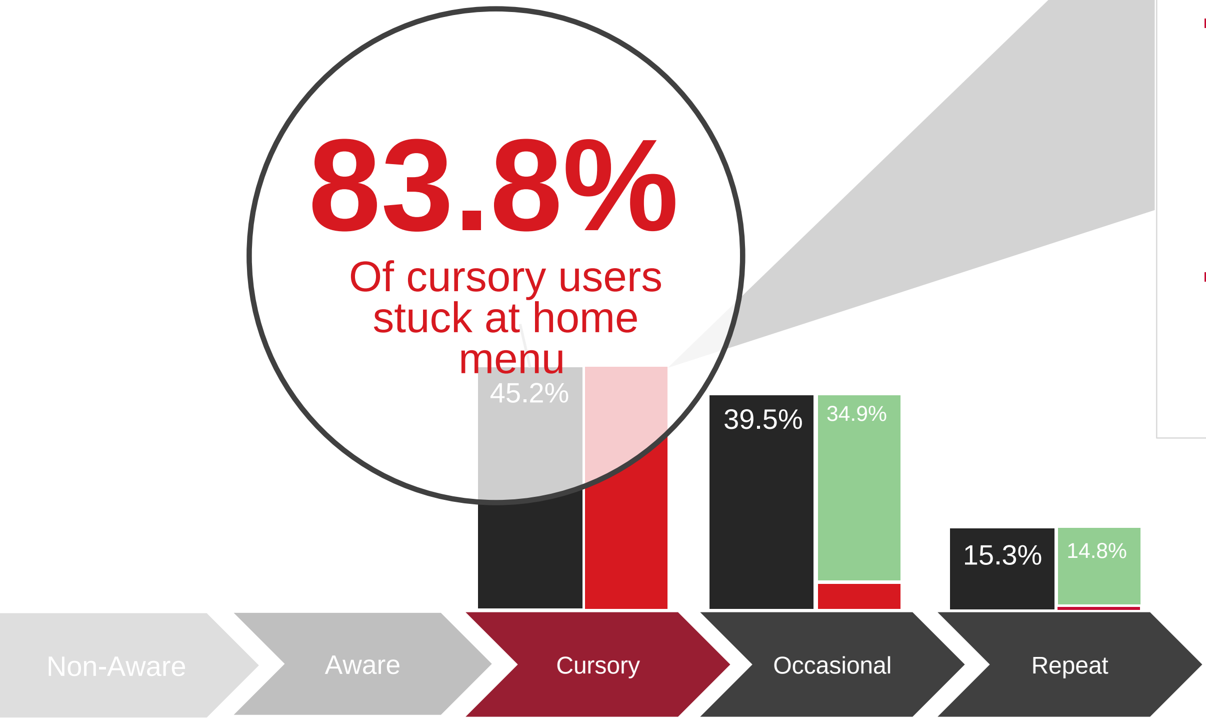
Highlights need to carefully consider impact of SMS STK component



Cursory use clearly the primary barrier in the journey

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

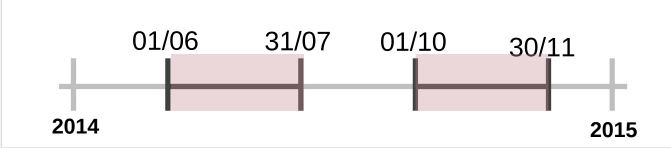
- Most of the users are at the cursory stage, 83.8% are exiting at the home menu, showing that this is the likely driver for this bottleneck



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



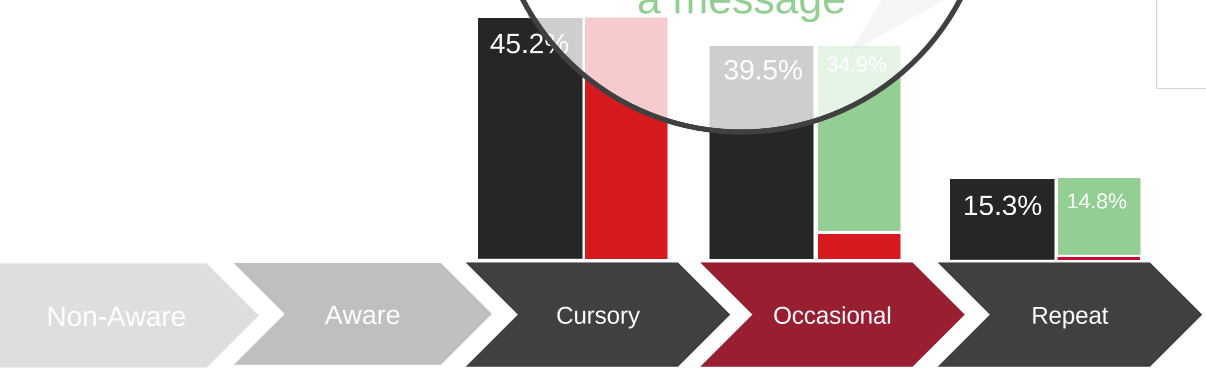
Users quickly become engaged, and listen to full messages

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)

65.5%

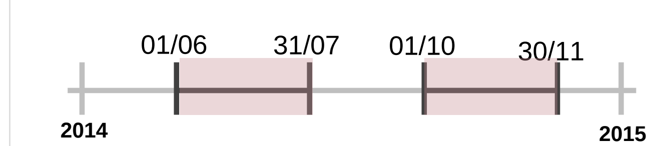
Of occasional user calls end in a message



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



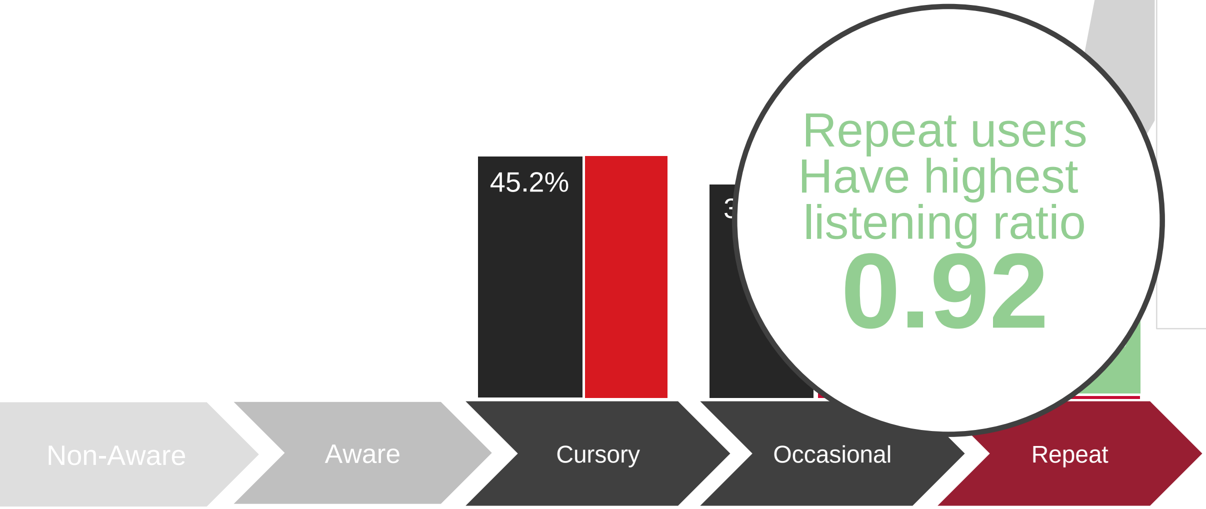
Repeat users have the highest listening ratio

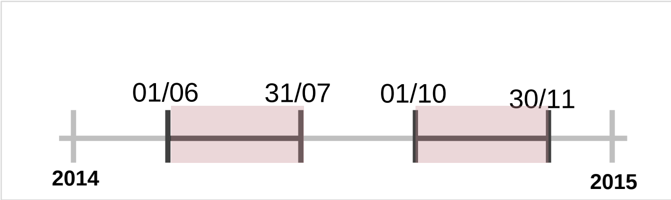
Extra data analytics around certain journey stages serves to clarify nature of usage

- 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)

Repeat

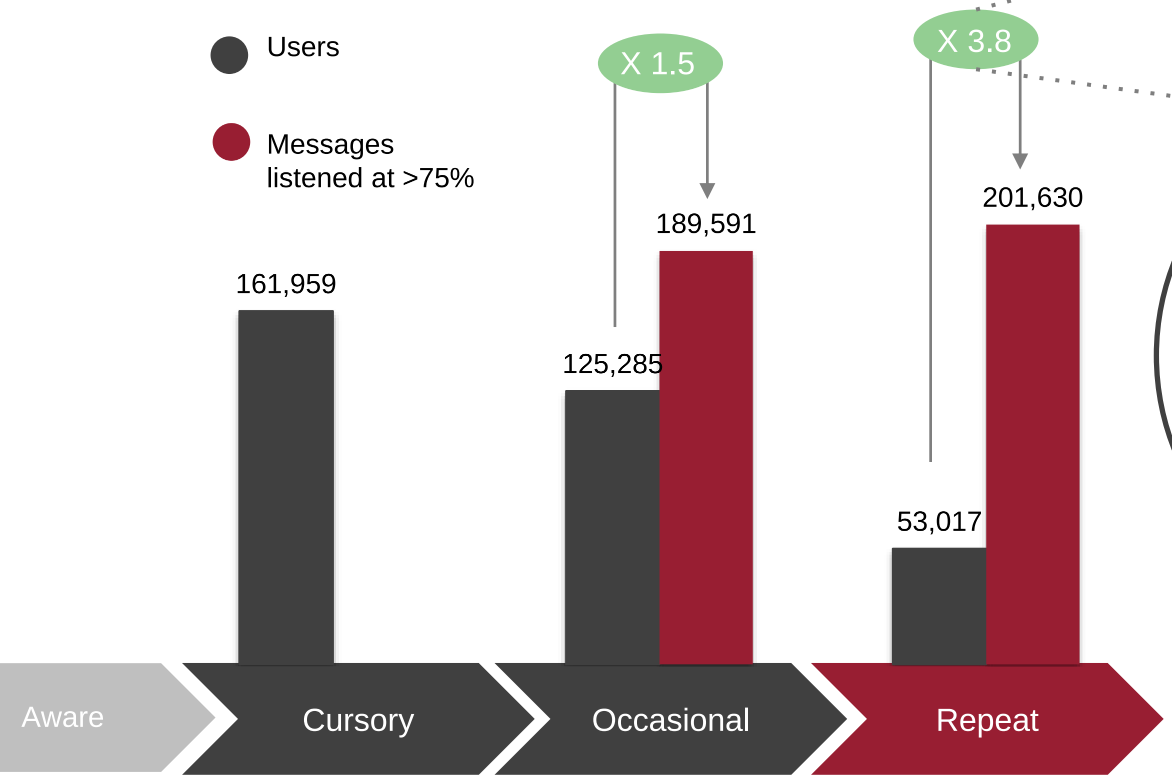
- 51.4% of the calls by repeat users end up in a message
- Message listening ratio average is 0.92
- Main exit topics : (32.9% home), 18.8% gender, 16.9% health, 11.3% family planning
- 16.7% have paid for usage
- 58.9% also use SMS channel
- 46.4% also use USSD channel





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

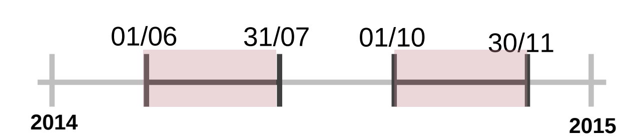


Repeat

X 3.8

For every repeat user **3.8** messages are **listened to in full** versus **1.5** for occasional use

Demonstrates that repeat users are not only more frequent, but also more valuable users



Customer journey summary

Segment / Stage	% base	Key issues		Priorities
Repeat – Engaged	14.8%	▪ Close to one third of calls made by repeat users do not pass the home menu ▪ 51.4% of calls made by repeat users end up in a message (a figure close to occasional users) ▪ Only 46.4% of calls made by repeat users end up in a message listened to at over 75%	Medium / Low	✓ Improve IVR tree design and content
Repeat – Non-Engaged	0.5%			
Occasional – Engaged	34.9%	▪ 65.5% of calls made by occasional users end up in a message ▪ Chances to listen to a message in full is less than half of repeat users	Medium	✓ Boost repeat behavior ✓ Improve IVR tree design and content
Occasional – Non-Engaged	4.6%			
Cursory – Non-Engaged	45.2%	▪ 83.8% of the calls exit at home ▪ 19.5% of paying users are in this segment (probably by mistake)	High	✓ Educate about the service ✓ Improve IVR home menu

Guard against vanity metrics and measure what matters

A warning against vanity metrics

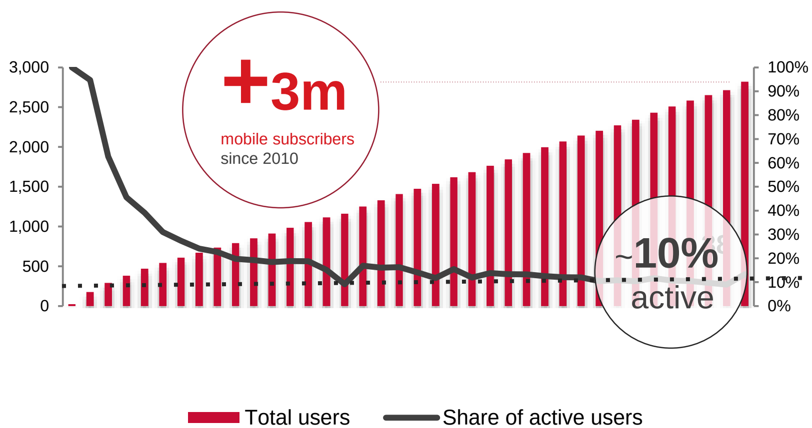
This picture of the data also clearly shows how looking at user numbers, or even active rates (which are far better), is not always sufficient to understand quality engagement. Consider that:

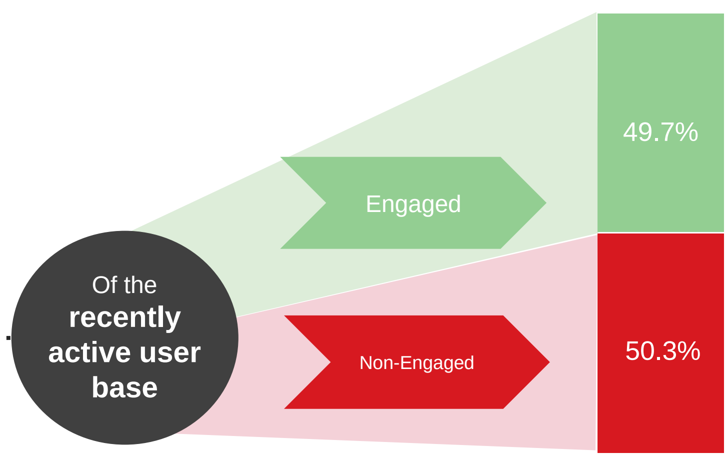
- All users across cursory, occasional and repeat categories will be registered (in the given period) as active customers
- Yet of these active customers, 15% (repeat) drive most of the valuable usage
- So “share of engaged users” (i.e. >75% listening) make up an even smaller proportion of the overall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

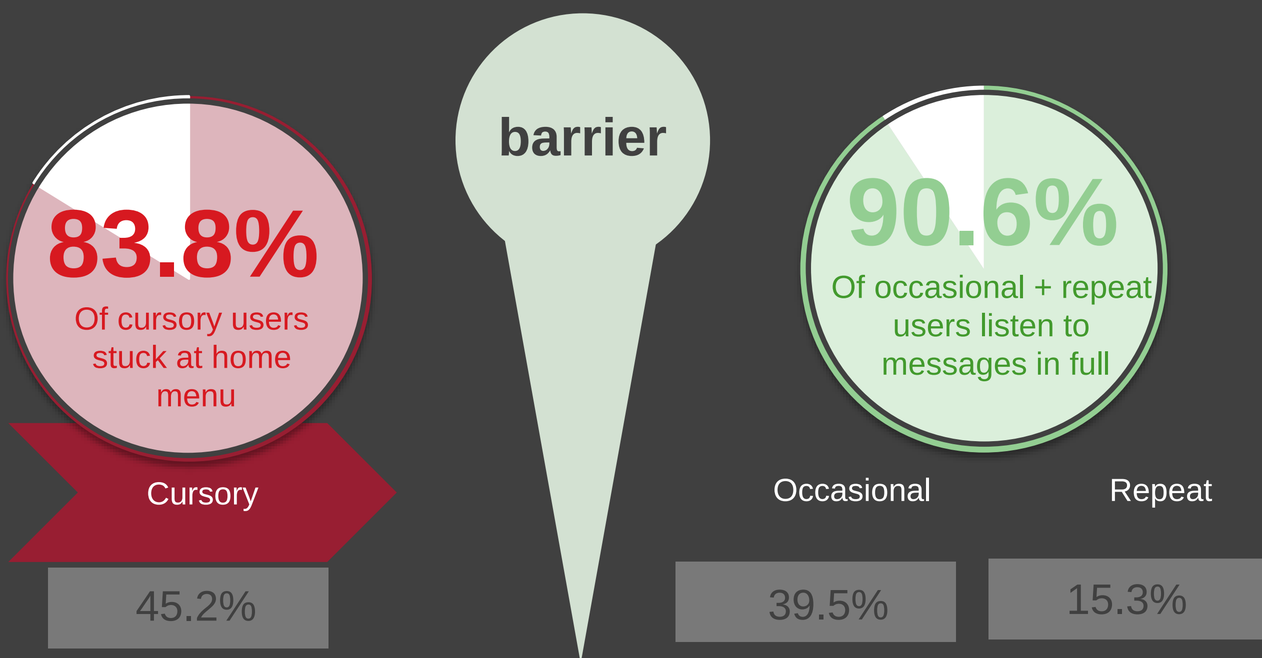




Key Takeaway

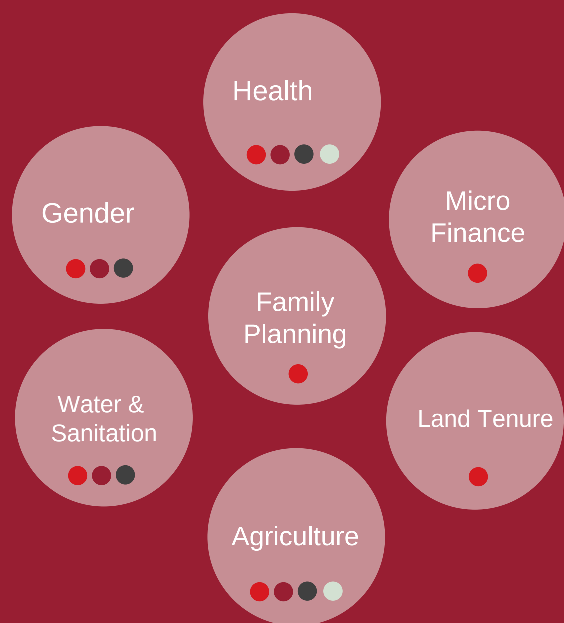
Cursory stage is the main barrier

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

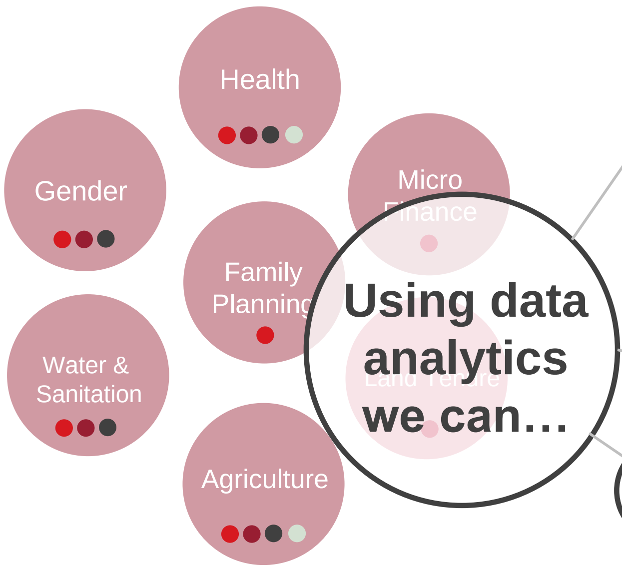


Mapping content access trends:

Creating data driven evidence around the engagement with content from users

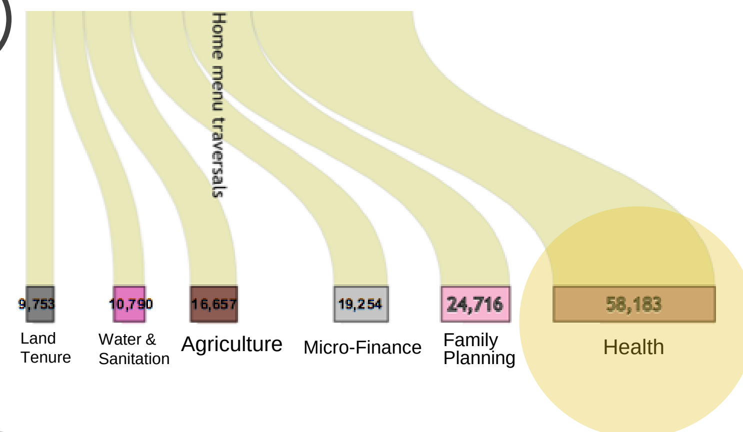


We investigate access trends and engagement across content areas

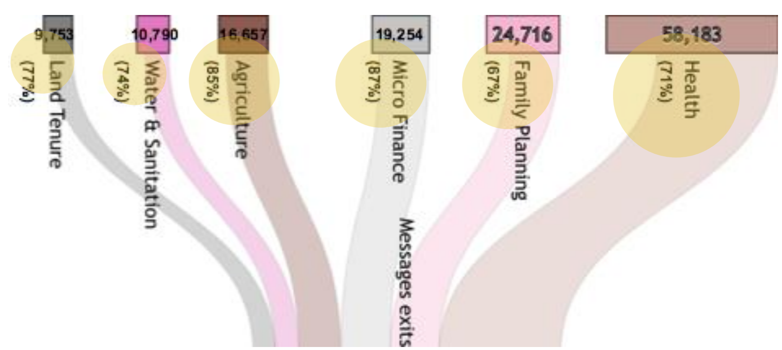


Using data analytics we can…

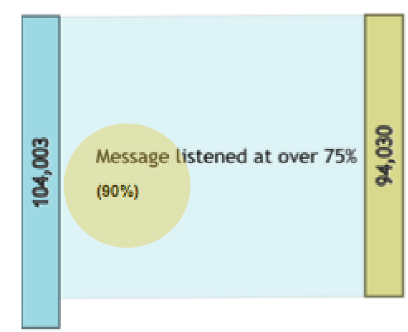
1 assess which areas gain the most hits – **initial demand**



2 assess the 'pass through' rates - **attrition**

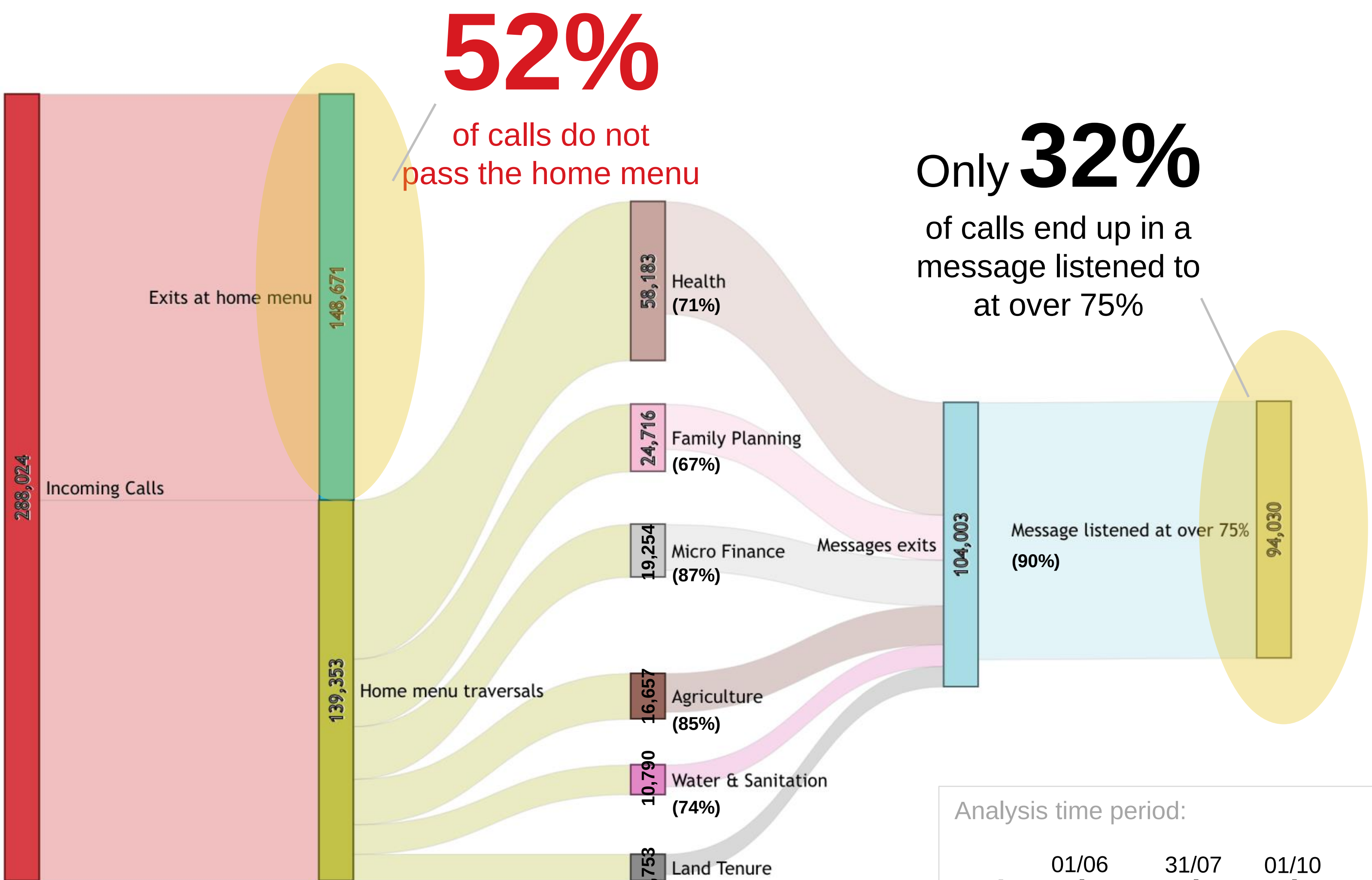


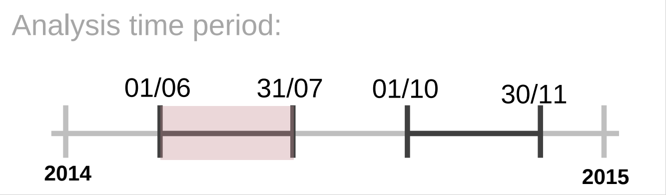
3 assess the overall level of engagement[1] – **'real access' to information**



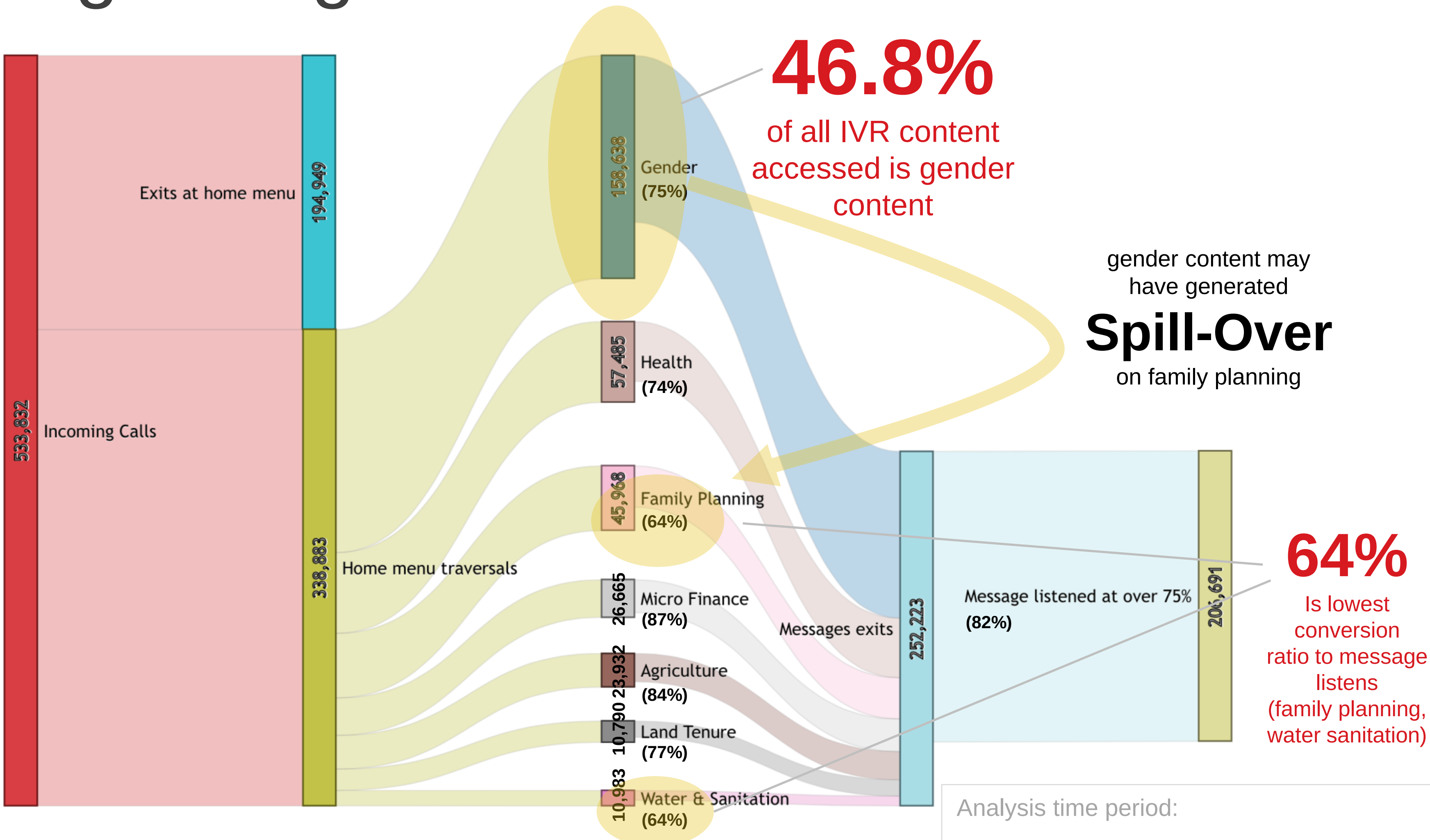
[1] i.e. >75% listening ratio

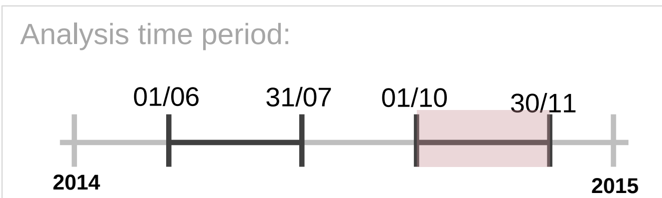
Home menu is the main roadblock on the customer journey



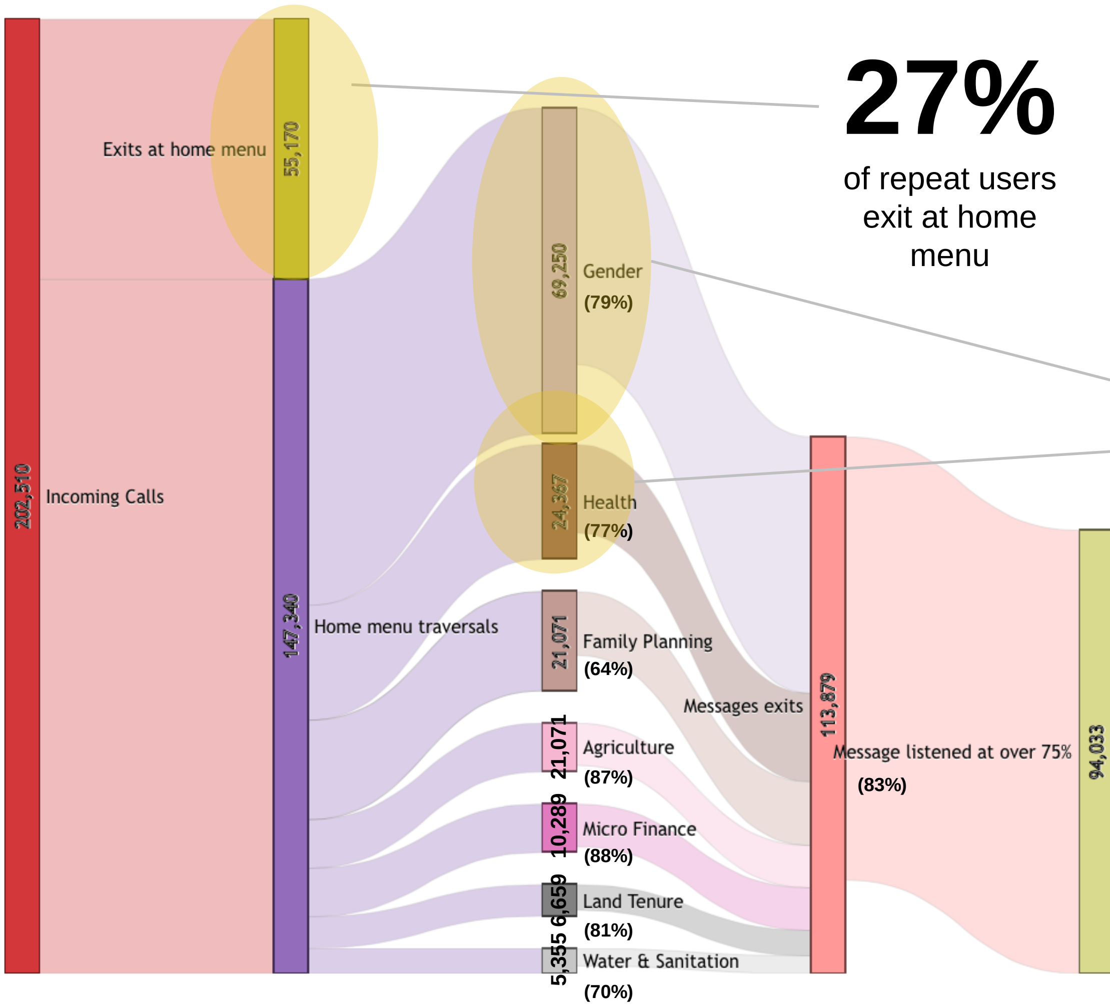


The gender content has generated high usage





Repeat users better at reaching menus and messages



27%

of repeat users exit at home menu

Most popular content remains

Gender

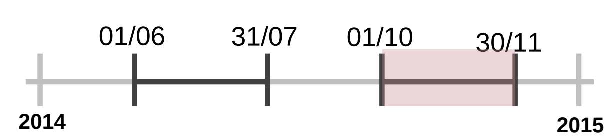
&

Health

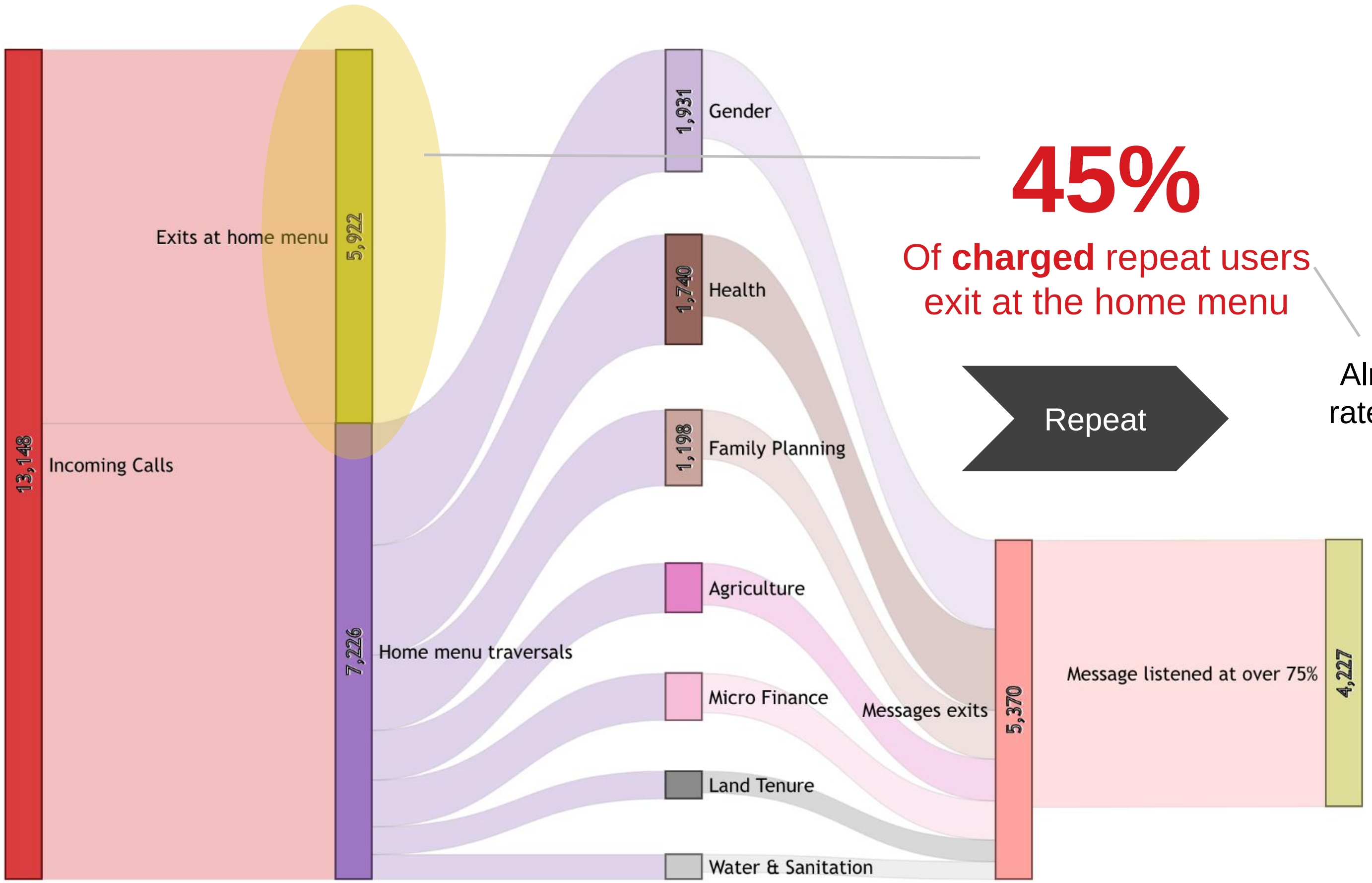
among repeat users

Repeat

Analysis time period:



Charged calls show a high percentage of exit at home

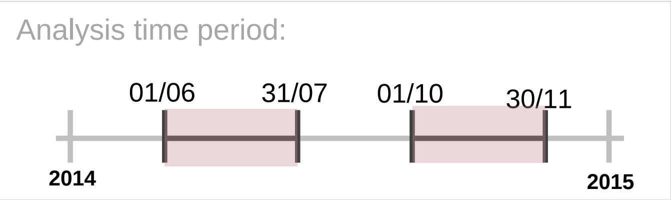


45%

Of **charged** repeat users exit at the home menu

Repeat

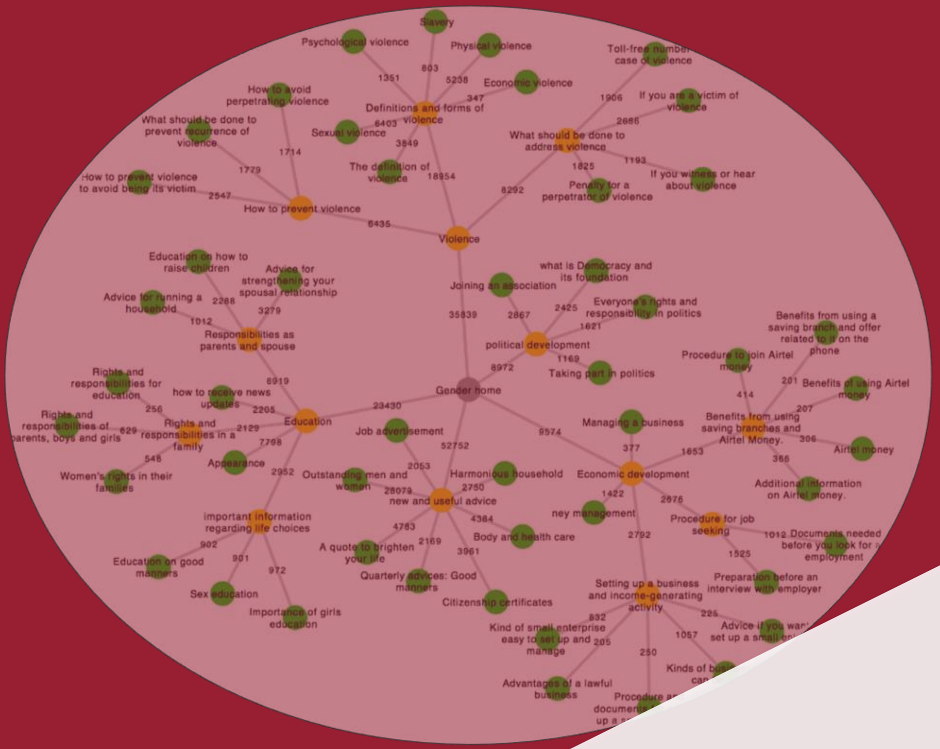
Almost **double** the rate for repeat users generally



- June to Nov. 2014 calls charged to repeat users

In-depth Gender Area Focus:

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

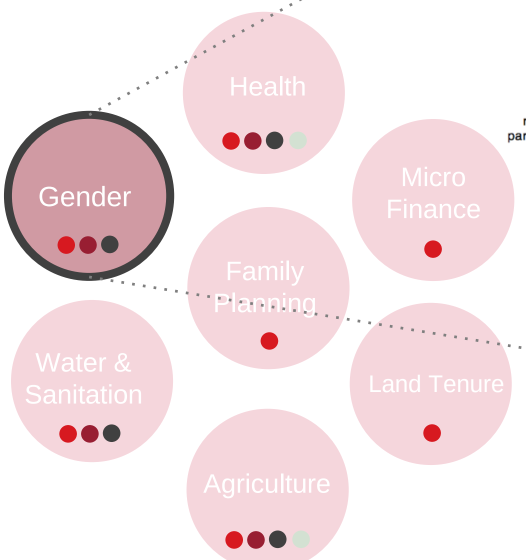


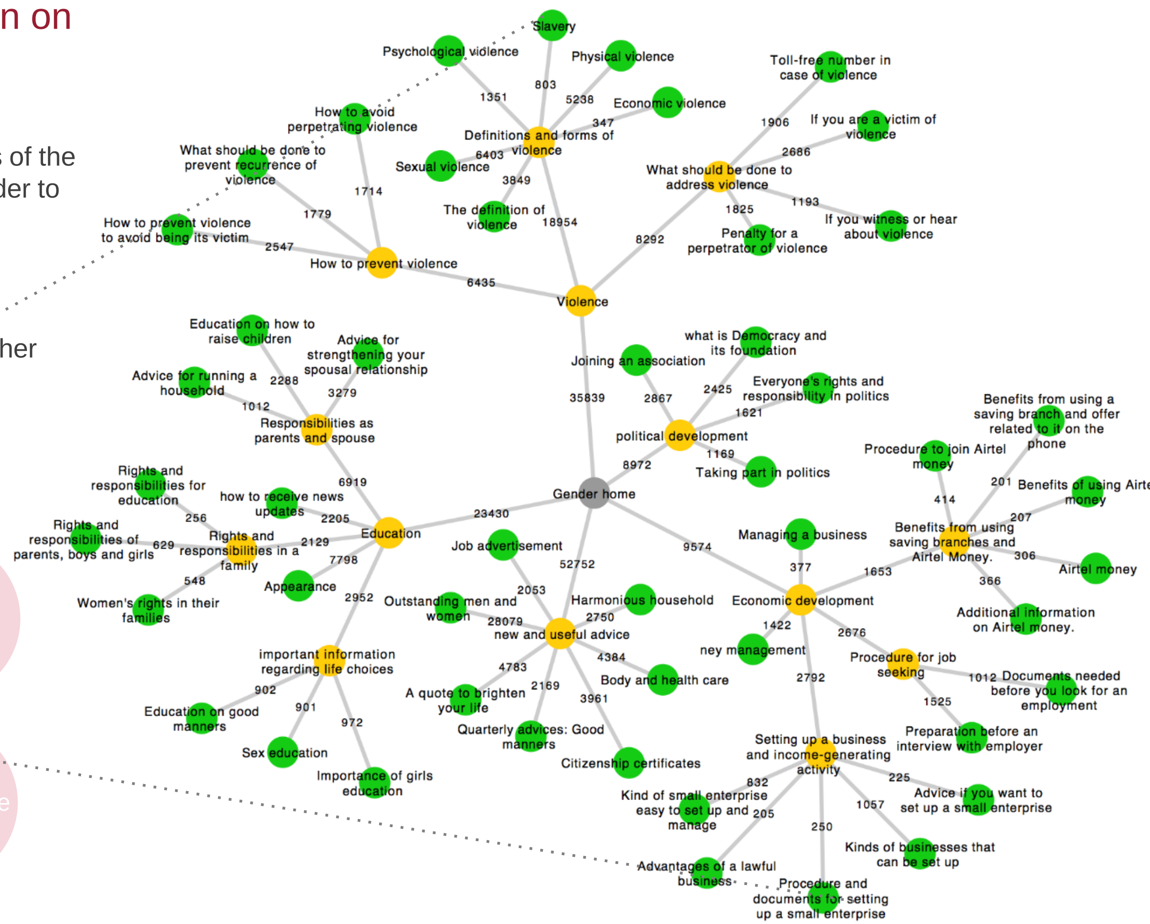
We further focus on data from the gender content area

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

This tree is broken into two key components:

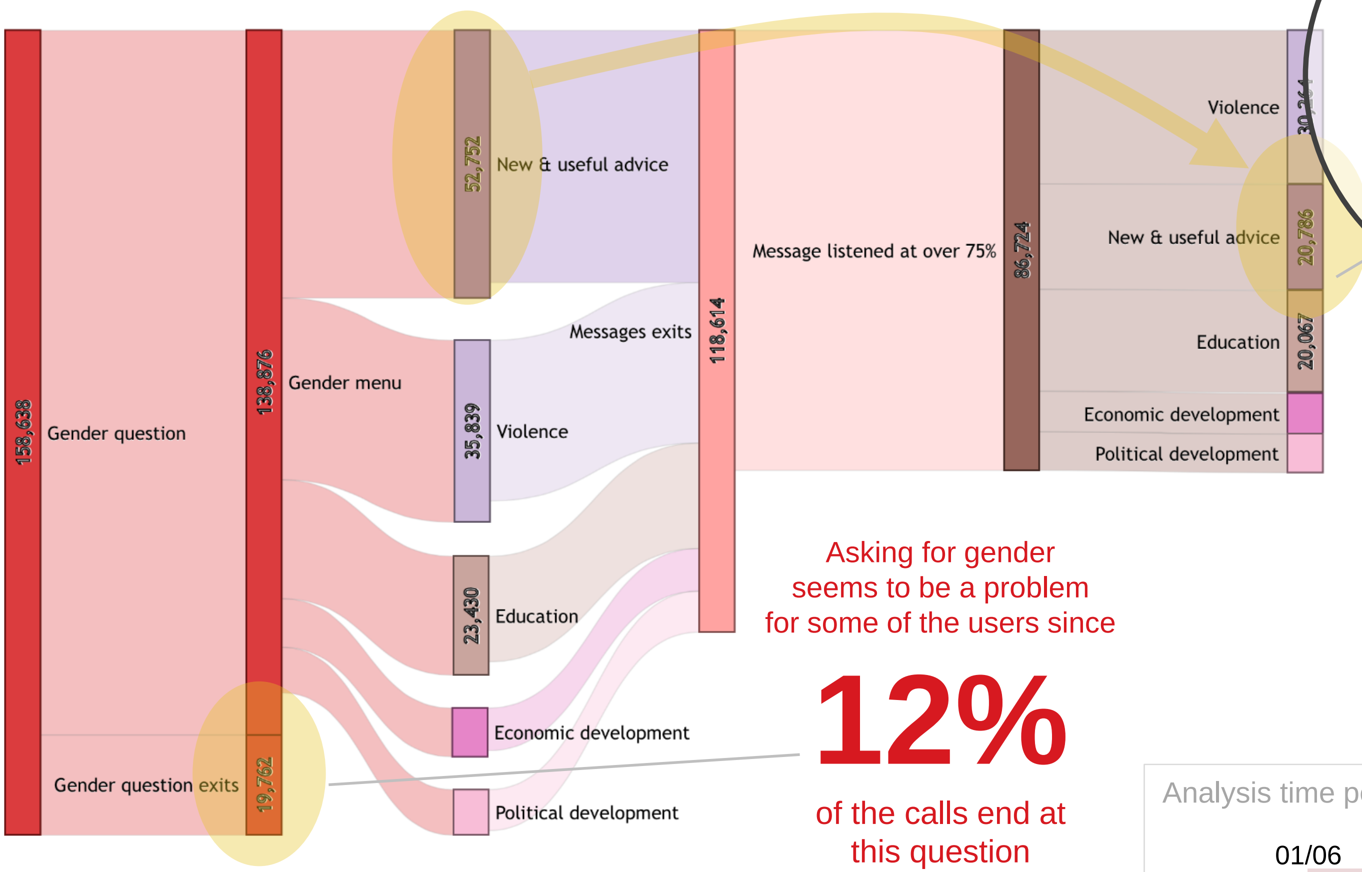
- **Sub-menus** – which are further areas of the content area the user can select in order to access content
- **Final messages** –are the pieces of information that we want to determine whether users access, and if so, whether they listen to the content in full





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"

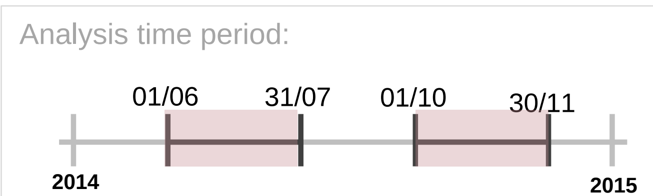
39%

engagement only

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

12%

of the calls end at this question



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%

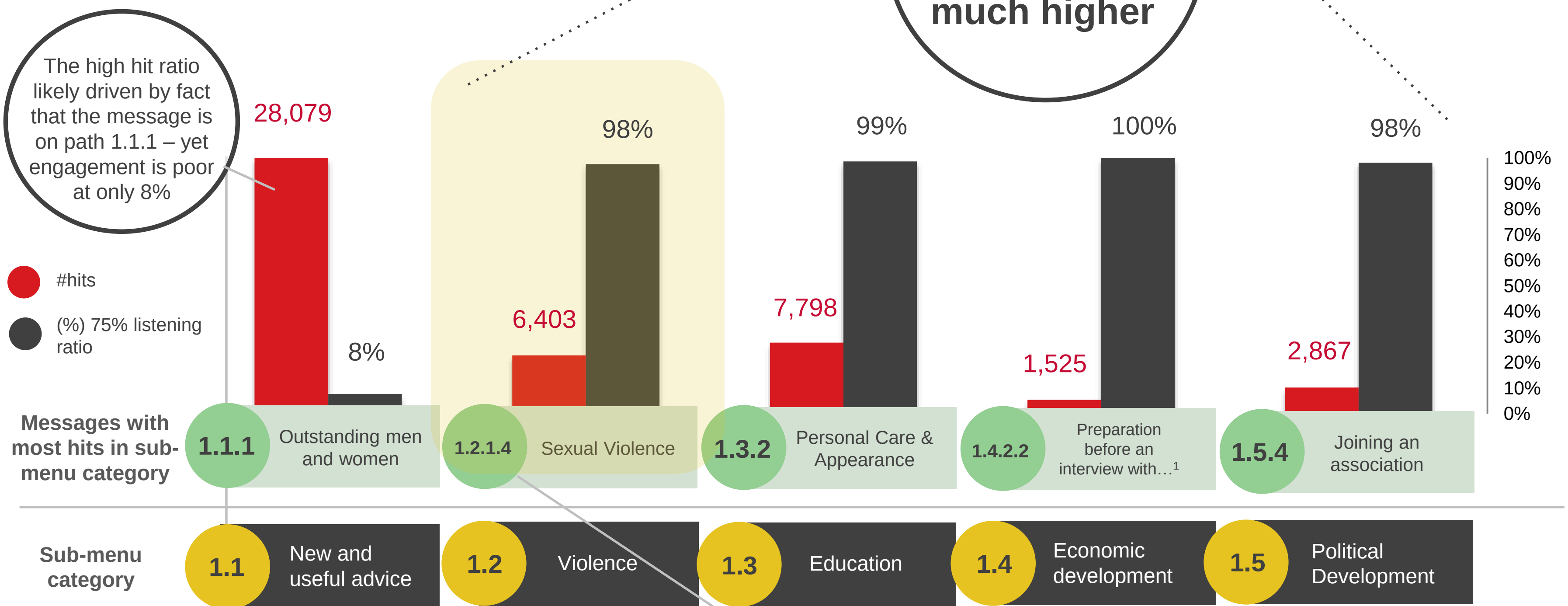
Sub-menu category	1.1 New and useful advice		1.2 Violence		1.3 Education		1.4 Economic development		1.5 Political Development	
	% calls	% 75% listens	% calls	% 75% listens	% calls	% 75% listens	% calls	% 75% listens	% calls	% 75% listens
hit ratio/ 75% listening ratio			23%	84%	15%	85%	6%	83%	6%	84%

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**



"Sexual violence is unwanted sexual touching or taking advantage (…) Even within the conjugal relationship, sexual violence is wrong (…)"

Snapshot of message content

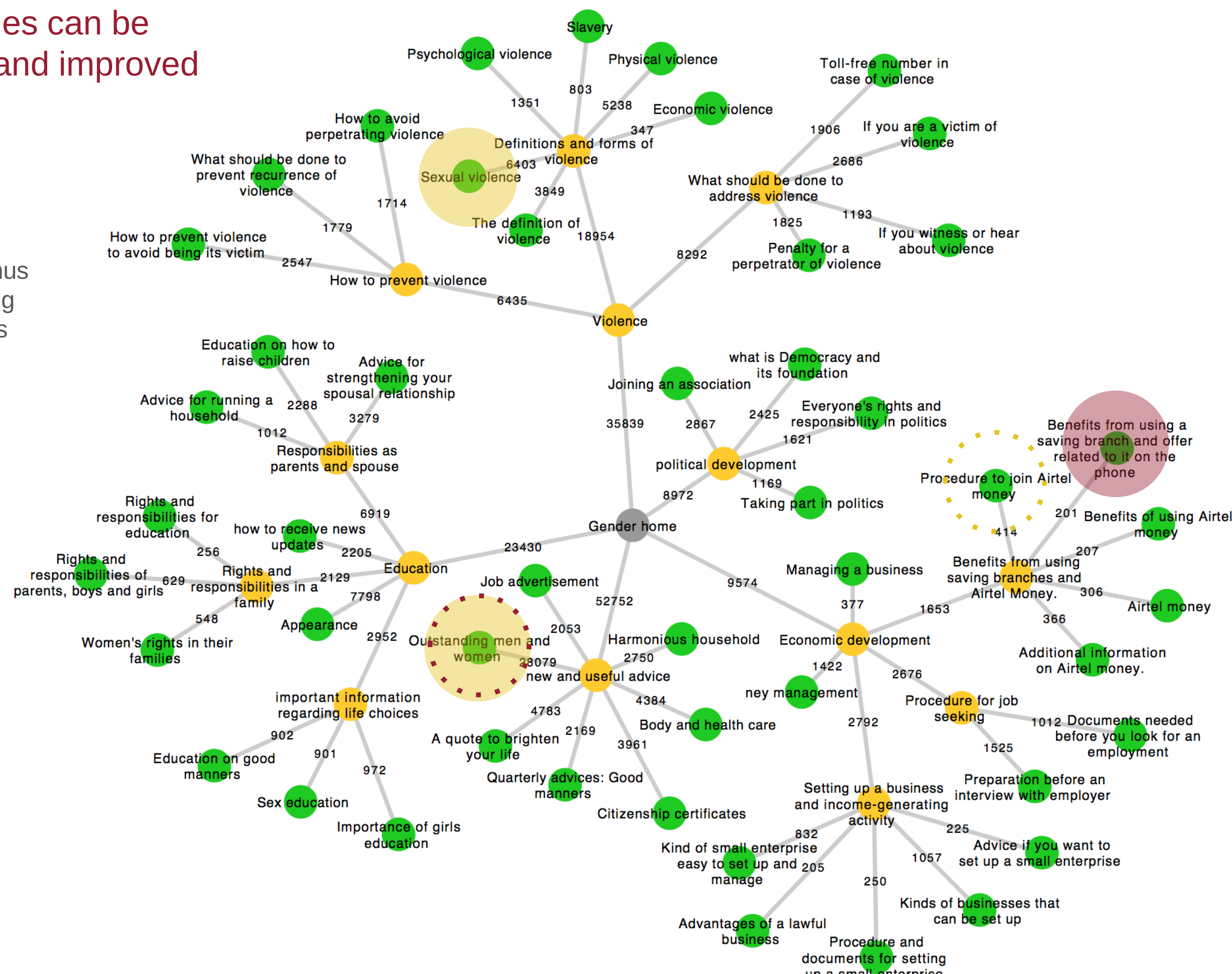
(1) Actual #1 message was 'Job advertisement' but this very short message (4.6s) just says that there is no content here

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



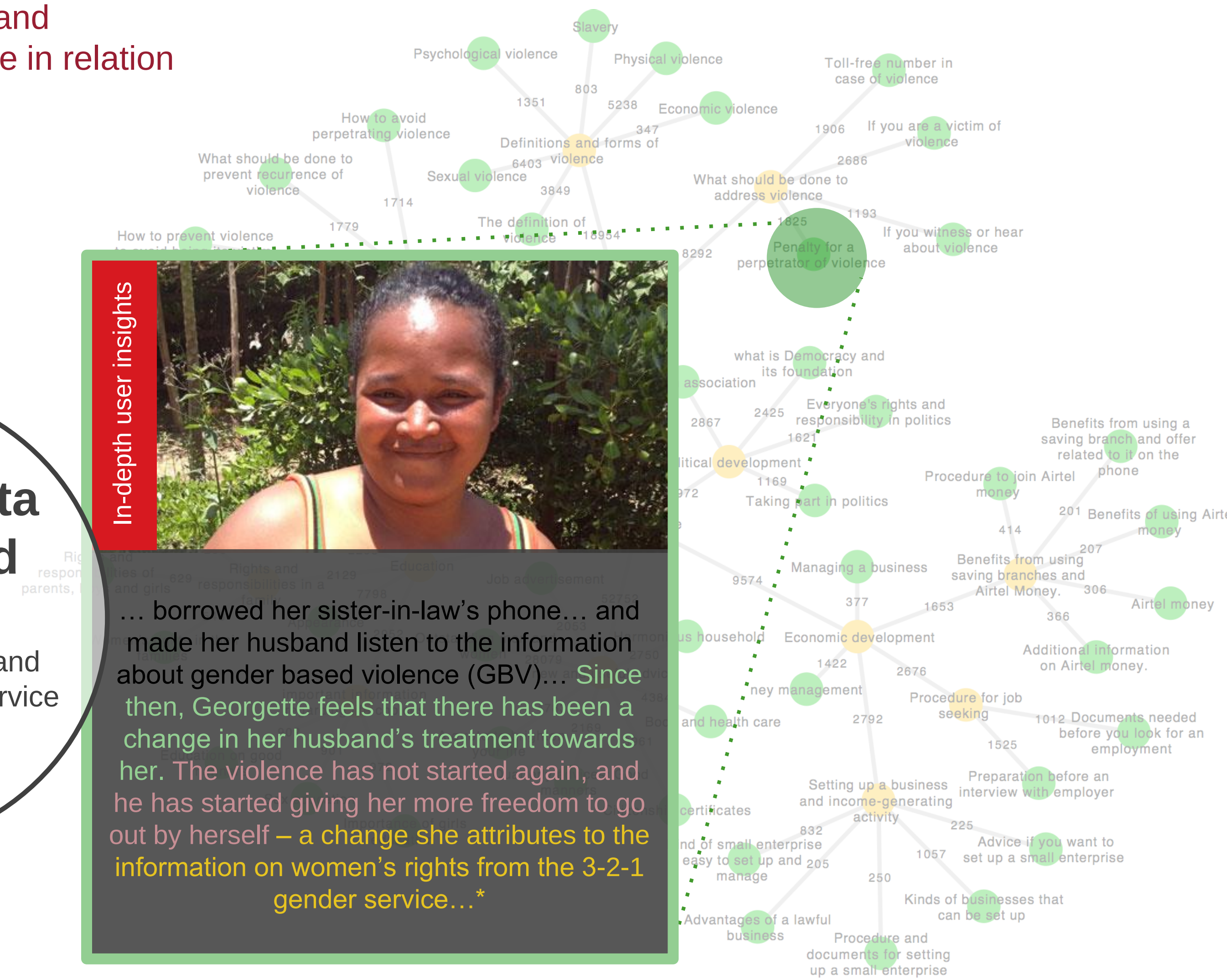
Key

Most hits	Lowest hits
High quality engagement messages	Low quality engagement messages

User testimonials should be layered over analytics

Dig deeper into existing and potential behavior change in relation to content

Use a
mixture of data analytics and qualitative
work to most efficiently and effectively improve the service delivery to end users



In-depth user insights

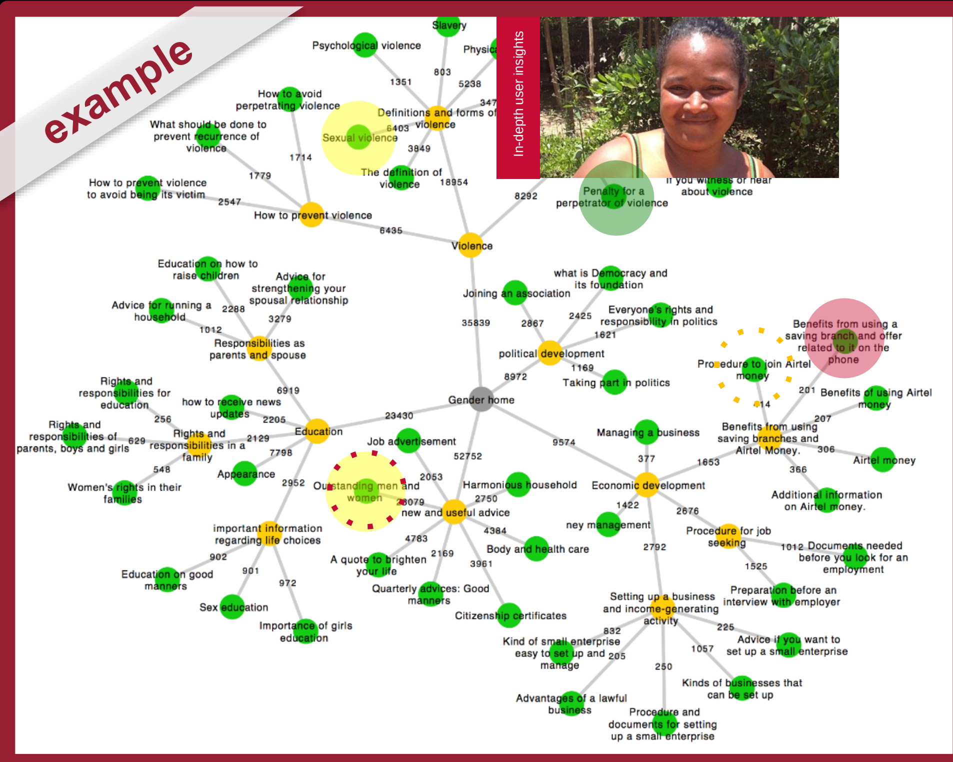
… borrowed her sister-in-law's phone… and made her husband listen to the information about gender based violence (GBV)… Since then, Georgette feels that there has been a change in her husband's treatment towards her. The violence has not started again, and he has started giving her more freedom to go out by herself – a change she attributes to the information on women's rights from the 3-2-1 gender service…*

* Extract from Alexandra Tyres' Connected Women blog post here

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

Gender Content Area

Analysis time period:

01/06 – 31/07 | 01/10 – 30/11

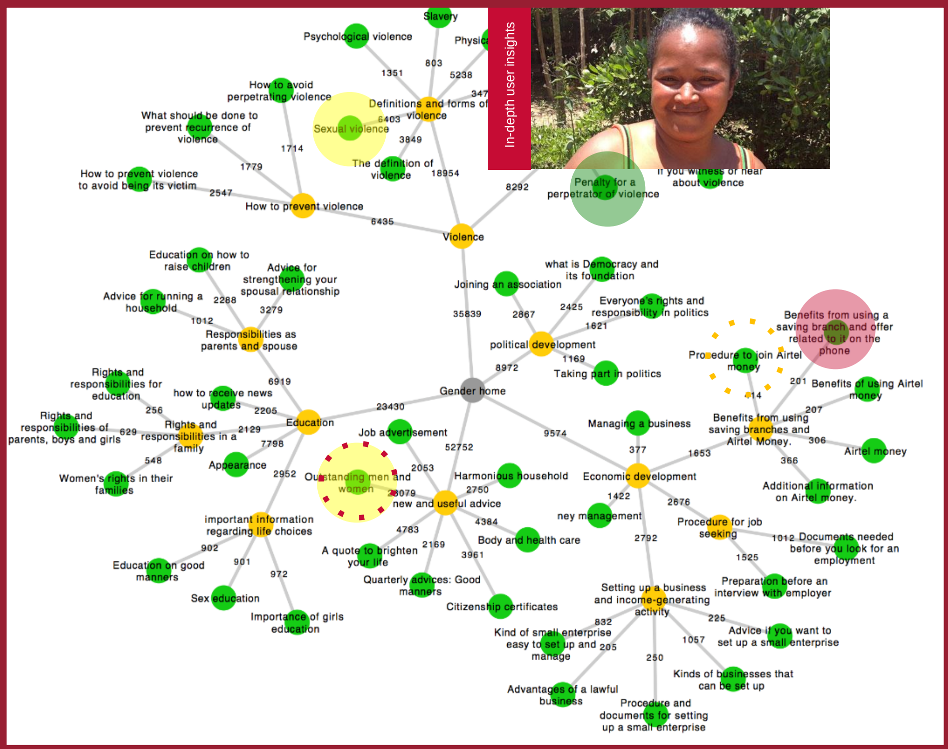
2014 – 2015

Along with recommendations to content sponsors

example

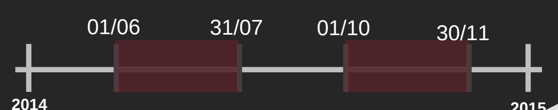
Implementation actions

- ✓ 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



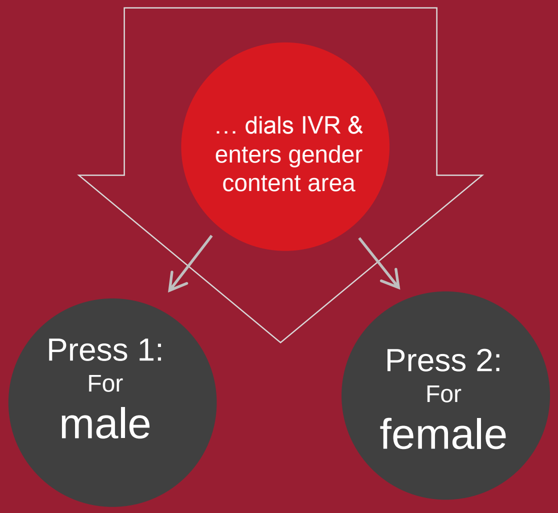
Gender Content Area

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

- On the basis of 20 in depth user qualitative interviews, pictures not to be shared publically without express user consent

Yet data analytics cast doubt on users' willingness to pay

The price for the service is considered reasonable by the audience

The mechanism of a 200 MGA charge per call starting the 5th 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.

User Testimonials

"I can afford it"

"200 MGA is very reasonable"

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

Patterns of paid usage show very little engagement with the service and **reluctance to pay for it**

*MGA = Malagasy Ariary

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

Are we able to assess the **actual** gender of these ‘flip-floppers’

?

Gender Content User…

User dials IVR & enters gender content area

For **Each** access user asked: “Are you male or female?”

Press 1: For male

Press 2: For female

20%

of gender content users provide

inconsistent answers

Unfortunately data cannot be fully conclusive

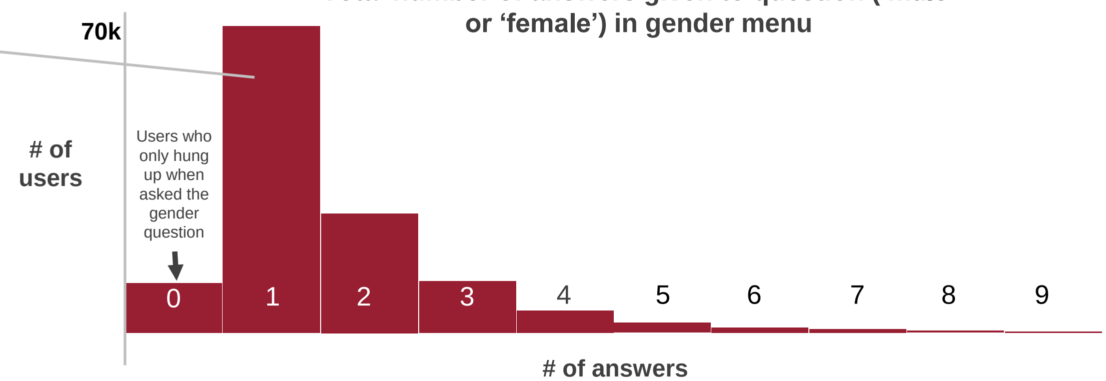
Paid for content | **Flip Flopper problem**

Most users have only entered their gender once using the IVR

53.4%

of users answered once only

Total number of answers given to question ('male' or 'female') in gender menu

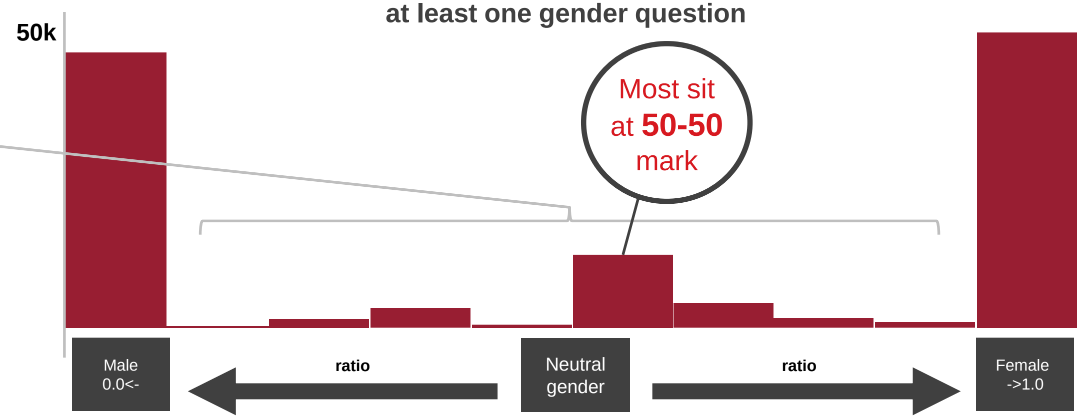


For multiple answers, inconsistency rate is 20%, with a high number of 50/50

20.1%

Of users in the gender section* are flip-floppers

Ratio of aggregate recorded gender (per user) for users who have answered at least one gender question



(*) 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

Findings from qualitative research component

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

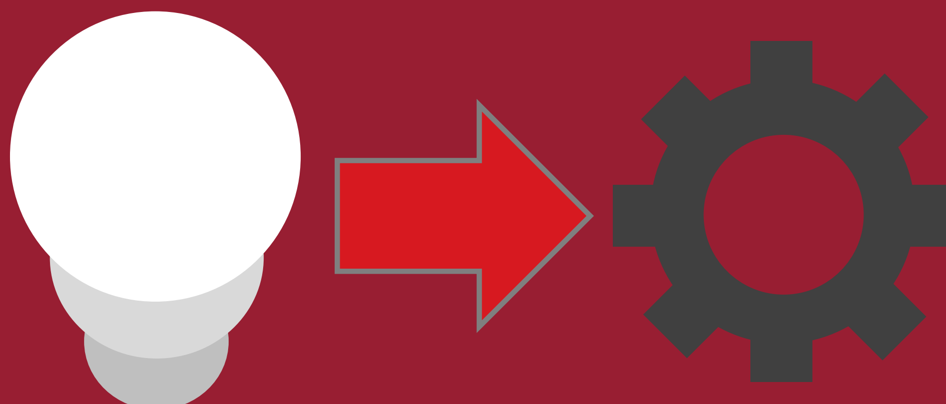
Device sharing

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

- Qualitative research is based on 20 one on one interviews conducted by the GSMA Connected Women team in Madagascar in Jan./Feb. 2015

Recommendations:

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



Recap of the 3-2-1 model

GSMA

Key Partners
- MNOs (Airtel)
- Grant providers / funders (USAID; Better U Foundation, World Bank, GSMA, etc.)
- IVR platform provider (Yo!)
- SMS platform provider

Key Activities
- Disseminating public service information
- Making content mobile ready
- Registering users

Key Resources
- Historical data
- Content
- Technical development (IP)
- Staff (<100)

Value Proposition
- **Users:** get on demand access to information on selected topics
- **Grant providers/funders:** provides efficient dissemination of messages
- **MNO:** improve stickiness of users, increase indirect ARPU and VAS usage (note: direct revenue generation marginal)

Customer Relationships
- Direct/indirect relationship with customers
- Allows branding by partners

Channels
- SMS and USSD most popular
- IVR probably most efficient to convey messaging

Customer Segments
- B2C (possible to generate direct revenue from mobile subscribers)
- B2B (e.g. seeing content providers as customers / aligning with business objectives of MNO)

Cost Structure
- Staff
- Marketing
- Technical platform
- Call center

Revenue Streams
- Grants from providers/funders
- MNO contribution (in kind)
- Paid messaging (marginal)

Partners	Cost/Rev structure	Key activities & resources	Marketing & channel access	Customer Value Proposition

Key recommendations summary

Recommendations

Customer value proposition	Improve user experience by addressing biggest bottleneck to users becoming engaged
	Investigate and improve the service experience across gender category
Cost/Rev structure	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
Key activities & resources	Use the data to create a new monetisable value proposition
	Continue investigation of methods to best disaggregate gender
Marketing & channel access	Create case for continued access to mobile channel that is attractive to MNO
Partners	Align with key partner KPIs/ objectives to strengthen relationships

How can HNI tackle the bottleneck in the user journey?

How can the challenge of gender data be further investigated?

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

How can HNI better use their data to support their cost structure?

How can HNI strengthen ties will all key partners who are critical for business model?

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

83.8%

Of cursory users stuck at home menu

Cursory
45.2%

barrier

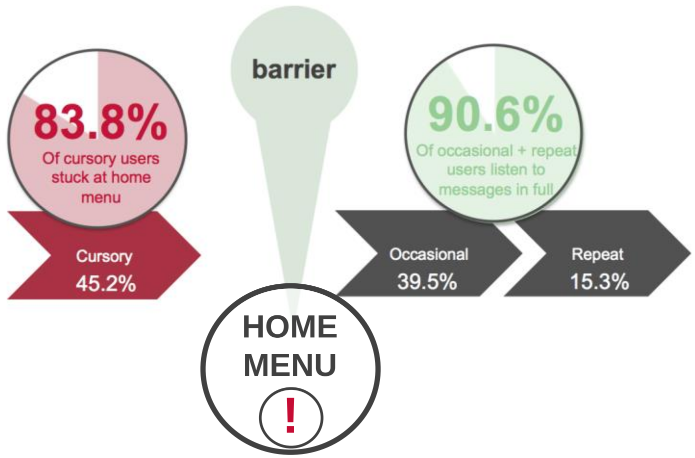
90.6%

Of occasional + repeat users listen to messages in full

Occasional
39.5%

Repeat
15.3%

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

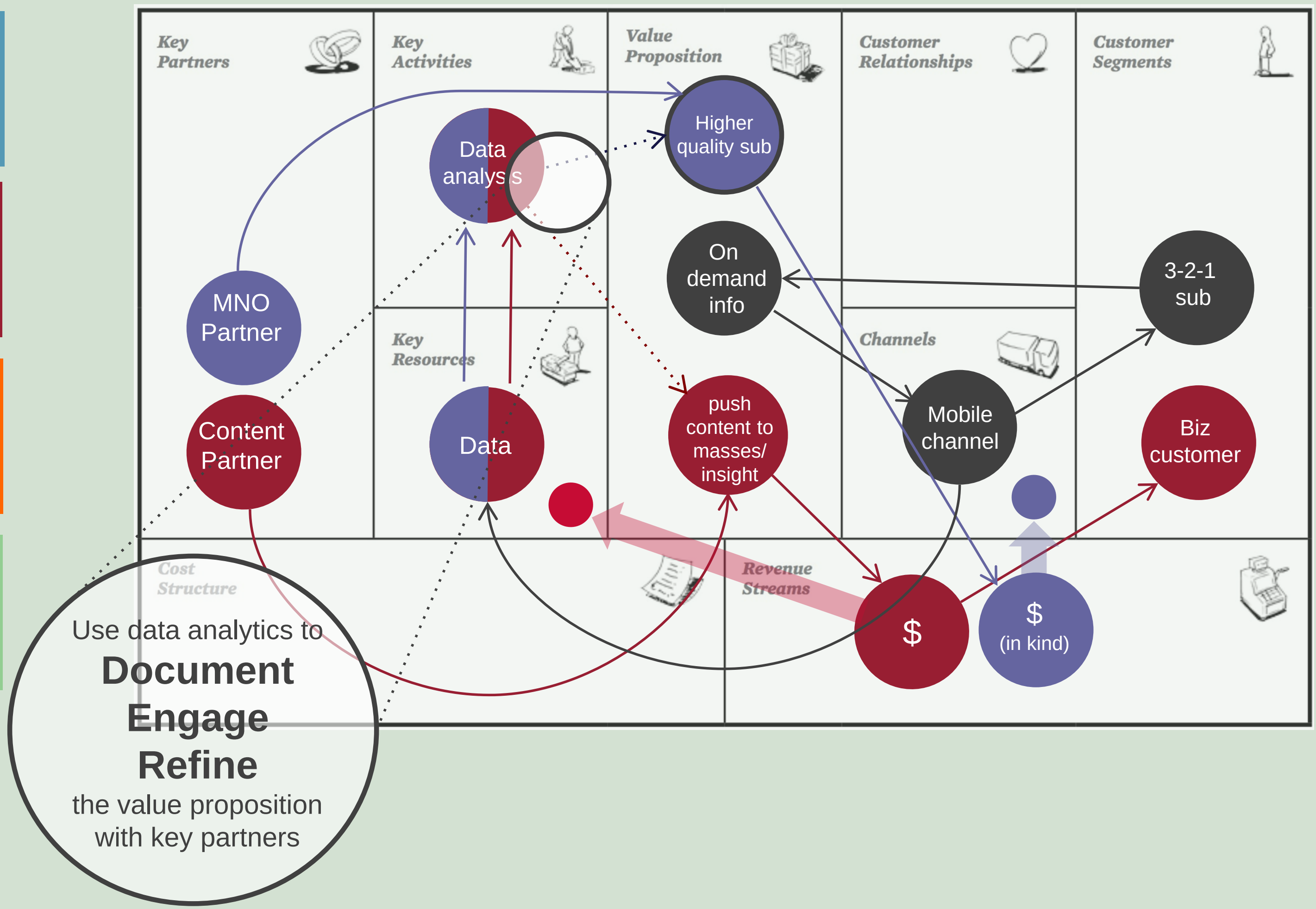
How can 3-2-1 usage data be the cornerstone of the business model?

Partners

Key activities & resources

Cost/Rev structure

Marketing & channel access



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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

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

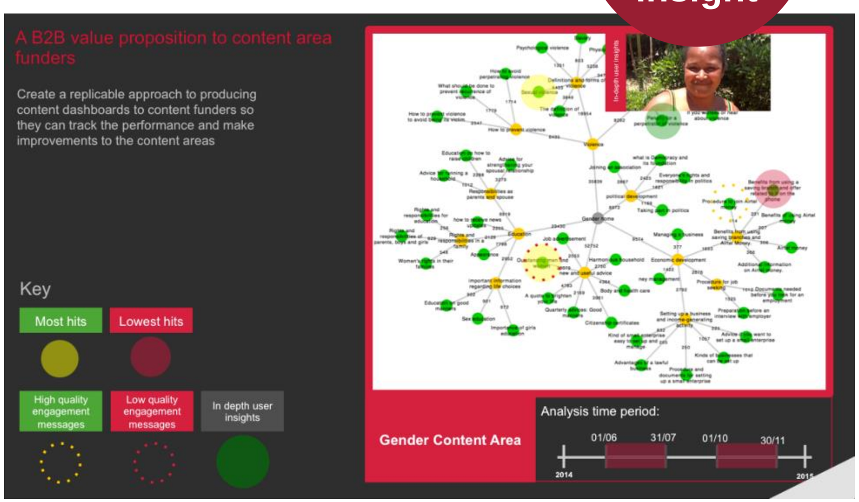
Support partners in measuring and clarifying their social impact metrics

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

IVR data monetisable proposition → Data → Data analysis → push content to masses **gain insight**



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…

IVR data monetisable proposition

Data

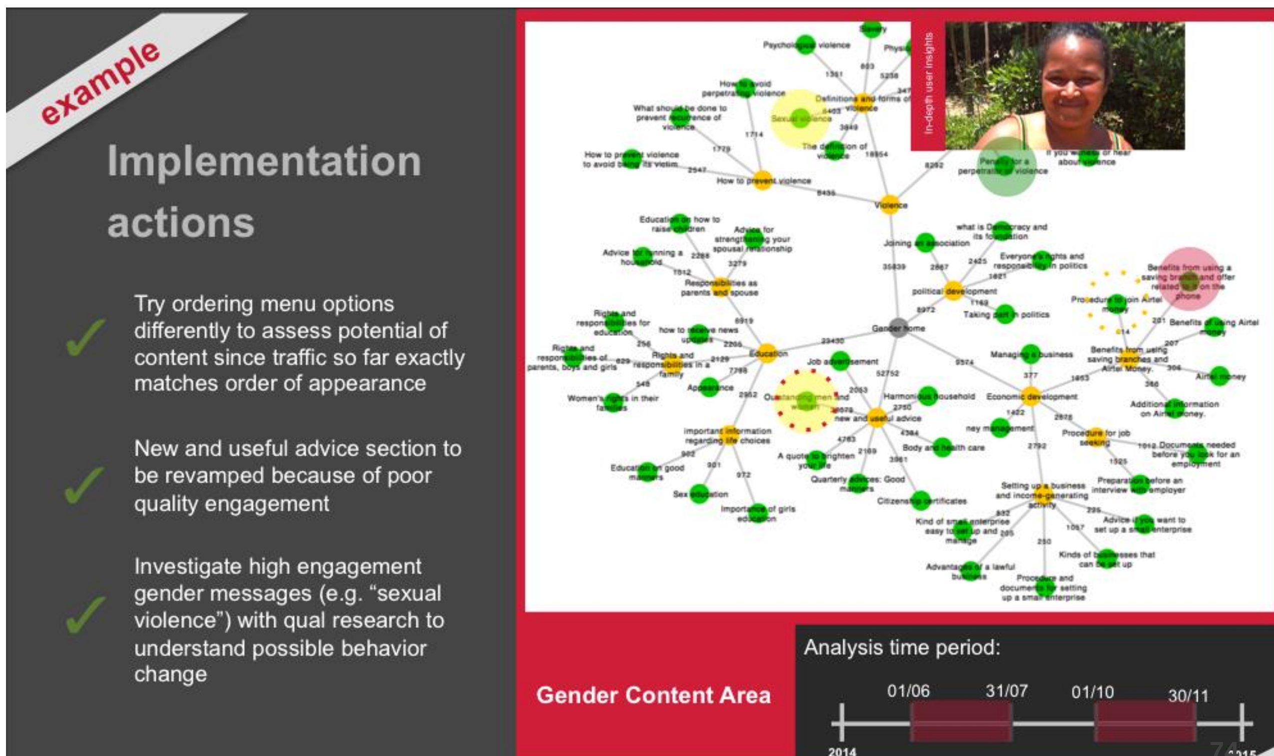
Data analysis

push content to masses

gain insight

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



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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

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

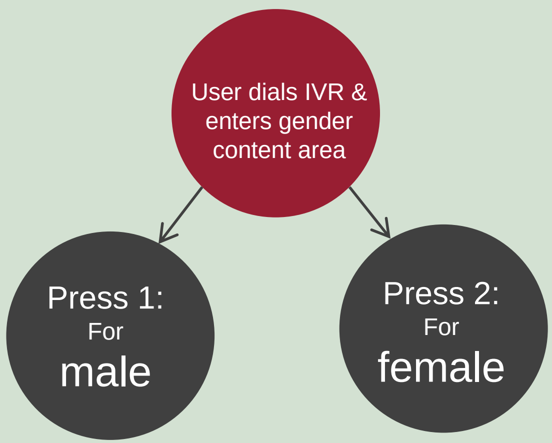
Pro-actively attempt to measure and track KPIs of interest to MNOs

Dis-aggregating gender

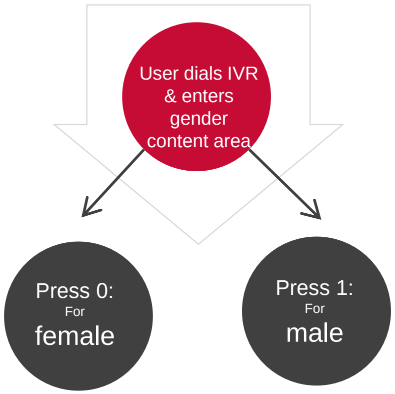
(and other demographic data)

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



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

Customer Value Proposition	Investigate and improve the service Experience across gender categories
Key activities & resources	Continue investigation of methods to best disaggregate gender

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

Customer Value Proposition — Investigate and improve the service Experience across gender categories

Key activities & resources — Continue investigation of methods to best disaggregate gender

1 An experimental approach/ driven by user testing

- Design mock-up solutions of the IVR menu (or USSD/SMS) that can either be paper prototyped, or mocked up on phone
- They will subtlety 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

2 A data analytic investigation approach

- 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

- *cf MOOC course, or similar, particularly on material around user testing)

Mobile for Development Impact

Connected Women

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