Gender Content & IVR Data Insights

Case study – Airtel & HNI's 3-2-1 Madagascar service

Contents

1

Introducing the M4D Impact Evaluation Service Model

A means of helping and advising organisations to better use their data

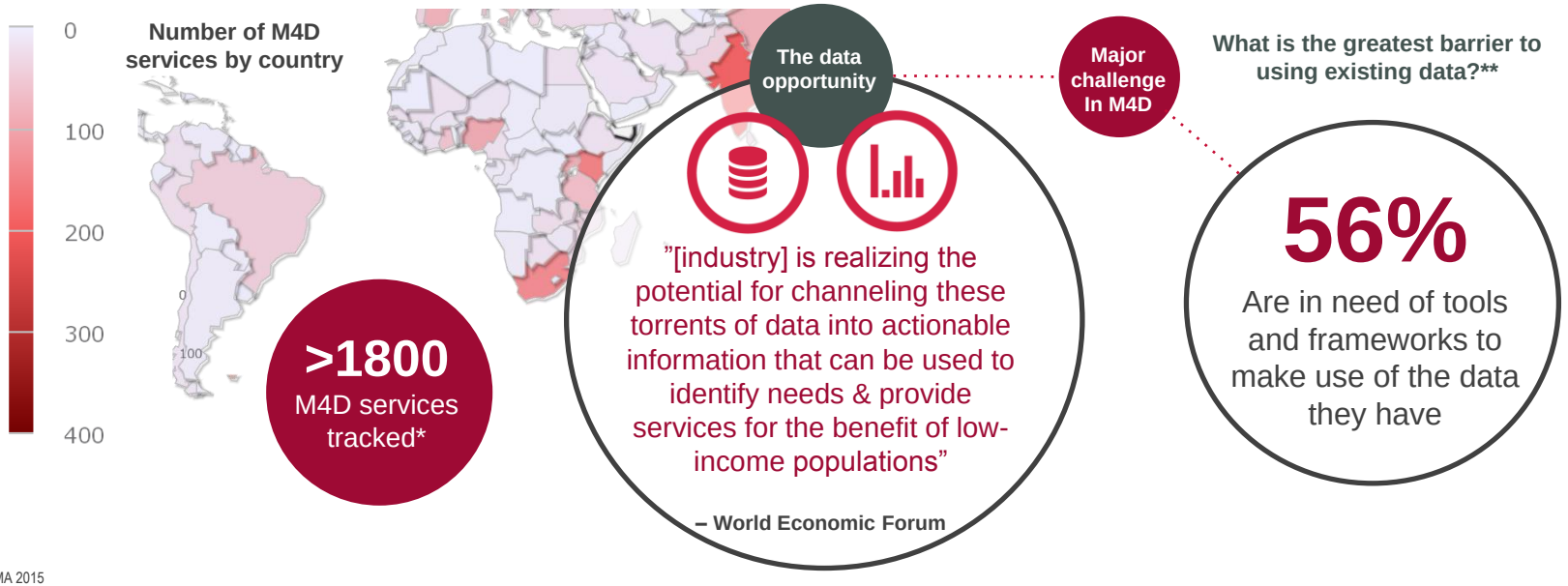
An opportunity & challenge around data in mobile for development

Big Picture – “Big data” touted as game changing in international development, mobile leads the way

- Many refer to the opportunity in “big data” in international development as a means to better serve the interests of underserved populations
- Solutions in the international development space that use mobile technology are of particular interest because of the volume of data they quickly generate - with over **1800** Mobile for Development (M4D) services now tracked by M4D Impact, this opportunity grows every day

A Key Barrier for the Industry – Not data access but data use

- Organisations offering mobile products and services that target underserved populations – from Mobile Network Operators to NGOs – all desire to better use data they already have, with business questions in mind to ensure sustainability, social impact, and scale
- The need for tools and frameworks that allow implementing organisations to make better use of the data they have is striking, with **56%** of respondents from a recent M4D survey citing this need as primary



Source: (*) M4D Impact product and service trackers (**) M4D Impact survey results – see ‘Making the most of data in M4D’ report

Our approach creates direct impact and shares replicable methods

We work with M4D service providers across sectors

Results from our survey show a need across sectors and organisation types to make better use of existing data*

Provide support to tackle barrier of lack of frameworks and tools

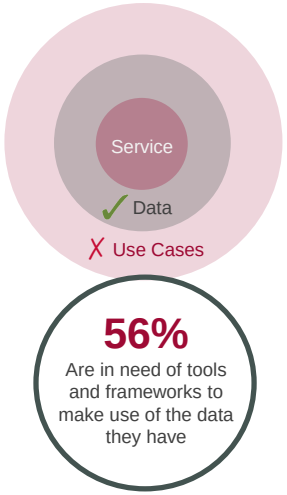
A cost effective service supporting M4D service providers to make use of existing data, focusing on tools and approaches that can be reused would prove valuable for a wide range of organisations

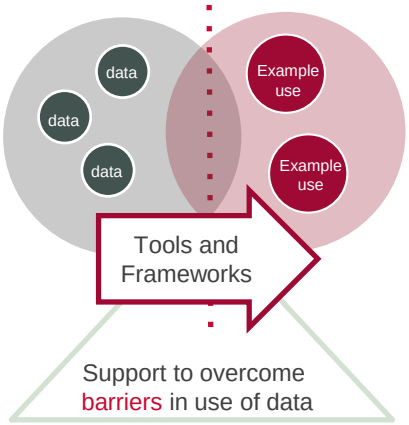
Seek replicable approaches across sectors & organisation types

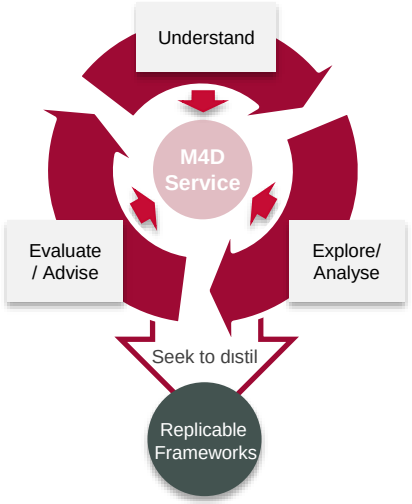
Beginning on a case-by-case basis with given M4D service providers in tackling barriers to data use, we seek to refine replicable frameworks and tools across sectors

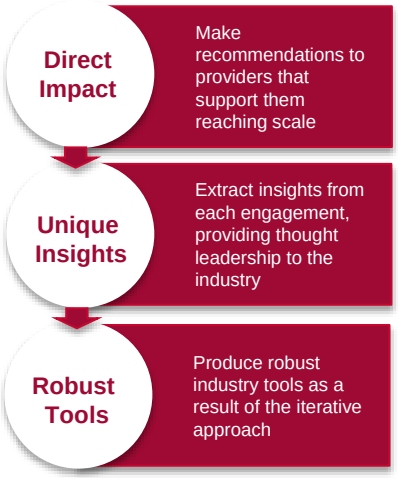
Add value to the wider M4D industry across sectors

Share findings with the wider industry – insights and tools that are relevant and applicable across sectors; both directly and indirectly impacting M4D service providers in supporting them overcome barriers to data use









Source: (*) M4D Impact survey results – see 'Making the most of data in M4D' report

Note on privacy: It is important that the request for data be in line with regulatory market requirements (e.g. customer location data generally cannot be shared without the customer's consent). For further resources on data privacy go to http://www.gsma.com/publicpolicy/mobile-and-privacy/design-guidelines & http://www.gsma.com/publicpolicy/mobile-and-privacy/mobile-privacy-principles

2

Disseminating Information & Mobile Intelligence

The opportunity for mobile information dissemination in many developing markets not just about ubiquity, but also intelligence

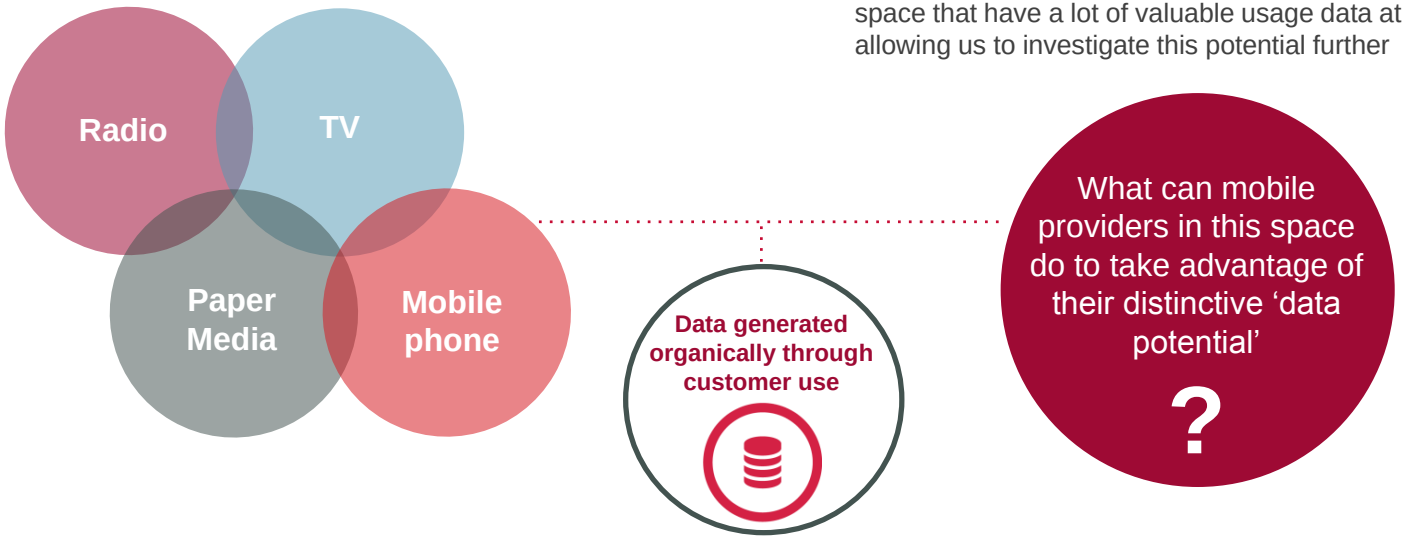
Limited options to push content & pull insight in low income markets

The standard options for donors/NGOs and others to disseminate information to the bottom of the economic pyramid is limited

- At present, radio, paper media, TV, and mobile phones are the primary channels through which donors/NGOs and others can reach their target audience in lower income markets
- Those disseminating information to a mass audience with the intention of creating positive behavior change find it hard to understand the effect of their communication

Mobile's potential in terms of data generated is distinctive among the channels

- For markets that are lower down the mobile data adoption curve, living in lower income circumstances means basic handsets are the primary channel of access
- However, even these basic channels offer the chance for much more granular insights from data than the other options available for content dissemination
- There are organisations at a mature stage of development in the space that have a lot of valuable usage data at their disposal allowing us to investigate this potential further



We evaluated this topic through an NGO that has reached +3million users over mobile

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 (**i.e. NGOs and donors) who are trying to reach a mass audience, HNI have designed a model to convene content generation committees, making content mobile ready

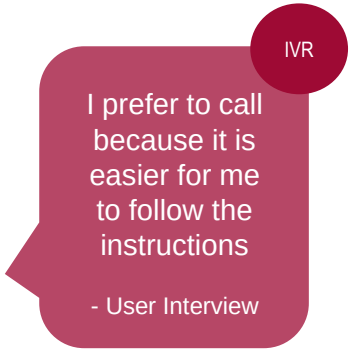
The mobile phone represents the most cost-effective way to reach the population at large. Multi-channel access value added services (VAS), e.g. IVR + SMS + USSD allow efficient targeting

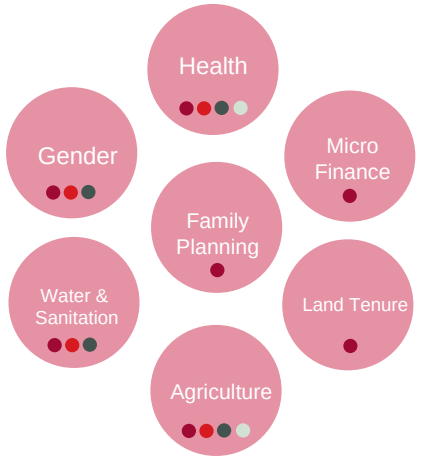
✓ The partnership with a **mobile network operator (MNO)** enables reaching millions of individuals

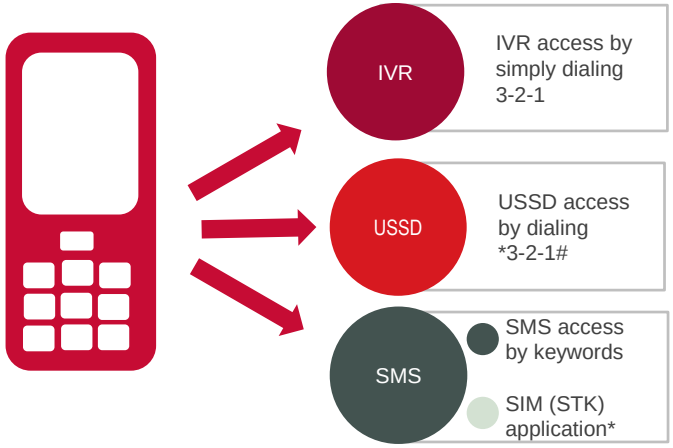
HNI's mobile service leverages IVR, USSD and SMS

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

The IVR channel 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







- 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** (increasing to 8 in 2015), then charged at 200 Ar (reduced to 100 Ar starting in 2015)

- Menus: gender (Oct. 2014), health, agriculture, water & sanitation
- **Unlimited access, free of charge**

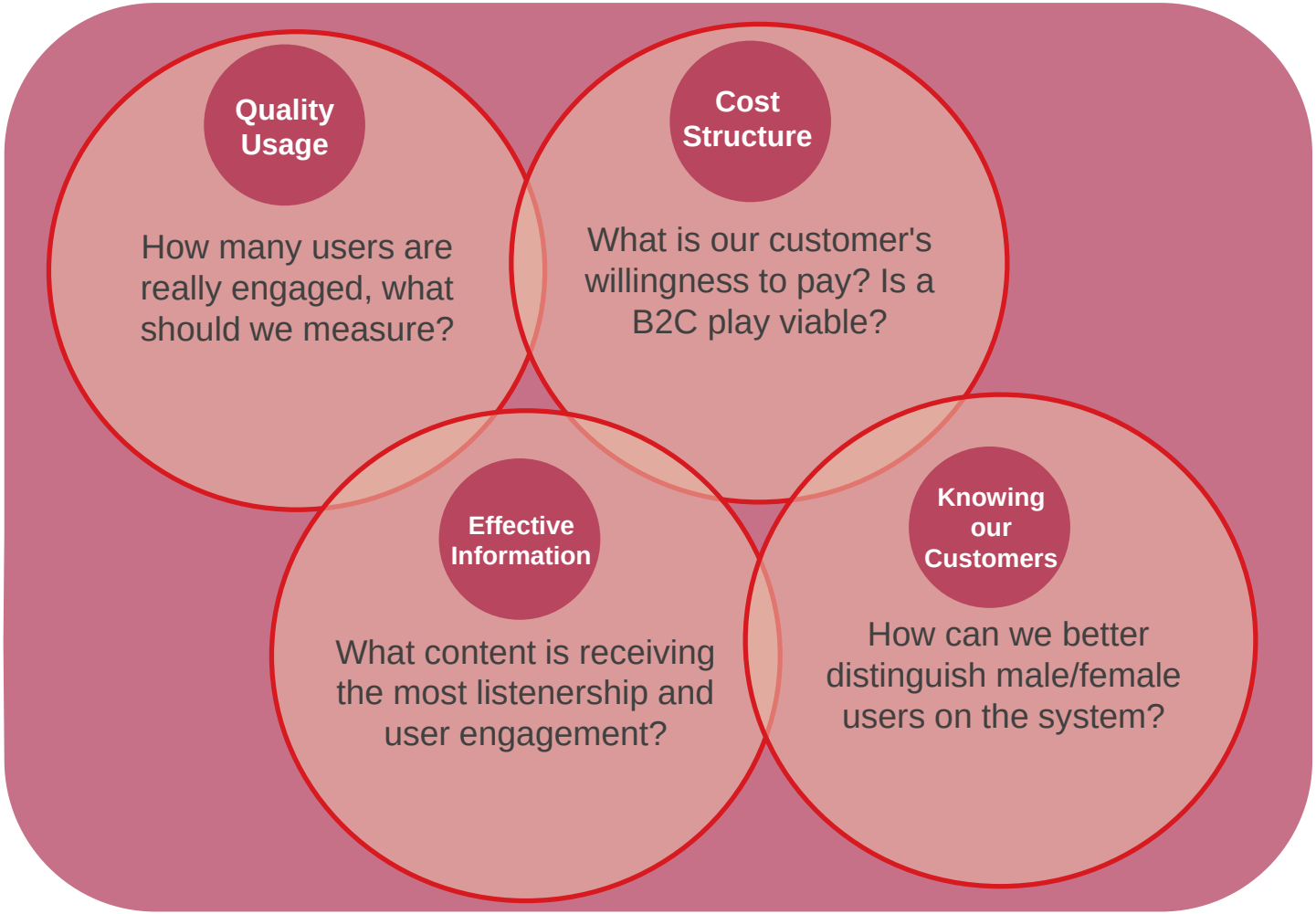
- Menus (keyword access) : gender, health, agriculture, water & sanitation
- Menus (STK access) : health, agriculture(1)
- **Unlimited access, free of charge**

* STK – stands for 'Sim Toolkit Application'

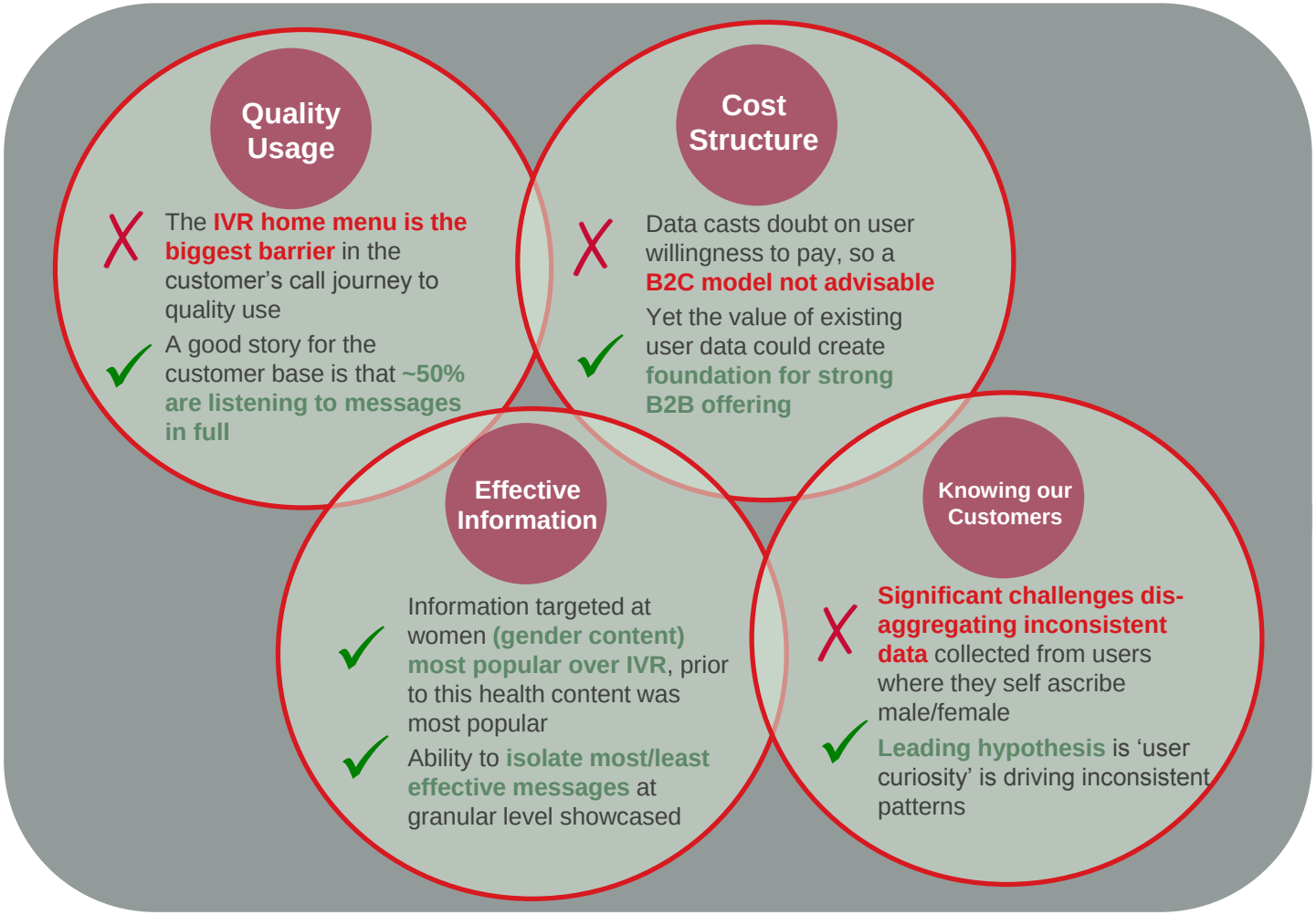
(1) Access to agriculture topic depends on the version of the SIM, as Airtel has changed the STK application over time due to size constraint

(2) Emergency (launched in Dec. 2014) has been excluded from analysis in this report which covers a period of data pre Dec 2014

HNI asked M4D Impact to investigate 4 key questions



We answered, based on analytics and customer insights*



(*) Note: we used the IVR channels as the basis for analysis as this was the richest form of data to analyse

3

Insights from the Customer Journey Toward Engagement

Details of the customer journey model used, and the findings it unearths to investigate key questions asked

A basic customer journey is mapped across 5 categories

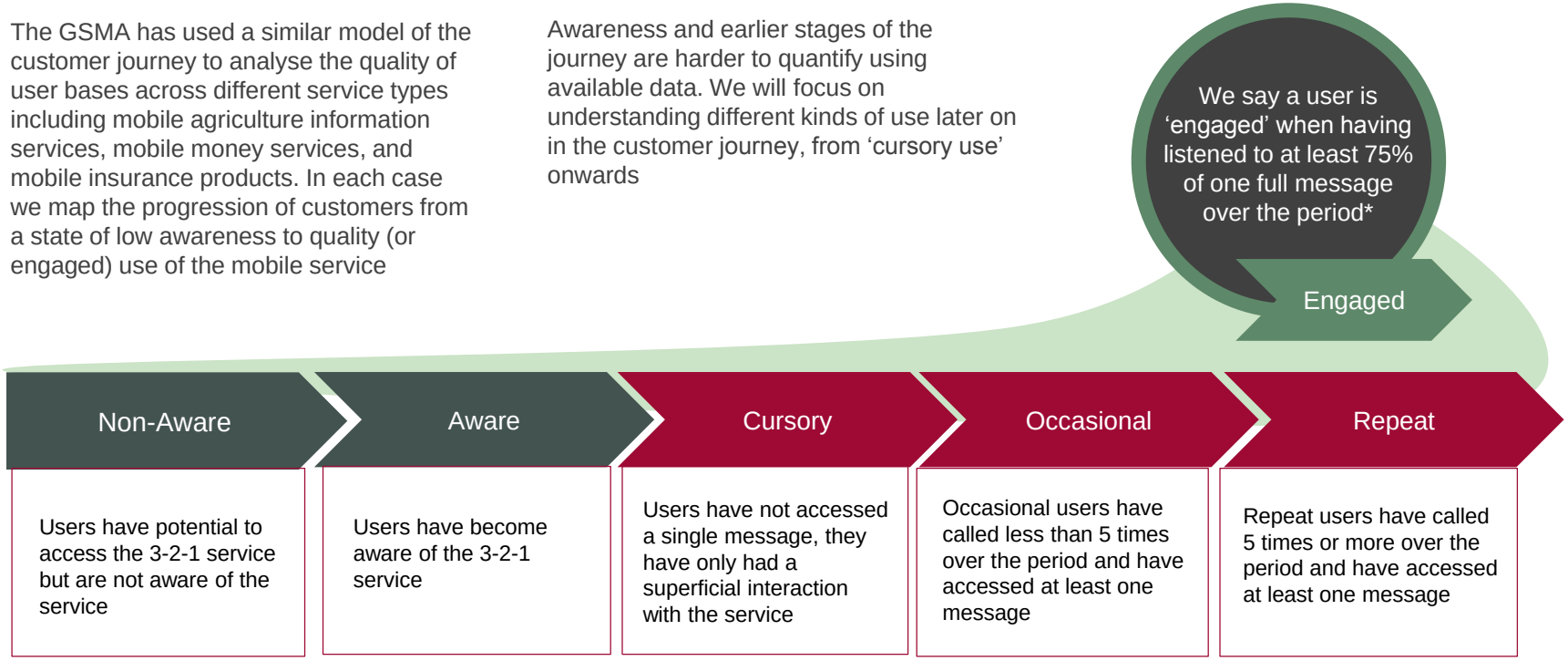
We formulated a customer journey similar to those already used by the GSMA

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, from 'cursory use' onwards

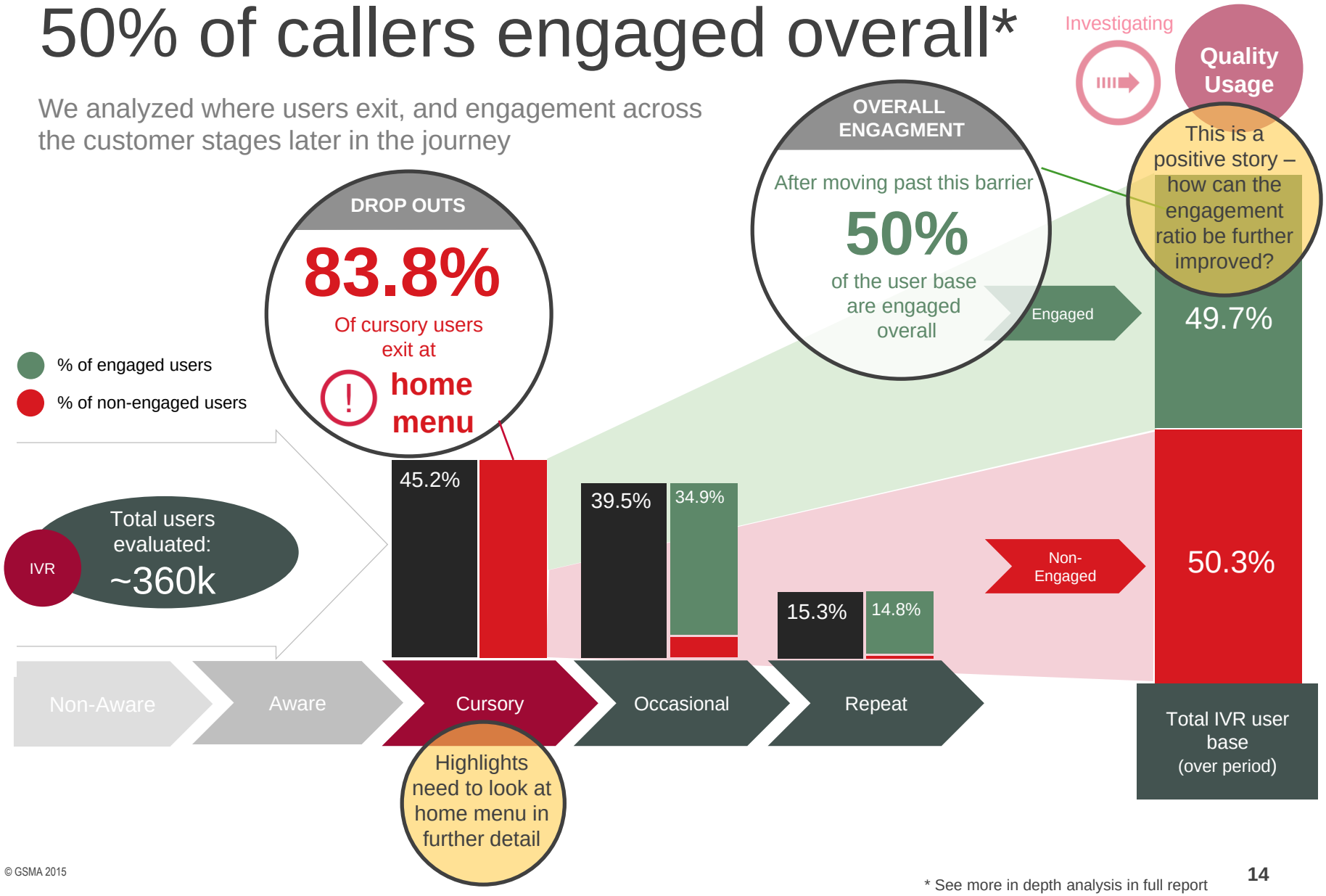
A key metric considered is 'engagement' – i.e. whether a user listens to a full message



(*) we chose 75% as the most appropriate lower bound to isolate users who had listened to messages in full by investigating listening patterns across a range of users

IVR home menu is key barrier, while 50% of callers engaged overall*

We analyzed where users exit, and engagement across the customer stages later in the journey



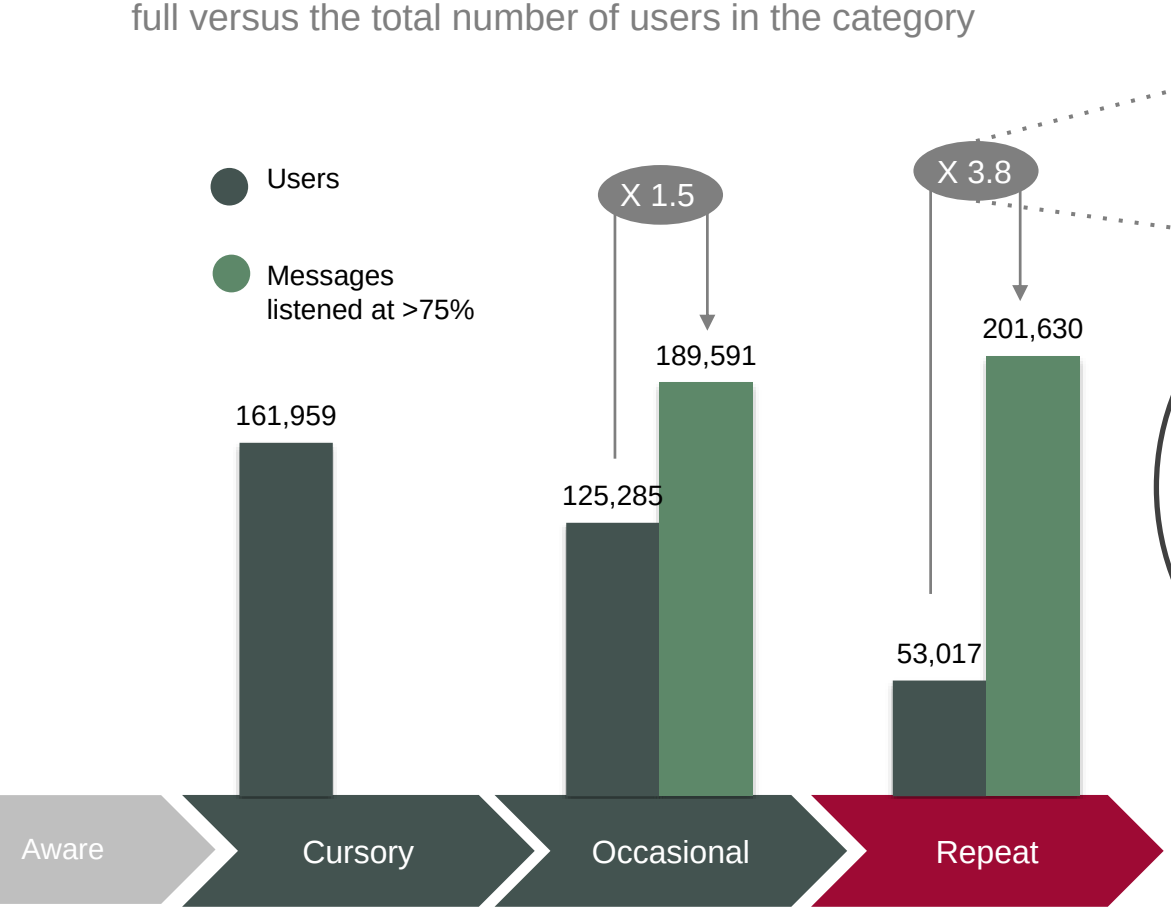
* See more in depth analysis in full report

Message to user ratios further highlights value of repeat users

Investigating

Quality Usage

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



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

Investigating direct/indirect revenue from 3-2-1 users is key for HNI and MNOs

Investigating → **Cost Structure**

Direct Revenue (B2C) doesn't seem to be a good option for a sustainable model

- Customer willingness to pay was evidenced in some user interviews – results from customer interviews showed a likelihood to pay when the user has a clear need (e.g., pertinent health info) vs. mere curiosity - but this was not reflected in the data

User Testimonials:

"I can afford it"

"200 Ar is very reasonable"

- But evidence from data analytics does not show a similar story

Only **9,177** repeat users have had a paying usage

45% of paid calls made by repeat users end at the home menu - high number of users hanging up potentially for fear of being charged

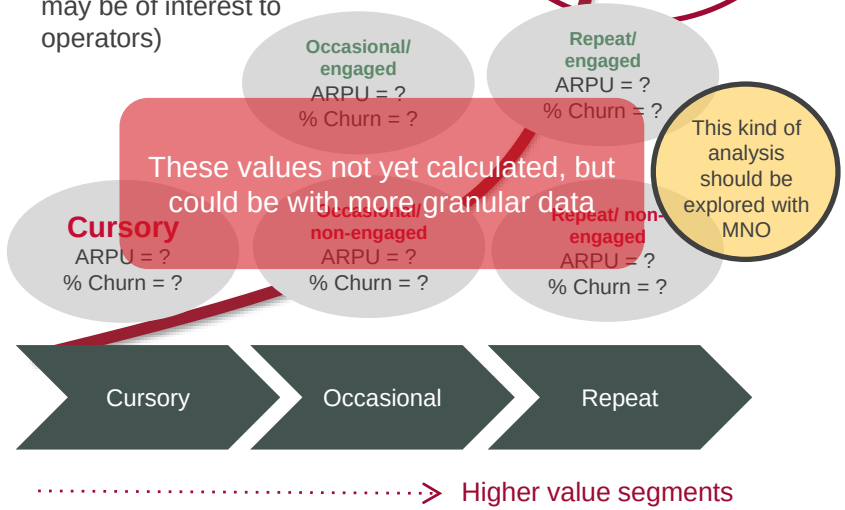
19.5% of paying users are occasional users not listening to a single message in full

Exploring a B2B sustainability model likely better

Indirect revenue or benefit for the MNO is something that should be further investigated

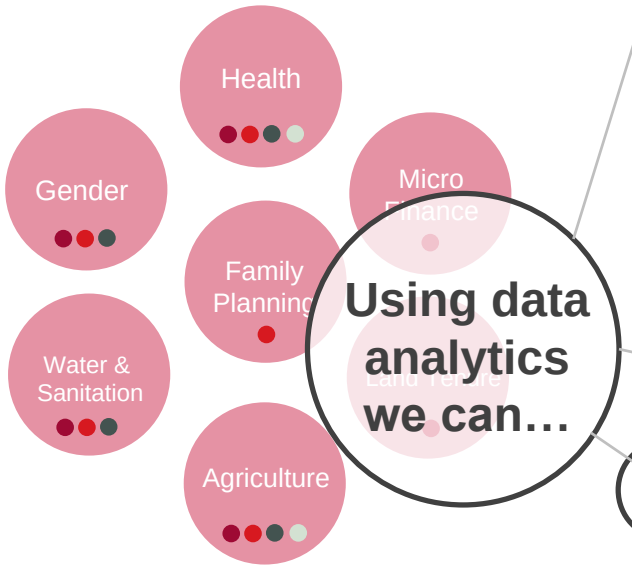
- Existing aggregated data can be used to show the average churn rate & ARPU of 3-2-1 users
- But to make the case more compelling this can be investigated across customer segments (since the difference between segments may be of interest to operators)

Are **higher value segments** also higher value MNO subscribers, e.g.,
Better ARPU?
Better Churn?
?

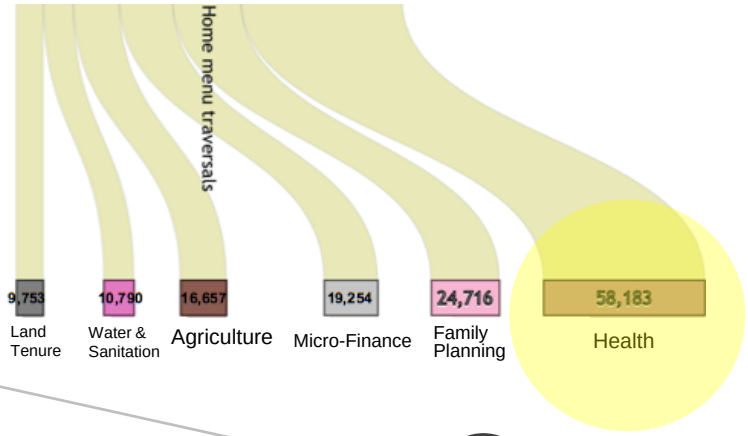


Access and engagement trends help assess content area efficacy

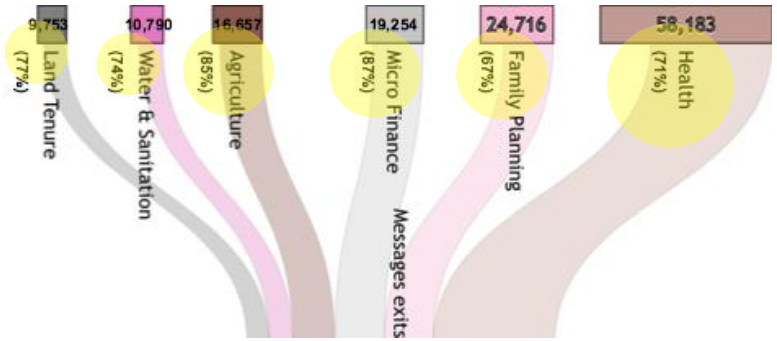
Investigating → **Effective Information**



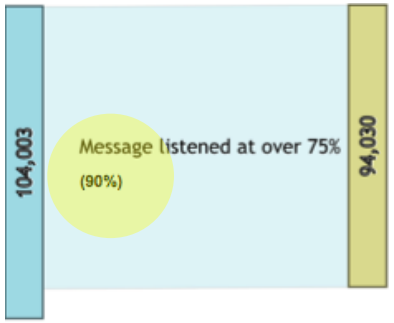
1 assess which areas gain the most hits – **initial demand**



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



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

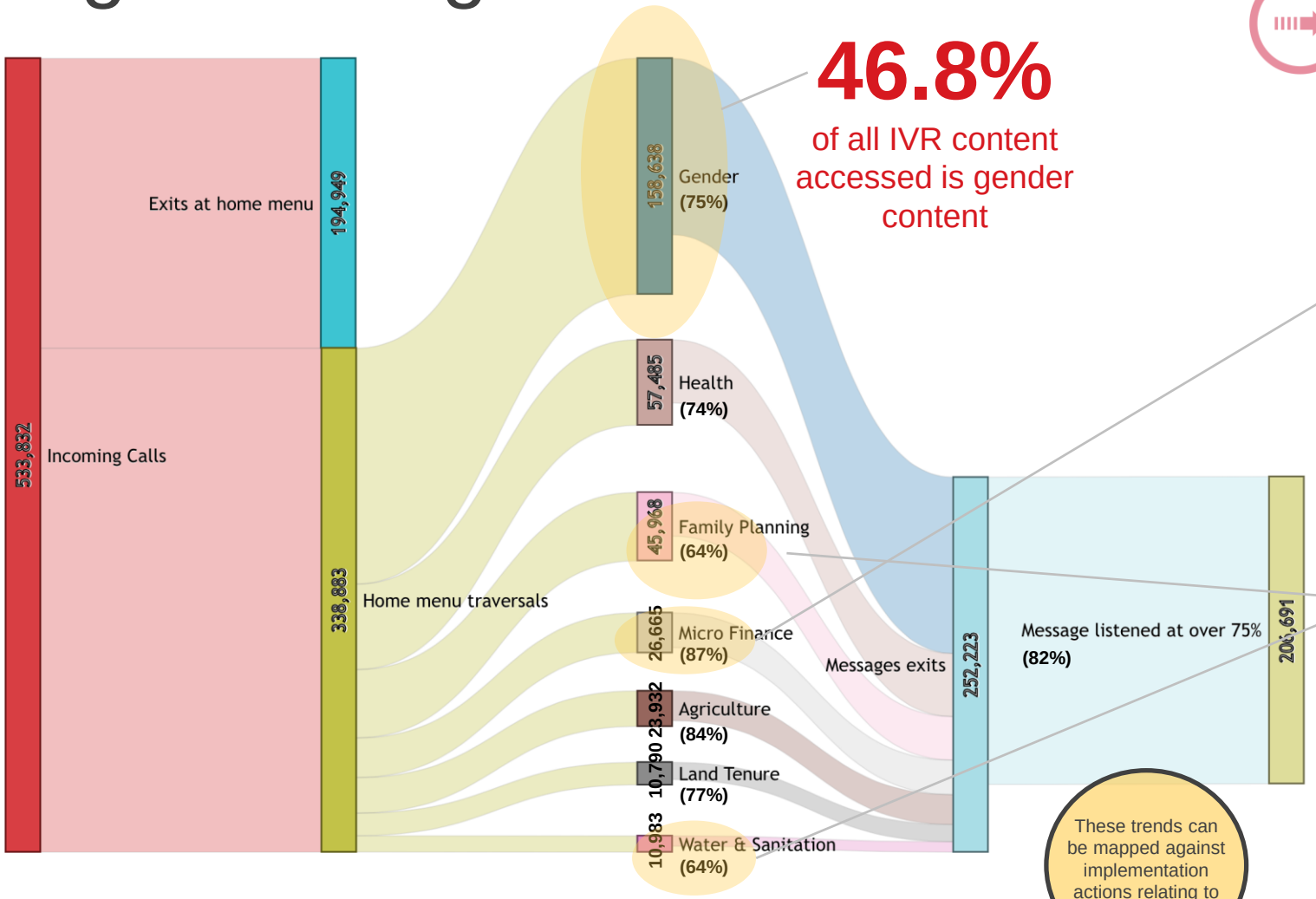


[1] i.e. >75% listening ratio

Gender content has generated highest usage*

Investigating

Effective Information



46.8%

of all IVR content accessed is gender content

87%

Is the highest conversion ratio to message listening (for Micro Finance)

64%

Is the lowest conversion ratio to message listening (family planning, water sanitation)

These trends can be mapped against implementation actions relating to content areas

* See more in depth analysis in full report, note this analysis done for period 01/10/14 – 31/11/14

We can go deeper, investigating hits & engagement at message level

Investigating

Effective Information

Here we examine the 'gender content' IVR tree – where yellow nodes are submenus & green bubbles represent the final message

The lowest hit messages (purple) are at the same level as the highest hits (blue) in the gender menu (Gender home menu → 2 sub menus → message) which suggests that message location is not a factor in access

We can also compare each message's performance based on engagement levels. Here we highlight the highest performing message in green outline (the lowest in red)

This IVR tree mapping could be used as a dashboard to show the efficacy of messages at a granular level, to help assess the impact and refine content

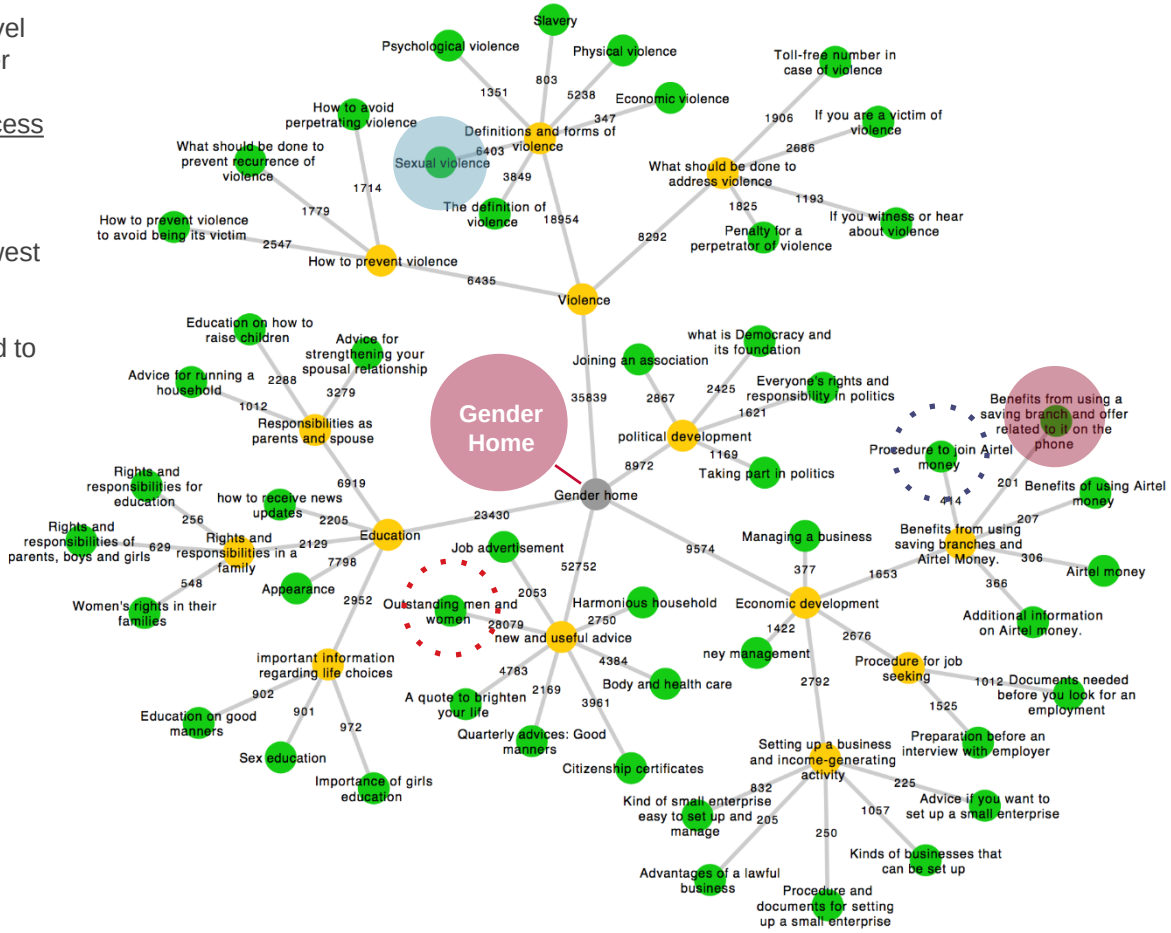
Key

Most hits

Lowest hits

High quality engagement messages

Low quality engagement messages



Determining whether users are male or female proves challenging

Investigating → Knowing our Customers

Capturing data on male/female demographics is important for the service, but a problem occurred

- To understand whether or not the gender content has an impact on a female audience, it is critical to have basic user demographics, yet this can be notoriously hard to obtain
- To capture this data, HNI inserted a question as users entered the IVR gender content area that asked users for their gender

Press 1: For male

Press 2: For female

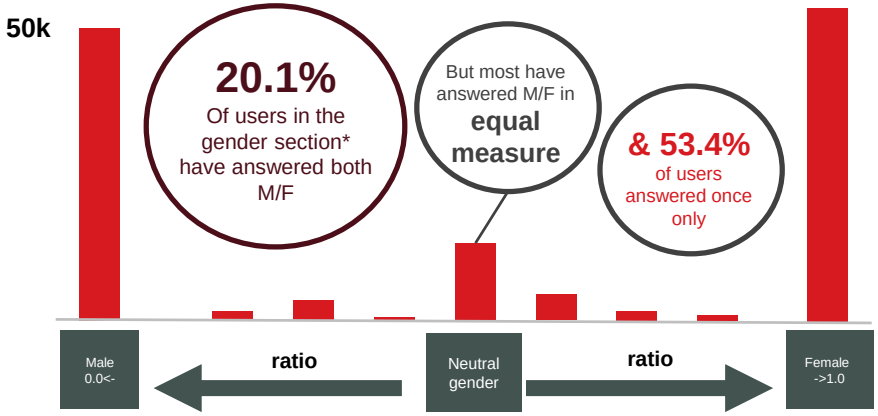
20%

of users select inconsistently

- We used two approaches to investigate the issue, the first involved **data analytics** to see if we could disaggregate the 20%, the second involved **user interviews** to explore possible hypothesis for the choice of both M/F answers

Both analytics and user interviews remain inconclusive

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



- Early hypotheses were that device sharing created the inconsistency
- User interviews suggested that mainly curiosity and some phone sharing drives the inconsistency

Curiosity

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

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

This hypothesis needs further investigation through user research

(*) having answered at least once to the gender question, over a 2 month period

Recommendations – a quick view

Headline Recommendation – use data to create a B2B model

Cost Structure ✓ Effective Information ✓

Document and analyse customer content engagement in line with interests 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.

✓ **Recurring revenue model**

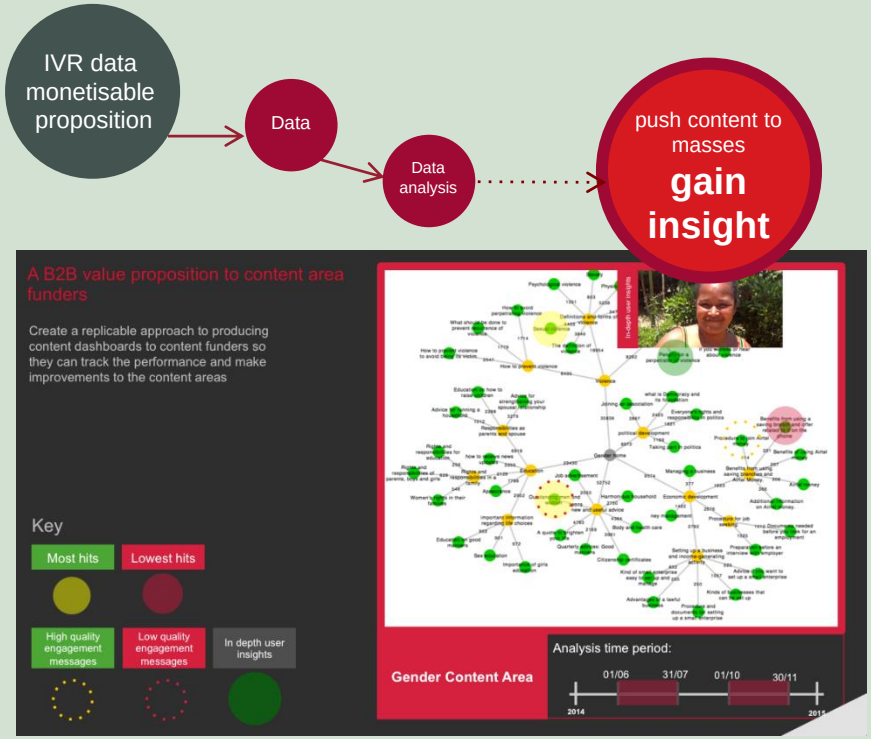
note: if engagements with these (B2B) content generating clients are on-going, this analytics model has the advantage of a **recurring revenue model** (e.g., monthly reports, based on a subscription fee)

✓ **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

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 another – monetised in the future



4

Takeaways for the Wider Industry

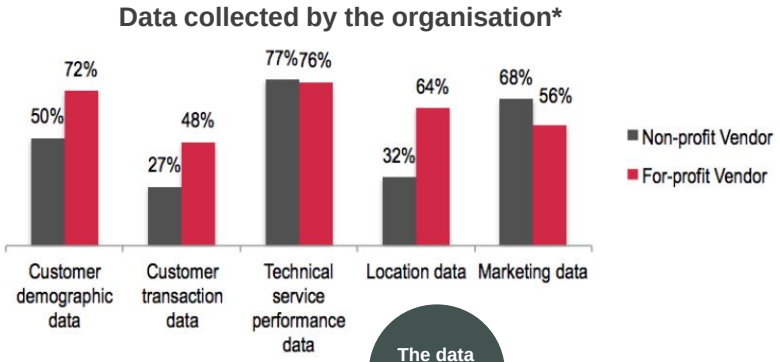
Themes and ideas that emerged from this case study useful for a large range of M4D players

NGOs have data too, and can use it to create a sustainable way forward

‘Doing more with your data’ is a theme that applies across the board

- There is a lot of discussion around getting access to more sensitive mobile network data, and the value this could provide for outcomes that further international development agendas
- While that may be true, we show here the value of data that a NGO already has, without the need to engage an operator for 'hard to get' data sets – this once again shows the importance of focusing on the ‘use cases’ for data and analytics, rather than ‘access’ to data alone

Differences between data collected by non-profit M4D vendors (NGOs) and for-profit vendors not as stark as expected



Key Takeaway

Organisations from NGOs to MNOs can focus on doing more with the data they already have

This type of investment can produce quick returns for these organisations in informing their future direction, as demonstrated through the findings here

The data opportunity is not as far away as might be thought

The data opportunity

”[industry] is realizing the potential for channeling these torrents of data into actionable information that can be used to identify needs & provide services for the benefit of low-income populations”

– World Economic Forum

Source: (*) M4D Impact survey results – see ‘Making the most of data in M4D’ report

Replication depends more on delivery channel and service model

Replication of this analysis depends more on horizontal features of services than a given sector

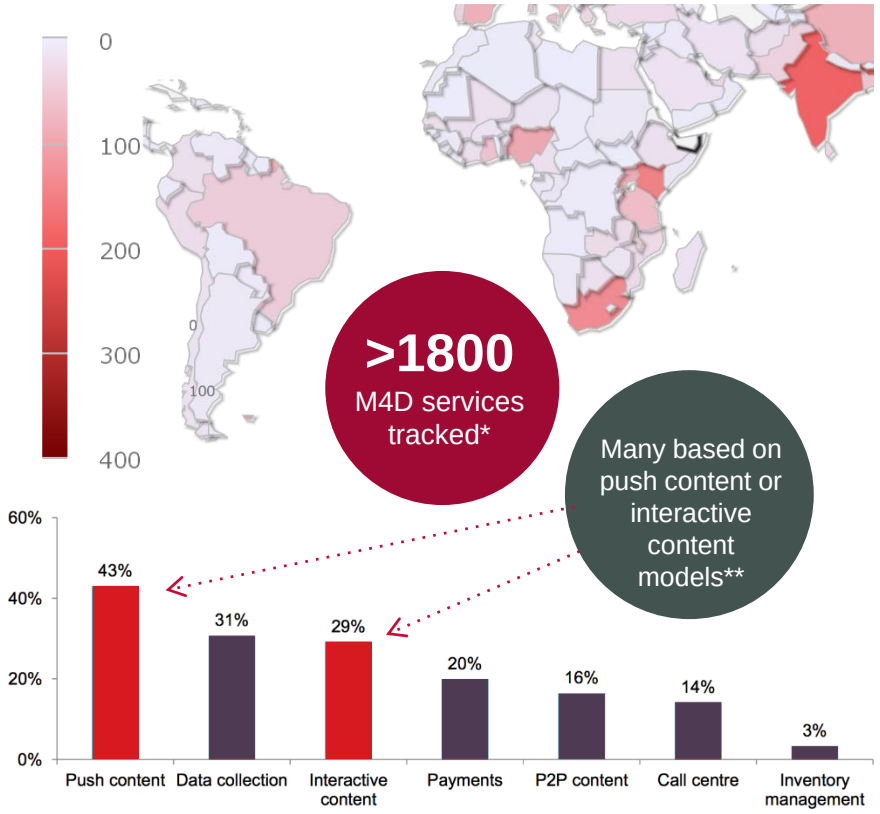
- The service examined here is based on an interactive content model (user pulls content based on specific requests), it also operates over basic channels IVR, SMS, and USSD – this description could describe hundreds of other existing services across sectors (in fact, we see in this case how the content covers multiple sectors from Agriculture, Microfinance, Gender, etc.)
- This means the analysis can be replicated by a wide number of players, and recycled for a wide range of purposes
- This analysis works for data captured over basic handsets and as smarter handsets are on the horizon, these analyses only get richer with more sophisticated datasets to work with

Key Takeaway

these analysis frameworks and findings can be re-used and recycled by a wide number of players

The analysis can be built upon as users ascend the handset/data use curve

Significant numbers of M4D services are using content delivery models



Source: (*) M4D Impact product and service trackers (**) M4D Impact analysis, see 'Scaling Mobile for development' report

Data analytics has its limits, user research must investigate the ‘why’

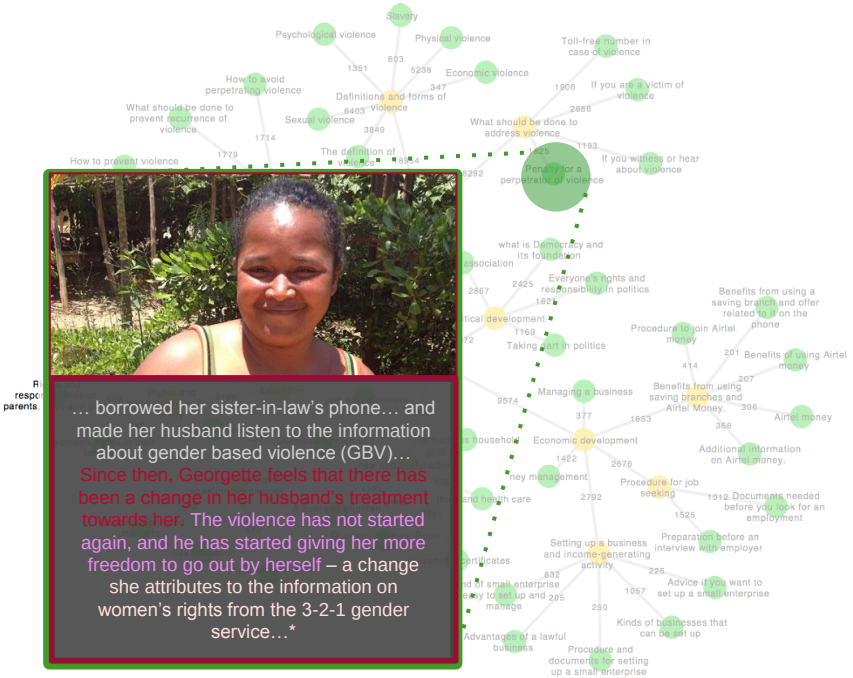
Ensure data analytics are combined with qualitative methods that explore phenomenon from the user’s perspective

- We can clarify where issues persist using data, but the 'why' is hard to determine from data alone
- In the instance of trying to disaggregate data on male/female responses we only start to scratch the surface when seeing the 'curiosity' issue – more must be done to investigate and explore user attitudes, beliefs and motivations to understand why certain phenomenon exist in the data
- Exciting opportunities lie in this area, to combine insights from data analytics and user research (e.g. design based methods) that create the most powerful ‘user-centric’ approaches coupled with the data driven insights to successfully navigate businesses

Key Takeaway

don't stop at data analytics, the combination with in depth user research will yield the most powerful insights to design successful M4D business models

Example of layering user stories over data analytics model for greater insight



Authors

Adam Wills (Lead)
GSMA M4D Impact
Awills@gsma.com

Gilles Morain
Masae Analytics
gmorain@masae-analytics.com

Rodolphe Baudeau
Altai Consulting
Rbaudeau@altaiconsulting.com

Further acknowledgements:

With thanks to **Caroline Sheldon** for project management, **Hannah Metcalfe, Alexandra Tyers & Salima Fazal Karim** for leading qualitative research from GSMA M4D Impact & Connected Women

With thanks to **Kellen Eilerts** (Country Director Madagascar) & **Erica D'Aquila** (Global Director of On-Demand Messaging), from HNI for providing key information & input

Read the full report at

m4dimpact.com/analysis/case-studies