Introduction

Background to the framework

Our earlier publication *Getting the most of your data in M4D* identified that mobile service usage data is largely a “missed opportunity” across the Mobile for Development sector and that more can – and should – be done to support organisations make greater value of their existing data.

In particular, we found that a significant number of organisations across the sector lacked appropriate tools, frameworks and approaches to dealing with such data – this framework is designed in response to this need.

Three service examples

This framework references work from 3 recent service evaluations in order to provide concrete examples. The services made reference to are:

**HNI** - 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 IVR, SMS & USSD

**ACRE Africa** – offers micro-insurance, using SMS and mobile money, where the insurance premium is paid on behalf of the farmer by a seed company as part of the purchase of a packet of seeds

**NextDrop** - offers water supply timing information to urban citizens in India, using SMS & IVR over basic phones, as well as aggregating water service information from ‘valvemen’ using IVR & smartphones

What are the primary barriers to using your existing service data for deeper analysis?

- Lack of appropriate skill sets
- Lack of appropriate tools
- Lack of frameworks, or approaches to analysing data
- Lack of time or funds

Source: M4D Impact survey, 2014

M4D Impact provided bespoke evaluations for:

- Human Network International
- ACRE Africa
- NextDrop
## Objectives of the Framework

<table>
<thead>
<tr>
<th>What we will cover…</th>
<th>What we won’t cover…</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>An approach to assessing operations</strong></td>
<td>A one-size fits all customer journey</td>
</tr>
<tr>
<td>Helping managers understand their service performance to a greater level of depth</td>
<td>It’s more important to think about ‘what to measure’ in each case</td>
</tr>
<tr>
<td><strong>Using existing operational service data</strong></td>
<td>Analytical approaches vary case-by-case (e.g. based on delivery technology)</td>
</tr>
<tr>
<td>Understanding mobile usage data’s potential value in driving new operational insights</td>
<td>It’s more important to grasp the overall approach, then investigate details of running analysis when a need is clear</td>
</tr>
<tr>
<td><strong>Identifying barriers to service success</strong></td>
<td><strong>Prescription of which analysis tools to use</strong></td>
</tr>
<tr>
<td>Generated through associated analysis that identifies areas of focus to unblock barriers to success</td>
<td>We advise on open-source and freely available tools (e.g. iPython)</td>
</tr>
<tr>
<td><strong>Target audience:</strong> Those managing delivery of mobile services targeting underserved populations</td>
<td>Organisations invest in different tools &amp; skillsets &amp; need to adapt them across frameworks</td>
</tr>
</tbody>
</table>

**Flexibility is key:** This approach is designed to be flexible across deployments in different sectors, accounting for differences in business model and service designs
Elements of the framework

Our approach to conducting evaluations that support M4D services

This document outlines M4D Impact’s approach to mobile service evaluations, built from our knowledge of conducting evaluations with a diverse range of mobile products aimed at low income populations in developing markets.

Our approach makes use of the raw mobile usage data that these mobile service providers have access to, but are often unable to extract the full value from.

The approach also draws on customer-centric qualitative research techniques coupled with data analytics on mobile usage data, linking findings with behavioral drivers.

Most importantly, the approach is driven by the business needs of the product, linked to clear commercial and social success factors. Recommendations are given in the context of a rich understanding of the business model underlying the product.

In 9 sequential steps

1. Establishing a plan of action
2. Mapping out the business model
3. Setting Commercial/Social Objectives
4. Assessing available data sources
5. Constructing the Customer Journey
6. Using data analytics to identify bottlenecks
7. Developing qualitative research briefs
8. Analysing and presenting results
9. Monitoring, implementing & evaluating
Establishing a plan of action

Start with a plan of action, appropriate resourcing and expertise

Follow the high level plan

The high level plan on the right outlines the basic approach we took to running different evaluations, it can be adapted across different cases.

Key milestones

Key milestones include project buy-in and secondary research, running in-depth diagnostics, and delivering the reports back to business decision makers.

3 areas of expertise

We recommend a team with three areas of expertise:
- **Business model analysis / strategy**
- **Data analytics** - with database & large dataset analysis experience
- **Qualitative research** – with ethnographic/ Human Centered Design (HCD) experience

Note: The timeline for turning around a project is variable between 2 – 3 months.

Note: The plan assumes report output is equivalent to “full report” as for HNI, and that this is not the team’s only area of focus.
Example: Planning two in-market visits with ACRE Africa

Diagnostic & Qualitative engagements are both key components

Data & business model
- We created a plan in advance with the ACRE Africa team; interviewed marketing, product, and other team leads, the mobile operator and seed company to investigate the agriculture insurance product.
- This and early data analysis clarified that driving registration at points of distribution was critical to investigate.

Qualitative Research & Customer Insights
- A bespoke research engagement focused on a key distribution point, and the interaction between farmers and agricultural merchants during the sale of a packet of seeds.
- This assessed behavior and attitudes that might limit farmer registrations, and opportunities for driving greater future registrations.

Investigate

Month 1 | Month 2 | Month 3
---|---|---
Senior leadership project buy-in – sign off | Business problem statement & data samples received | Data & Business model diagnostic

1. Business model analysis
- Business model & objectives sketch
- Business model & objectives finalised
- Synthesis & Preliminary report write-up
- Final report write-up

2. Data analytics
- Data testing & cleaning
- Customer journey analytics
- Synthesis & Preliminary report write-up - analytics
- Final report write-up

3. Qualitative research
- Qualitative brief preparation
- Synthesis & Preliminary report write-up - qualitative
- Final report write-up
Mapping out the business model

Service business model must be broken down into components

- We suggest using the business model canvas below as a way to break down and investigate the mobile service
- Models vary widely in the M4D space, and without specific understanding of the structure, evaluations will risk leaning on false assumptions about how the service works

‘Mobile’ components exhibit common business model patterns

- There are some common features across mobile service models, especially when considering distribution, customer relationships, and benefits (e.g. considered from the mobile operator perspective)

How do you interact?
Customer relationship (over technology channel)
- Mobile infrastructure
- Machine to Machine (M2M)
- SMS, USSD, IVR, data, apps

How do you reach them?
Distribution channel
- Agent network
- Below the Line (BTL) marketing
- Partner network

What are the benefits? (MNO)
Direct benefits
- Increase connections
- Increase ARPU
- Reduce churn
- Reduce costs

Indirect benefits
- Improve brand perception
- Improve value of mobile ownership
- Increase ability to use mobile

Who will help you? PARTNERS
How do you do it? KEY ACTIVITIES
What do you want? KEY RESOURCES
How do you help? VALUE PROPOSITION
How do you interact? CUSTOMER RELATIONSHIP
How do you reach them? DISTRIBUTION
Who do you help? CUSTOMERS
What are the costs? COSTS
What are the benefits? REVENUE

Customer Value Proposition
Partners
Distribution & relationships
Key activities and resources
Cost/Rev structure
NextDrop, a story of three customers and three models

Services and their history are not as simple as expected on first glance

- NextDrop offer water supply timing information to urban citizens in India. While the value proposition sounds simple, their business model has pivoted multiple times
- The initial model was Business to Customer (B2C), but it was too hard to balance the cost/revenue equation with monthly subscription fees from end-users
- The model then pivoted to Business to government (B2G), where the water utility (government led) pay for an employee monitoring system to better monitor their network
- The model pivoted yet again, when an Fast-Moving Consumer Goods (FMCG) company showed interest to access the large base of users, offering a Business to Business (B2B) sponsorship model

Lesson:
- Don’t leave any rock un-turned, the model will be more complex than you expect
- Few models in this space are mature enough to straightforwardly replicate, so don’t blindly assume similarity
Setting Commercial & Social Objectives

Identify central commercial and social objectives before anything else

- In conjunction with understanding the business model the headline **social and commercial objectives** for the mobile product must be clearly and unambiguously defined
- This process should be **conducted in close discussion with employees who have a deep understanding of the product** in order to ensure the right metrics are isolated

Break down the business using a pyramid approach around key levers

- Then break the logical dependencies for achieving these commercial and social objectives down into **mutually exclusive and collectively exhaustive factors**
- These sub-factors should be **sufficiently granular & measurable**, e.g. number of users registered, or value of transactions paid by brokers to farmers in value chain
- By examining relationships in the system, **levers for creating the desired value can be better identified**

**Optimise what?**

- **Commercial Value**
- **Social Value**
Breaking down an agricultural micro-insurance product: it’s all about registration

**Driving registrations is key across both commercial and social dimensions**

- ACRE Africa offers micro-insurance where the insurance premium is paid on behalf of the farmer by a seed company as part of the purchase of a packet of seeds. The farmer simply needs to register by sending an SMS with a unique code at the point of planting, and is insured against the circumstance of no rainfall inside a defined planting window.

- The commercial value is straightforwardly tied to profits, while the social value is tied to the number of farmers who have increased mitigation against lack of rainfall. Both factors increase with farmer registrations: increasing the number of farmers insured & increasing profits since costs are fixed with a fixed average premium revenue associated with each packet registered.

**Social + Commercial Impact**

= # registered packets * XX% of average premium – overheads (fixed)

**How can ACRE increase profits and impact?**

Drive the number registered packets

**Key lever**

- **Social**
  - Increases the number of farmers insured against seed germination failure

- **Commercial**
  - Increases profits for ACRE

**Lesson:**
- Keep it simple, you need to be clear about the commercial/social objectives and what you’re optimising
- Don’t try to measure more than a few key things at first
Assessing available data sources

Different service models and delivery channels will create different ‘data opportunities’

- Feasibility
  - With objectives established the feasibility of what can be done with the data must be assessed. For mobile services that have gone live and have customers, we look for a record of all customer transactions, i.e. a ‘free record’ of behavior.
  - This record will naturally differ across delivery technologies and service types. For example, the data records will be different across IVR, USSD, SMS & Data/Web, as well as between mobile money and information services.

- Technology / service type
  - Generally data is available from different sources, check service line agreements with providers, e.g., platform vendors or operators if in direct partnership.

- Different data sources
  - Note: for another example considering mobile money transaction data see the technical notes from the GSMA’s Mobile Money team, available on request.

Run early tests with available data to assess what behavior can be analysed

- Start with raw transaction logs
  - Generally raw transaction logs will look something like the simplified, dummy example below. Logs record unique customer identifiers, timestamps, and actions.

<table>
<thead>
<tr>
<th>Session ID</th>
<th>User ID</th>
<th>Call Time</th>
<th>Choice Time</th>
<th>Choice ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>71beb</td>
<td>01/10/14 00:15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>c5717</td>
<td>01/10/14 03:30</td>
<td>01/10/14 04:56</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>c5717</td>
<td>02/10/14 00:15</td>
<td>02/10/14 00:44</td>
<td>15</td>
</tr>
</tbody>
</table>

- Then assess feasible analysis
  - Once the meaning of fields and supplementary data is given, discussions can begin on what is possible to analyse.

  E.g. In the above, we can segment the user base by how many registered users accessed the service last month, how many ‘made a choice’ and how many accessed & made a choice more than XX times – the decision about whether such a segmentation is valuable depends on the previous exercises with business model and commercial/social objective mapping.
Examining what’s possible with IVR data – a refined notion of ‘active’ use

IVR data is readily available HNI, but which success metrics are possible to distill from the data?

The dummy snippet on the right shows the transaction log of an IVR table. It shows 3 unique users, making choices (or not) to access information from menus and then individual messages (choice ID) on an IVR system.

A basic calculation to understand valuable user behavior is ‘active use’, e.g. has the user dialed the service in the last month? 3/3 users would be active on this definition in our example – but can we do better?

More nuanced behaviors can be looked at with the data:

| Frequency | Have users called in multiple times? |
| Note: 2/3 users dialed in multiple times in our example |

| Diversity | Have the users looked at multiple content areas or just one |
| Note: 0/3 users looked at multiple content areas in our example |

| Engagement | Have the users listened to messages in full or not? |
| Note: 1/3 users have listened to a message in full in our example |

In HNI’s case, listening to messages in full (engagement) is a logical precondition of social behavior change, and since the commercial value was seen to be based on indirect revenue benefits to the operator, engagement was also a good fit for tracking commercial value.

**Check your data is clean:** in another service example it was discovered that timestamps for the same event differed across datasets – the most basic issue can lose you a week if you don’t spend enough time to understand the data first.

**Lesson:** Make sure you look at the fields and experiment, this is critical in understanding what customer segments will be feasible to construct with the data.

**Table:**

<table>
<thead>
<tr>
<th>Session ID</th>
<th>User ID</th>
<th>Call Time*</th>
<th>Choice Time</th>
<th>Choice ID</th>
<th>Duration of call after choice (sec)**</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>71beb</td>
<td>01/10/14 00:15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>c5717</td>
<td>01/10/14 00:15</td>
<td>01/10/14 00:44</td>
<td>1</td>
<td>11</td>
</tr>
<tr>
<td>3</td>
<td>c5717</td>
<td>01/10/14 03:30</td>
<td>01/10/14 04:56</td>
<td>1</td>
<td>32</td>
</tr>
<tr>
<td>4</td>
<td>d0fc5</td>
<td>01/10/14 03:34</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>71beb</td>
<td>02/10/14 00:15</td>
<td>02/10/14 00:44</td>
<td>13</td>
<td>20</td>
</tr>
</tbody>
</table>

* a user doesn’t access content by just dialing in, they must first make a choice to listen to content

** a user must listen for >30 seconds to listen to a message “in full”
Constructing the customer journey

Data is a key dependency, and unique service designs must be factored

The customer journey is a set of events that define key experiences in the life cycles of customers. Customers will progress through such a journey in their evolving use of a service. The aim is to have them gravitate towards an ideal use case. Data can be used to quantify how many customers sit at different points of the journey.

Assessing available data sources provides a natural constraint on what journey segments can and cannot be described (e.g. SMS is limited, IVR is much better since more customer behavior is visible in service usage logs).

Also consider the unique features of a particular service that may be important to include in the journey – e.g. a pre-registration phase or a post-trial phase.

Use a basic model to start – but tailor to fit your service

The journey below is a useful basic model to start thinking about the customer’s journey from a state of low awareness to regular use of a product – it can and should be adapted to fit different service models.

With the data constraint & unique service features in mind, the most appropriate customer journey segments must be identified - the key is that later stages of the journey correspond with the kind of value that the service is aiming to create, which depends on the social and commercial objectives outlined beforehand.

Ideal Usage

Commercial Value + Social Value

Corresponds with

Ideal Usage

Non-Aware
Aware
Understand
Register
Trial
Use

User is not aware of the service
User has become aware of the service
User is aware & understands the service’s value
User has registered for the service
User has tried the service, maybe just once
User is regularly using the service

Non-Aware
Aware
Understand

???

???

???
Example: Segmentation of customers who register and have repeat use of the insurance

Driving registrations is key, how can this be best reflected in the customer journey map?

In the case of ACRE Africa’s micro-insurance product, driving registration was key:

- **Access**
  - Many farmers had access to the product - having bought a packet of insured seeds – but had not registered. This unique part of the service model was worth highlighting as ‘access’

- **Register**
  - Farmers who registered at least once would still drive crucial service value

- **Repeat**
  - An ideal farmer would be one that repeats registration for the product season-on-season.

### Ideal Usage

<table>
<thead>
<tr>
<th>Non-Aware</th>
<th>Aware</th>
<th>Understand</th>
<th>Access</th>
<th>Register</th>
<th>Repeat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Users have potential to access the service but are not aware of it</td>
<td>Users have become aware of the service</td>
<td>Users have become aware of the service, and understand its value</td>
<td>Users have bought a packet of seeds giving them free access to the service</td>
<td>Users have sent an SMS to the short code and successfully registered for the insurance</td>
<td>Users have re-registered a packet of seeds after payout decision, either within the same or next season</td>
</tr>
</tbody>
</table>

Unique element

- **Different types of ‘user’ require different journeys:** In the case of NextDrop, we defined two types of customer journeys for two different user types of their mobile services. Different usage, data & categories were used to define each journey

- **How can ACRE Africa increase profits and impact?**
  - = how can ACRE Africa drive the number registered packets?

- **Capacity and impact**
  - How can ACRE Africa drive the number registered packets?
Using data analytics to identify bottlenecks

Use the customer journey framework to show where use is being obstructed

- The customer journey framework (constructed at the previous stage) coupled with data analytics can be used to quantify the percentage of the entire customer base falling in specific segments – e.g. % of base not going past trial stage
- This will create a data-driven view of where users are ‘stuck on a journey toward ideal use’ – use this view to address the biggest bottlenecks to ‘ideal use’

Establish hypotheses around what causes each bottleneck

- With a priority bottleneck in mind, brainstorm hypotheses around what could be causing customers to get stuck at this stage
- For example, suppose ‘trial’ was the main bottleneck, is this due to usability issues, understanding the service, or something else? These hypotheses are critical to inform the qualitative briefs that deep dive on customer’s behavioral and attitudinal drivers
Understanding where usage falls off – the home menu problem

For HNI, the cursory segment was ‘stuck at home’

For HNI’s information service in Madagascar a customer journey included the following categories:

- **Cursory** – user calls the IVR menu, but never listens to a final message
- **Occasional** – called <5 times & accessed at least one message
- **Repeat** – called >=5 times & accessed at least one message

45% of the user base are in the cursory segment and 84% of that segment exit at the home menu. Why? Some early hypotheses might be:

- Home menu too long
- Voice is not appealing
- User dials wrong number

End-user research can help confirm/refute hypotheses

**Lesson:**
- Oftentimes the biggest bottleneck segment and the key issue within it is identifiable from the analytics
- Good segmentation and data analytics should make the priority issue much clearer

<table>
<thead>
<tr>
<th>Segment / Stage*</th>
<th>% base</th>
<th>Key issues</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cursory</td>
<td>45.2%</td>
<td>83.8% of the calls exit at home</td>
</tr>
<tr>
<td>Occasional</td>
<td>34.9%</td>
<td>65.5% of calls made by occasional users end up in a message</td>
</tr>
<tr>
<td>Repeat</td>
<td>14.8%</td>
<td>Close to one third of calls made by repeat users do not pass the home menu</td>
</tr>
<tr>
<td>Occasional</td>
<td>4.6%</td>
<td>Chances to listen to a message in full is less than half of repeat users</td>
</tr>
<tr>
<td>Repeat</td>
<td>0.5%</td>
<td>Only 46.4% of calls made by repeat users end up in a message listened to at over 75%</td>
</tr>
</tbody>
</table>

* note: ‘engaged’ users are those that have listened to over 75% a final message in the period

... upon further investigation with the data, ‘key issues’ are highlighted which can inform priority actions

For HNI, the cursory segment was ‘stuck at home’

For HNI’s information service in Madagascar a customer journey included the following categories:

<table>
<thead>
<tr>
<th>Priorities</th>
<th>Medium / Low</th>
<th>Medium</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improve IVR tree design and content</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Boost repeat behavior</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Improve IVR tree design and content</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Educate users about the service</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Improve IVR home menu</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>
Methodology notes: Use open source free analysis tools until more advanced tools are required

The tools used for analytics will vary across organisations, but freely available tools are powerful

- **Free & powerful tools**
  Powerful and freely available tools to conduct a customer journey analysis on large data sets are available e.g., iPython, R

- **Strong online communities**
  A strong community of practitioners for such tools exist, with a multitude of tutorials & material online to support those willing to invest in learning more advanced analytical toolsets

- **We chose iPython**
  All analysis conducted for examples in this toolkit used iPython, the advantage of this approach is that well-documented python code in ‘notebooks’ can be effectively passed between individuals across teams/organisations

- **Each must choose their approach**
  More advanced tools may be required later on, but investments in new team skillets/ software must be considered with a long term view in mind*

**Useful Links:**
- Python basics (review Gilles)
- iPython intro (review Gilles)
- Review of analytical tools (ensure iPython, R included, preferably with others like Tableau)

*We assume that most organisations creating mobile products and services will have some kind of coding expertise in-house, making iPython a strong candidate tool since it should have cross-over with existing expertise.
Developing qualitative research briefs from bottlenecks identified

Appreciate the limitations of data analytics, qualitative work can add critical insights

- Data analytics are good for seeing trends and correlations, but **not the causal factors that underlie them**
- Good at enabling segmentation of the entire user base, but **not at getting a rich picture of typical individuals in different segments**
- Understand thought processes/motivations underpinning an individual’s relationship with the wider world – **behavioural**
- Understanding how people’s behaviour and attitudes are situated in the wider world – **anthropological**

- Examples of techniques that can be applied:

Need for qualitative research

Across a range of techniques

- Community immersions/intercepts
- Ethnography
- Depth interviews
- Focus groups or workshops

Deep dive on more granular journeys and behaviors/attitudes that have no digital trace

Create a brief with a qualitative research team that **investigates key barriers and opportunities for overcoming the bottleneck identified through customer journey data analytics** – different problems call for different techniques, so choose the method that fits best:

- Community immersions/intercepts
- Ethnography
- Depth interviews
- Focus groups or workshops

**Flexible/ wide-angled/ in-context**

- Flexible, respondent-led
- Broad community/context focus
- Valuable where little is known about subject matter and community dynamics are desired

**Structured topics/ solution focused**

- Deep-dive into needs, attitudes and detailed behaviours of subject matter
- Valuable for observing behaviour in action and understanding the role of context
- Valuable where research objectives are more focused, less exploratory yet depth is also desirable

- Shorter, more structured individual sessions
- Shorter, more structured group sessions
- Congruent sample
- Valuable for focused solution testing and structured idea generation, with groups of people who share similar characteristics
Ethnography at the point of sale

What happens between the merchant and farmer during the sale of a packet of seeds?

Registration was identified through data analytics as the key barrier to adoption for ACRE Africa’s micro-insurance product, but questions remained about what was driving the low uptake.

In response, a qualitative scope of work that focused on barriers and opportunities to driving uptake of the service was created. In particular, it included examination of ‘agrovets’ – local merchants who sell seeds and other farming inputs to small-holders.

Findings at the ‘purchase’ stage of a farmers’ seed journey (shown on the right) showed that agrovets had no incentive to make farmers aware of the product, and both farmers and agrovets were concerned with seed authenticity which potentially confused or detracted from the micro-insurance value proposition. The lack of incentives and the authenticity concern are barriers and opportunities to driving greater product registration.

What could drive more uptake?

A qualitative brief scoped

Registration
- No incentive
- Seed authenticity concern

Immersion at points of sale
- 3 x distribution points
- Observation & Intercept interviews

Ethnographic depths
- 6 x half-day farm visits

Depths with agrovets
- 3 x extended depth interviews with agrovets

A qualitative brief scoped

Pre-purchase
- The farmer hears about the relevant seeds and the insurance service

Purchase
- The farmer buys a packet(s) of seeds from their local agrovet

Register
- The farmer registers by sending SMS to a short code at time of planting

Replanting
- If there is no rain, the farmer is paid in time with mobile money to buy new seeds and replant

Re-purchase
- The farmer re-purchases a packet of seeds of same brand after positive product experience

Barrier at Registration
Analysing and presenting results

Pull together findings across all aspects of the project

- Keep commercial and social objectives top of mind
- Use analytics to clarify pain points
- Target the business model
- Provide qualitative evidence
- Measureable outcomes for actions

When presenting results, the social and commercial objectives established at the project outset should be of central focus — how do recommendations support social/commercial goals?

Customer journey analysis establishes barriers to ideal usage, it should be used to quantify where customer engagement is lost — what are the most significant bottlenecks?

Recommendations must be linked to changes to the product or wider business model — what is the weakest areas of the business model to focus on?

Qualitative research should provide an evidence base from which implementation actions are inspired — what are the key insights that support recommendations?

Actions proposed should have expected outcomes that can be linked to impact on social/commercial objectives stated — how can recommendations be made accountable through re-measurement?
Reviewing valvemen incentives to drive active usage

Objectives:

Active valvemen

Recommendations framework:

- Brand
- Registration
- Valvemen incentives
- Accuracy
- Infrastructure

Detailed Action:

Across valvemen usability / utility

Specific implementation ideas:

- Show them that it will eventually help them to save time
- Ensure they have sufficient data & battery to use and mitigate against scenarios in which these are depleted (e.g. provide top-ups at beginning of routine, limit data use, instruct on phone charging practices)
- Provide a protective hull with the smartphone to avoid it being damaged
- Conduct user testing in ‘mucky environments’ with valvemen
- Have phone heavily branded to reduce risk of stealing
- Create casing to conceal phone in everyday use as much as possible
- Direct users calling valvemen to NextDrop (e.g. an automatic message sent) to reduce harassment
- Consider social incentives (e.g. valveman of the month highlighted on utility website and by SMS to the residents of the area)

One key recommendation area for NextDrop put valvemen in focus

NextDrop have to capture high quality data from valvemen who enter information over the phone as they patrol the city, manually opening and closing valves which control the water supply to citizens - how can NextDrop drive more quality (active) valvemen usage of the mobile service?

The earlier phase of the project determined that NextDrop needed to drive more registered end users, end user feedback, and active valvemen usage to drive social & commercial impact. Recommendations were delivered as part of a full package. Dealing with valvemen incentives was one area of focus. Using data analytics a clear benchmark for improvement was established – 9% of the registered base were exhibiting the ideal ‘consistent’ use of the mobile service.

Qualitative work showed that any mobile solution must meet key valvemen usability/utility criteria. With the key objective of driving more valvemen usage, implementation ideas were sketched with the usability criteria in mind and the benchmark of improving against the 9% consistent user ratio.

- Must fit with the routine – i.e., not take too much time
- Must be practical – i.e. not risk damage during mucky work
- Must be risk free – i.e. not expose them to abuse/ phone theft
- Must help deflect customer complaints – i.e. reduce complaints
Monitoring, implementing & evaluating

The approach is most effective when repeated, not just as one-off analysis

- **Measurement approach**
  By framing recommendations to service providers using the data-driven baseline of the customer journey there automatically is a future measurement approach.

- **Controlled experiments**
  Changes to the service can be conducted as controlled experiments with expected outcomes on the quality of the user base, translated into indicators on the customer journey – e.g. expect a XX% reduction in users stuck at trial stage (note: using ratios is better than aggregate numbers).

- **Create cyclic evaluation**
  With these indicators as ‘lines in the sand’ implementation changes can be evaluated by re-analysing recent service data logs. By determining how effective changes have been against expected outcomes new actions can be refined.

Use the customer journey across each stage of an ongoing cycle

The customer journey developed for the service can impact all stages of the cycle from constant monitoring, implementing and evaluating actions made on the service.

- **Use the customer journey to monitor the service at a more granular level – measurement approach**
- **Use the customer journey to monitor the service at a more granular level – measurement approach**

**Monitor**

- **Evaluate**
  Evaluate the actions made and make refinements accordingly – closing the loop

- **Implement**
  Brainstorm service actions and associated expected outcomes – controlled experiments
Following up with all 3 service provider examples

**Monitor**

**HNI**

- Changing key monitoring KPIs
  - From users to engagement
  - Enhancing business intelligence
  - Monitoring the number of engaged users listening to messages in full as opposed to user numbers alone—a much better fit with their stated success metrics
  - In addition, they used the Sankey representation of the customer engagement journey (shown right) to monitor the performance of the service over time

**Implement**

**ACRE Africa**

- Making business model changes
  - Changes to the registration card
  - Incentivising the distribution channel
  - On review of the recommendations, ACRE Africa planned tests with multiple registration card designs to determine which would drive the strongest registration uptake by communicating the right value proposition
  - Similar implementation experiments were planned for the distribution channel, incentivising agrovets with airtime to drive farmer registrations of the product

**Evaluate**

**NextDrop**

- Seeing uplift in end-user feedback
  - Removing unnecessary consent & reframing
  - To see strong user feedback
  - NextDrop responded to recommendations to remove the consent barrier entirely, while reframing the messaging to share ‘water status updates’ to get users more involved
  - They saw sizeable increase in the amount of feedback users gave in just a few weeks, providing a boost in one of the success metrics identified for the service

**Statistics**

- Received >5000 Pieces of Solicited feedback in a few weeks of making changes
  - 1,312 Users (12% of base) in solicited feedback segment
  - 32% of calls end up as a message listened to at over 75%
This toolkit outlines our 9-step approach how would you like to see us build on it?

This toolkit provides a holistic overview of our approach – in 9 succinct steps – in conducting customer journey evaluations across a range of diverse mobile service types with existing mobile service data – all with a common theme of trying to achieve commercial and social impact in developing markets.

We hope the approach is valuable to individuals across a wide range of organisations in the Mobile for Development space in thinking about how to make better use of their data, but realise that some may want more detail, in which case please get in touch.

If there are any elements you would like to see added to this framework
Please email m4dlimpact@gsma.com

1. Establishing a plan of action
2. Mapping out the business model
3. Setting Commercial/Social Objectives
4. Assessing available data sources
5. Constructing the Customer Journey
6. Using data analytics to identify bottlenecks
7. Developing qualitative research briefs
8. Analysing and presenting results
9. Monitoring, implementing & evaluating
Read our evaluation case studies

m4dimpact.com/analysis/case-studies
Read our Appendix for More Information

http://www.m4dimpact.com/analysis/insights
Contacts

Mobile for Development Impact
m4dimpact@gsma.com

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