

KEY PERFORMANCE INDICATORS (KPIs) FOR CYCLETEL DIV PROJECT

Proposed Quarters

IRH proposes the following dates for CycleTel DIV project quarters. KPIs will be given to DIV AOR as part of Milestones 4-8.

- Q1:** July 1- Sept 30, 2014 (no KPIs reported)
- Q2:** Oct 1- Dec 31, 2014 (no KPIs reported)
- Q3:** Jan 1- March 31, 2015 (no KPIs reported)
- Q4:** April 1- June 30, 2015
- Q5:** July 1- Sept 30, 2015
- Q6:** Oct 1- Dec 31, 2015
- Q7:** Jan 1- March 31, 2016
- Q8:** April 1- June 30, 2016

Financial KPIs

* Reported quarterly, starting Q4

- 1) **Expenditure**
 - a. Cost of Good (cost to operate technical service), as based on:
 - i. Cost of SMS deployment
 - ii. Phone line rentals
 - iii. Hosting charges
 - iv. Software maintenance and oversight
 - v. Software development
 - vi. Call center operator and phone bill costs
 - b. Total expenditure
- 2) **Revenue** - via customer sales
- 3) **Pricing** - cost of service to user
- 4) **Customer engagement** - cost of acquisition (*captured once at end of project*)

User KPIs

*Reported quarterly, starting Q4. Reporting will be based on snapshot of user data generated from the CycleTel system, collected on the last day of each quarter for the quarter prior.

DEFINITIONS: Customer Pathway (see diagram below)

Pre-User – someone who is exposed to CycleTel brand via marketing/promotion and/or someone who expresses some *interest* in the service by taking part in an outreach activity

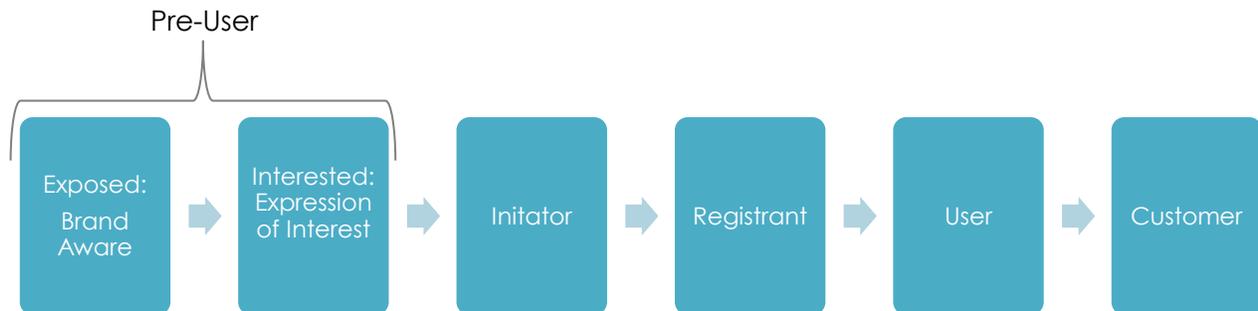
Initiator – someone who tries to initiate enrollment on the system by texting “JOIN”

Registrant – someone who successfully enrolls in the service and enters first period start date

User – someone who enters two period dates in a row

Customer – someone who pays to enroll in/use the service

Note: This pathway is illustrative for purposes of defining customer stages, not in defining our steps in engagement (e.g. sales, after-sales servicing, etc.) or continued use/retention as family planning users.



1) **Pre-users**

- a. KPIs to be determined based on selected marketing/distribution push. May include *brand exposure data* such as number of households reached or media reach, or *expressions of interest*, such as people who called the call center for more information, came to an informational meeting, etc.

2) **Initiators**

- a. # of new initiators acquired during the quarter
- b. # of cumulative initiators, ever

3) **Registrants**

- a. # of new registrants acquired during the quarter
- b. # of cumulative registrants, ever
- c. # or % of initiators who did not convert to registrants that quarter

4) **Users**

- a. # of new users acquired during the quarter
 - b. # of all active users during the quarter
 - c. # of cumulative users, ever
 - d. Quarterly snapshot of non-conversions (registrants to users): % of people who registered during the quarter but did not convert to users during the quarter *(as measured by % of registrants who signed up between the start of the quarter and at least 32 days before the end of the quarter, and have not entered their second period date)*
 - e. Cumulative non-conversion (registrants to users): % of people who registered but did not convert to users, ever *(as measured by % of registrants who registered at any point prior to at least 32 days before the end of the quarter, and have never entered their second period date)*
 - f. Cumulative churn rate : % of users who did not continue service after two cycles of use *(as measured by: % of users who have not entered a third period date more than 40 days before the end of the quarter)*
- 5) **Customers:** All "customer" data will be processed and sourced from MNO and/or payment partner, thus cannot be guaranteed until partnership established. CycleTel system does not generate payment data. Below KPIs will be requested but will be at the discretion of partner.
- a. # of new customers acquired that quarter
 - b. # of all current customers that quarter
 - c. # of cumulative customers, ever
- 6) **After-sales servicing**
- a. # of calls to the call center
 - b. Duration of use of service *(captured once at end of project)*.
of users who used the service for
 - i. 0-3 cycles
 - ii. 3-6 cycles
 - iii. 6-12 cycles
 - iv. +12 cycles

Milestone 2: Updates to IRH's Impact Evaluation Plan

INTRODUCTION

This document captures updates to IRH's evaluation plan for CycleTel. A plan was originally proposed in IRH's DIV proposal and, here, is edited to refine and clarify the activities that will occur during this project.

Overall, IRH's evaluation framework (see Figure 1) and the main objectives stated in the original proposal have not changed. As such, this document presents updates and expanded details to further illustrate our evolved evaluation plans across our three-pronged evaluation analysis:

- 1) **Social impact**
- 2) **Cost effectiveness**
- 3) **Business viability**

This document is divided into sections that address each of the three analyses.

To operationalize this three-pronged evaluation framework, we will rely on data collected through multiple systems and sources that will be set up for the project. Through routine data collection and continuous analysis, the project team (in India and DC) will use data to assess project progress, facilitate informed decision-making, capture lessons learned, measure impact, and report results for monthly KPI tracking as well as Milestone 8 (final evaluation assessment).

The social impact and business viability assessments will be led in-house by IRH. Since the proposal submission, IRH has confirmed a subagreement with Futures Institute to conduct the cost-effectiveness analysis. In addition, IRH is in the process of hiring a consultant to serve as an India-based Monitoring and Evaluation Manager. Updates below have been developed and designed by the respective organizations.

Figure 1: Project Evaluation Framework

| Evaluation methodology | Social Impact Analysis | Cost-effectiveness Analysis | Business Viability Analysis |
|--------------------------|--|---|---|
| Key evaluation questions | 1—What is the social benefit of CycleTel in terms of: a. Bringing new users to family planning b. Improving family planning use c. Engaging men in family planning | 2—To what extent is CycleTel cost effective as a development innovation? | 3—What is CycleTel's potential to become a sustainable innovation , based on progress outcomes and implementation learnings? |
| Data sources | CycleTel user database; phone surveys with users; in-depth interviews; call center logs | Data from Futures Standard Days Method costing study; costing spreadsheet set up for project; market research | CycleTel user database; CycleTel financials; partnership discussions; technology monitoring reports |

I. SOCIAL IMPACT ANALYSIS

A. Background:

Our focus for the social impact analysis is based on key principles included in the original proposal regarding the context and background of previous family planning, Standard Days Method (SDM) and CycleTel research. Those key principles include:

- The development impact of family planning is well-established, with numerous studies showing maternal and child health benefits as well as positive impacts on education, family income, and environmental and security stability.
- The effectiveness of SDM is well-documented through efficacy studies and assessments of use over time in India and elsewhere. Integrating SDM with CycleBeads into public health services is proven to be more cost-effective than other birth-spacing methods in three countries, including India.
- The CycleTel technology platform and messaging algorithm are rigorously tested and assessed for function and acceptability.

The social impact evaluation will not repeat these measures but rather address gaps in knowledge in terms of the unique social impact of CycleTel.

The social impact plan was built to reflect the specific structure of the DIV project. The project is built around a series of marketing experiments, which will be implemented with partners. These experiments will be implemented sequentially over the course of the project, resulting in increased users at specific times.

In addition, implementation of this plan will utilize the resources that IRH already has or is bringing on board now. Trained operators in the existing call center will implement customer surveys, and IRH is currently recruiting a manager for monitoring and . Efforts from our marketing and distribution partners will complement these resources.

B. Purpose:

To measure CycleTel's social impact, we will assess the social benefit of CycleTel as a family planning method in terms of three main domains: 1) bringing new users to family planning; 2) improving correct use and continuation of family planning use; and 3) engaging men in family planning.

We have formulated the following questions to address these domains of interest:

1. Does CycleTel bring new users to family planning, either as continued CycleTel users or as a gateway to other family planning methods?
2. Does CycleTel improve family planning use?
3. Does CycleTel effectively engage men in family planning?

A key element of the social impact of CycleTel is **its ability to bring new users to family planning**. As a non-hormonal method with no side or long term health effects, it may appeal to women and couples who are dissatisfied with the options currently available to them. Moreover, due to its unique service delivery modality, CycleTel may reach those who lack access (geographic, social, economic, or otherwise) to other family planning options. We also posit that CycleTel may serve as a "gateway" to other family planning methods and could be another way of bringing new users to family planning. We will assess this first

element of the social impact of CycleTel by determining whether CycleTel subscribers are new to FP (e.g. not using a modern method at the time they enrolled in the service) as opposed to switching from another method. We will also explore whether those who discontinue CycleTel move on to another method of FP in order to determine the role of CycleTel as a gateway to other methods.

In terms of the second area of social impact – **improving correct use and continuation of family planning use** – across methods, it is known that many women use their method incorrectly or discontinue use after several months and do not go onto use another method. Our assessment will measure correct use and continuation of CycleTel to determine its contribution to improved family planning use. Successfully managing fertile days and continuation of use are the two most important factors of correct use.

The final area of social impact is CycleTel’s ability **to effectively engage men in family planning**. In India and around the globe, men can be a significant barrier to method use. CycleTel offers a viable option for men and women to be positively engaged in family planning use. Our social impact assessment will assess whether women are able to avoid unprotected sex during the fertile days, as a measure of male involvement.

C. Design and Methods:

To address these questions related to the social impact of CycleTel, we will rely on three data sources:

1. Automated data from the CycleTel system;
2. Customer feedback surveys; and
3. In-depth interviews with a sample of users.

IRH will collect data during each customer acquisition phase to provide insight into any variations in results among potentially different user bases. Collection of data from multiple sources and from the different experiences of CycleTel customer acquisition will increase the reliability of the social impact assessment and address concerns about the extent to which effects are unique to a particular experience. For example, although there will inevitably be selection bias in customers who agree to be interviewed, information on all users will be provided through the automated CycleTel data.

The **automated CycleTel system** captures and stores real-time user data on all user/service interactions in an online database. This includes user points such as enrollment date, cycle start date, duration of cycles, number of cycles a user is on the system, drop off date etc. As such, we can assess SDM method use by looking at system activity. For example, we assume that if users input their cycle start date each month, then they are continuing CycleTel use. A limitation of this data, however, is that the system does not capture any personal user information (e.g. sex, age, marital status, socioeconomic status), nor does it provide information related to satisfaction, actual use, or behavioral outcomes.

Therefore we will conduct **targeted phone surveys** with users at three key stages of the user experience: new, continuing, and discontinued. Three different customer surveys will be designed and conducted for each of these stages, defined as:

1. Used CycleTel for at least one cycle (*new user*)
2. Used CycleTel for at least three cycles (*continuing*)
3. Discontinued use of CycleTel (*discontinued*)

These interviews will be conducted on a rolling basis, structured around our marketing experiments. We plan to pilot at least two customer acquisition strategies which will be implemented in a phased manner during the project period. We will analyze automated system data and conduct customer surveys during both phases. We will attempt to reach 100 new, continuing and discontinued users during each marketing phase which will result in a goal of at least 600 customer interviews (300 per marketing phase).

Ideally, we will not be tracking the same individual throughout their CycleTel lifecycle; rather we will select a random sample each month of new, continuing, and discontinued users. This process will enable us to collect information on a larger number of individuals, rather than following 200 individuals throughout their experience with the service. All survey participants will be selected from the CycleTel customer database. If needed, depending on the number of customers who agree to be interviewed, we may decide to approach those interviewed as new or continued users if they discontinue at a later date. We may also consider stratifying the sample to include users who discontinue when the service transitions from a free promotional trial to a paid service.

Table 1 provides information on the purpose and timing of the customer phone surveys with new, continuing and discontinued users. While the interviews with new users seek to answer whether CycleTel brings new users to family planning, the interviews with continuing and discontinued users focus on assessment of continuation and correct use.

Table 1: Summary of customer phone surveys

| | New users (after 1 cycle) | Continuing users (after 3 cycles) | Discontinued users (any time) |
|------|---|---|--|
| Why | <ul style="list-style-type: none"> • Determine if CycleTel is reaching new users • Understand user profile • Determine how users learned about the service | <ul style="list-style-type: none"> • Assess correct use and continuation • Assess engagement of men • Understand reasons for satisfaction or discontinuation | <ul style="list-style-type: none"> • Assess correct use and continuation of CycleTel • Determine if CycleTel users are switching to another method • Understand reasons for discontinuation • Assess engagement of men |
| When | Starting two months after each market experiment, rolling | Starting six months after each marketing experiment, rolling | Starting 3-4 months after each marketing experiment, rolling |
| Who | Users who have completed one cycle of use (entered two period dates) | Users who have completed three cycles of use (entered four period dates) | Users who have completed one cycle and not entered a subsequent period date after 50 days |

User surveys will be conducted via phone, as we assume that CycleTel customers are comfortable receiving calls and speaking on the phone. This is one of the most viable ways for us to reach users, as they are geographically spread across the country and their specific physical locations are not known. The survey will be brief, ideally lasting no more than ten or fifteen minutes; this timing is based on findings during our pre-testing which showed that consumers were unwilling to participate in lengthy phone interview. Trained call center operators fluent in local languages will conduct the interviews.

In addition, some of our potential marketing partners have the capability of conducting **in-depth, in-person interviews** with a small sample of users to provide insight into the quantitative data we are collecting, such as reasons for satisfaction or discontinuation. For example, a partnership with a local organization that employs a face-to-face outreach strategy may provide opportunities for follow-up interviews with continuing and discontinued users. The feasibility of conducting such interviews is pending until partner confirmation. If it does prove to be possible, the design of this assessment component will be based on interim results from the automated CycleTel data system and customer surveys. Preliminary analysis of these data will inform us into the areas where further, in-depth understanding of the experience of CycleTel users is most needed.

D. Variables

Information will be collected to measure key indicators of social impact, specifically:

1. Percentage of surveyed CycleTel users who are new to family planning and either continue with CycleTel or transition to other family planning methods;
2. Correct and continued use of CycleTel;
3. Male engagement in family planning

We will also collect data to explore issues relevant to efforts to improve and expand the service, such as:

- Pros, cons, and unique attributes of each marketing strategy
- Effectiveness of customer acquisition strategies
- Typical profile of users
- Motivation for CycleTel use, including planning or preventing pregnancy
- Likelihood that customers share CycleTel information with others

The indicators that we will collect to answer our evaluation questions and to improve the service are presented in Table 2 by source of the information and timing of data collection.

System data will produce key indicators on CycleTel use while the phone surveys will yield information to assess knowledge, utilization, and satisfaction with CycleTel over time. The phone surveys will also allow us to determine basic demographic information on CycleTel customers, such as sex, age, geographic location, marital status, and/or socioeconomic data. This information will both help us focus further marketing efforts and allow us to explore whether those factors influence uptake and continued use of CycleTel.

Table 2: Indicators, Data Source and Timing

| Data Source | Indicator | Timing |
|---|--|-------------------|
| On-demand user data, captured and stored in CycleTel system; reports generated by online customer reporting system | <ul style="list-style-type: none"> • # of new, continuing and discontinued users • Average # of cycles per users | On demand, online |
| Customer feedback surveys over the phone with new, continuing and discontinued users | <ul style="list-style-type: none"> • User profile (such as age, marital status, SES residence) • Previous and current use of family planning • Reasons for CycleTel uptake (to achieve or | Rolling |

| | | |
|---|---|---------|
| | <p>prevent pregnancy)</p> <ul style="list-style-type: none"> • Source of information about CycleTel • Reasons for selecting CycleTel over another family planning method • Reasons for continuation/discontinuation • Satisfaction with the service • Correct use by avoiding unprotected intercourse on fertile days • Communication with partner about CycleTel/FP • Communication with messages/service with others | |
| In-depth interviews with sample of users via partner, if possible | <ul style="list-style-type: none"> • Reasons for continuation or discontinuation • Correct use by avoiding unprotected intercourse on fertile days • Communication with partner about CycleTel and/or family planning | Rolling |

E. Implementation

Data from the CycleTel customer data base will be analyzed monthly by the IRH Monitoring and Evaluation (M&E) manager and shared with the team to inform implementation decisions as well as to contribute to the social impact assessment. Phone surveys will be conducted on a rolling basis timed to user enrollment and discontinuation during both phases of marketing acquisition.

The phone surveys will begin two months after the first marketing experiment rolls out and will continue through spring of 2016. Monthly, the IRH M&E officer will identify a sample of CycleTel users identified by the system as new, continuing or discontinued and provide the call center staff their contact information. Call center operators will contact users in a manner that complies with Georgetown research protocols and the relevant Indian regulations. The process could include sending an SMS consent form, using SMS to schedule a time for a future interview, calling users who have agreed to be contacted through a terms and conditions document, or other similar procedures. The M&E officer will establish a dashboard for the interviewers to keep track of the users to call, the number of attempts to reach each one and completed interviews. The M&E officer will also be responsible for training and monitoring the interviewers to ensure that they comply with the protocol and produce high quality data in a way that protects the rights of study participants. Data will be recorded in an Excel spreadsheet by the interviewers and exported into SPSS for analysis. The study protocol will be approved by the Georgetown University IRB and a corresponding body in India.

II. COST EFFECTIVENESS ANALYSIS

A. Background

Section II outlines the plan by which Futures Institute, in partnership with IRH, intends to assess the cost-effectiveness of the SDM using CycleTel in comparison with the SDM using CycleBeads, as well as with other spacing methods such as oral pills, condoms, and injectables. Cost-effectiveness analysis is a method to compare the efficiency of different approaches in meeting a given objective. As one among many ways to meet the birth spacing needs of Indian couples, it is important to compare the cost-effectiveness of SDM with CycleTel to SDM with CycleBeads as well as to other spacing methods such as oral pills, condoms, and injectables. To assess CycleTel, Futures will adapt a costing methodology used to assess the cost of SDM with CycleBeads in Guatemala, India, and Rwanda (Rosen et al. 2013) to the study of CycleTel.

B. Purpose

To measure CycleTel's cost effectiveness, we will assess the cost of using SDM with CycleTel in comparison to other family planning methods by looking at five key sub-questions:

1. What is the first year cost per new user of CycleTel and how does this compare to the cost per new user of SDM with CycleBeads and other, similar family planning methods?
2. What is the cost per user for subsequent years of use of CycleTel and how does this compare to the cost per user of SDM with CycleBeads and other, similar family planning methods?
3. What is the cost per couple-year of protection (CYP) for CycleTel and how does this compare to the cost per CYP of SDM with CycleBeads and other, similar family planning methods?
4. What is the cost per birth averted of CycleTel how does this compare to the cost per birth averted of SDM with CycleBeads and other, similar family planning methods?
5. What is the cost per disability adjusted life year (DALY) averted of CycleTel how does this compare to the cost per DALY averted of SDM with CycleBeads and other, similar family planning methods?

C. Design and Methods

A fair comparison of the cost of diverse methods requires inclusion of cost categories that are comparable. The study requires information on costs of CycleTel and other methods to which it is being compared. The unit cost, or cost per user, is the basic cost unit from which the study will generate additional cost-effectiveness estimates. The study requires estimates for both first year cost per new user and cost per user for subsequent years of use for both SDM using CycleBeads, SDM using CycleTel and other methods.

Costing of family planning methods typically encompasses three main categories of costs:

1. The direct cost of the commodity used (for example, a cycle of oral pills, or the CycleBeads used for SDM);
2. The direct labor costs of clinic staff who interact with clients, providing clinical and counseling care; and
3. Program support costs such as overhead, management, supervision, etc.

Estimating unit costs of SDM with CycleTel

As a non-clinical, direct to customer service, CycleTel differs from the typical family planning methods, and thus has a somewhat different yet analogous cost structure. The three main elements of CycleTel cost that the study will measure are the following:

- **System costs.** These are costs associated with hosting the CycleTel algorithm, software and database, deploying the SMS messages to users, and integrating with other telecommunications and mobile payments companies to make the system functional. This cost category does not have a straightforward analogy to a cost category for other family planning methods, but are closest to the category of commodity costs, because the ICT element is critical to the proper “mechanism of action” of CycleTel. Research and Development (R&D) costs, as well as initial costs to develop and operationalize the system, will not be included.
- **Customer service call center.** These are costs associated with running a customer service call center that responds to customer questions related to using CycleTel. These costs are analogous to the cost of the time community health workers spend with family planning clients on counseling and service provision.
- **Program support and supervision.** These are costs associated with time spent by program support and supervision staff in facilitating CycleTel operations. These are analogous to the costs associated with the time spent by family planning program managers and supervisory staff managing implementation of service delivery.
- Cost data on system, customer service call center, and program support and supervision costs will be collected from IRH DC and India accounting records. To generate an average cost per new user, these cost categories will be divided by the annual (over a period of 12 months) number of subscribers.

In addition to these three elements that cost studies typically cover, the study will also include the costs to the CycleTel user, including the following:

- **CycleTel subscription.** The cost of CycleTel to the user will include the cost of subscription to the CycleTel service. This cost is analogous to the cost of a family planning commodity.
- **User time.** We will also cost the average user’s time spent registering into the CycleTel system and the time spent reviewing message alerts and/ or speaking with the call center.
- **Cost of fertile day management.** Many users choose to manage their fertile days with supplemental forms of family planning such as condom.

For the purposes of this analysis, a user is defined as a woman who initiated enrollment on the system by texting JOIN, successfully enrolled in the service, entered two consecutive period dates. The average attrition rate, i.e. the average number of users who started during the year and are no longer actively subscribing to CycleTel either during that year or in the subsequent year, will also be included in the calculations to estimate continuity. If the study timeline is such that a full year of data on subscribers is not available, the study will use a partial year, aiming for a minimum of ten months. The partial year data will then be annualized to generate the annual number of subscribers.

To estimate the unit cost for second and subsequent years of subscription, data on expected costs for the second and subsequent years will include cost the three major cost categories – system, customer center and program support and supervision. Instead of using initial subscribers as the denominator, the study will use an estimated number of

subscribers from the previous year, less the attrition rate (i.e. the estimated number of subscribers who started in the previous year but are no longer subscribing). These costs, while not required in the evaluation by the Milestones, will be necessary to calculate the cost effectiveness component of this study.

The estimated cost to the subscriber for the second year will only include the estimated annual subscription and the cost of supplemental family planning methods such as condoms, as user time is likely to be negligible.

Estimating unit costs of SDM with CycleBeads and other resupply methods

For accurate cost comparison, we will use the unit cost data of SDM for CycleBeads and other short-term condoms, oral pills, and injectables that are reflective of the New Delhi context. The cost categories include method commodity cost, health worker time spent providing direct family planning method services to a user, and program support and supervision staff costs.

- **Commodity Cost.** This is the cost of the contraceptive commodity (procurement and distribution costs divided by the number of units). The unit cost is calculated by multiplying the contraceptive commodity cost by the average number of units needed for a year (12 month) supply.
- **Health worker time.** This is the average time spent by the provider in providing direct family planning method counseling and services during a year. The cost of staff time is calculated using the annual salary and benefits for the provider to calculate a cost per minute. The total number of minutes the worker spends with the client depends on the number of minutes per visit and the number of visits per year. This varies by method and whether the user is new or continuing.
- **Program support and supervision costs.** These are costs accrued by facility program support and supervision staff. These costs are calculated by the average annual salary of program support staff multiplied by the level of effort spent or portion time spent by the program support and supervision staff on supporting the delivery of contraceptive methods offered at the facility. The average cost can also be calculated by the average annual salary of program support and supervisory staff divided by the number of client visits of each contraceptive method over a period of a year (12 months).

Data sources for these cost categories will include existing studies such as the SDM Costing Study (Rosen et al. 2013), supplemented by data from the Indian National Family Health Survey, Demographic and Health Survey, and the Multiple Indicator Cluster Survey. A detailed description of the data collection process and analysis for the cost categories above will be determined and described in the protocol to be developed.

In addition to the cost elements described above, the analysis of the cost of SDM with CycleBeads and similar resupply contraceptive methods will include costs to the client, including the following:

- **User time.** We will value the opportunity cost of time for annual clinic visits,
- **Cost of fees paid for clinic visits,** the average cost of a visit multiplied by the estimated number of visits for each method to generate the annual cost.
- **Cost of transportation.** The cost average cost of transportation, if any, to and from the clinic for a visit multiplied by the average number of visits in a year.

This will ensure greater comparability to the CycleTel unit cost described above, Data on the cost to the user will be derived from existing data, for example from the Indian National Family Health Survey, Demographic and Health Survey and/or the Multiple Indicator Cluster Survey or from Futures' previous costing work with SDM. The details of how user information will be gathered will be determined during the development of the protocol.

The cost per subsequent year of use for CycleBeads and other resupply methods will be based on the same approach used in the SDM costing study (Rosen et al. 2013). The costs will include an average number of follow-up visits but not the cost of the initial visit. The cost per subsequent year of use to the user will include user time, clinic fees for follow-up visits, and transportation costs.

Outcome analysis and comparison

The cost per new user and for subsequent year of use will feed into additional cost-effectiveness comparison that use effectiveness measures reflecting service use and health outcomes. These include the following:

Couple-years of protection (CYP). CYP translates the quantity of a contraceptive method sold or distributed free of charge to users during a one-year period into the estimated protection from unwanted pregnancy during a one-year period. The CYP for each method is calculated by multiplying the quantity of the method that was distributed to users by a conversion factor, to generate an estimate of the duration of the contraceptive protection provided for each unit of that method (Wishik and Chen 1973, Stover et al., 2000, Measure Evaluation 2014). For the purposes of this study, we will assume that the CYP calculation for CycleTel is equivalent to the CYP for SDM with CycleBeads.

The cost per CYP will be calculated by dividing the estimated cost per CycleTel user for the first and second year by the CYP value for CycleTel over the same period. For comparison, the cost per CYP for CycleBeads, oral pills, condoms, and injectables will be calculated in a similar manner (cost divided by CYP) over two years.

Births averted by method. This measure is calculated by subtracting the estimated number of births that would occur without the use of a family planning method from the estimated number of births that would occur with the use of the family planning method. The number of births with or without use of a family planning method is based on proximate determinants of fertility (Bongaarts 1978, Stover et al. 2000). The births averted calculation takes into account the method continuation rate (that is, the percentage of women are still using the method after one year of use). The study will use established continuation rates for SDM with CycleBeads and the other resupply methods. As noted above, the continuation rate for CycleTel will be calculated as part of the project evaluation and feed into the births averted calculation undertaken for this cost-effectiveness analysis.

The cost per birth averted will be calculated by dividing the estimated cost per CycleTel user for the first and second year(s) by the births averted (including the continuation rate in the second year).

Disability-adjusted Life Years (DALY) averted by method. A DALY is defined by the WHO as "one lost year of healthy life" (WHO 2014). The DALY measures the difference between the current health status of a specific population (for example, women of reproductive age) and an ideal health situation where the entire population lives to an advanced age, free of disease and disability. Therefore, the DALY averted per family planning method is the estimated number of life-years gained from preventing unwanted pregnancy as a result of

the use of that family planning method. We will calculate DALYs averted by family planning method drawing on the methodology of Marie Stopes International's IMPACT calculator (Weinberger et al. 2013).

The cost per DALY will be calculated by dividing the estimated cost per CycleTel user for the first and subsequent year by the estimated DALY (discounted for second year as a result of the method continuation rate).

Market segmentation analysis

To facilitate and optimize client uptake of CycleTel, this study will conduct a market segmentation analysis based on client income/economic status and other relevant demographic characteristics. While unit cost and CYP do not vary by socioeconomic status of the user, proximate determinant factors such method mix and percent of fertility at a given age that affect the calculations for births averted have been shown to vary by socioeconomic status. This study will create three user profiles: low, medium, and high socioeconomic status and assess births averted that correspond to each profile. The results of this analysis will then be compared to the background of the average CycleTel user. Data on income status will be based on secondary analysis of existing surveys such as Indian National Family Health Survey, Demographic and Health Survey and/or the Multiple Indicator Cluster Survey) compared to a sample survey of CycleTel users. The details of the analysis will be determined during the development of the protocol.

D. Implementation

The study will use a two-year analytic horizon based on a minimum of ten months of subscriber data that are annualized as well as standardized assumptions of continuation rates used in the SDM costing study to calculate first and second-year unit costs as well outcomes such as CYP, cost per birth averted and capture the effect of method continuation (Rosen et al.).

For time and budget reasons, this study will focus on the cost of delivering CycleTel in the Hindi-speaking belt of Northern India.

The study foresees a study timeline of 20 months starting in November 2014 and ending with a written report by June 2016.

III. BUSINESS VIABILITY ANALYSIS

To determine if CycleTel has the potential to become a sustainable business, the project will be monitored and evaluated across the three strategic priorities – technology, market, business – during implementation. Table 3 is an illustrative set of ongoing evaluation criteria for each strategic priority, throughout the duration of the project.

The business viability assessment will rely heavily on the KPIs that will be reported to DIV quarterly. These KPIs, which include both customer numbers and financial monitoring, will illustrate our progress in terms of acquiring and retaining customers in a cost-effective way.

Towards the close of the project, IRH will create a reflection and recommendation document that will outline our conclusions regarding the viability and future potential of CycleTel. It will reflect on key questions, like those illustrative questions below, and the cumulative KPIs to date. This report, listed as part of the Final Report for Milestone 8, will conclude, as per the milestones, with IRH's assessment as to whether the business may or may not be viable for greater scale-up.

Table 3: Illustrative Evaluation Criteria across CycleTel's Strategic Priorities

| Criteria/Questions |
|--|
| TECHNOLOGY |
| Is the operational infrastructure in place to launch the service, including scalability of the software and integration with SMS, payment gateway and a call center? |
| Are the required partnerships in place to ensure smooth service operations? |
| Which operating systems, if any, need improvement to increase customer satisfaction and cost-efficiencies? When will these changes be made and what is the cost? |
| Is the service's monitoring system reliable and useful? |
| Are analytics captured accurately and analyzed to inform technology adaptations? |
| MARKET |
| Are appropriate initial partnerships in place to drive customer acquisition, across a mix of outreach channels? How many and through which channels? |
| To what extent do marketing strategies and distribution channels generate users? Which ones are the most effective? |
| What is uptake by month/ quarter? How is it connected to the distinct customer acquisition strategies? |
| To what extent does the pricing model meet consumers' willingness-to-pay? |
| BUSINESS VIABILITY |
| Does the pricing model make business sense? Which revenue-generation model(s) are successful? |
| How will trading occur in India, and what business structures/units are in place to support this for the short term? What is the longer term plan? |
| Are an appropriate # of sub-licenses in place? Are these relationships sufficient for operations? |
| Are COGS, gross margins, net margins, sales, etc., on track with financial model assumptions, given the customer base that is being generated? |
| What threats exist in the marketplace? How should they be managed? |
| How much leverage and cost-share is the project generating and from whom? |

CYCLETEL™: EXPANDING ACCESS TO FAMILY PLANNING VIA MOBILE PHONES | **MILESTONE 3**

*Institute for Reproductive Health, Georgetown University
April 2015*

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I. EXECUTIVE SUMMARY

This report serves as the Milestone 3 deliverable to meet the requirements of the CycleTel DIV agreement, which states:

“Milestone is considered fulfilled when the following actions have occurred and the deliverables and/or associated narrative have been submitted to the AOR for review/concurrence:

- *Technology platform, SMS gateway, and payment system solidified and integrated for operational launch; call center functional.*
- *Strategies and/partnerships are confirmed for implementation; marketing & communications partner identified and confirmed.”*

All of the above actions have occurred successfully, and are detailed in this report. The report narrative describes the first nine months of progress and lessons from the CycleTel project. The first nine months of this DIV project – known as Pre-Launch Phase – focused on the key activities that were needed to solidify a public launch of a market-based consumer service, ranging from initial business modeling, technology functionality, marketing strategy, partnership negotiations, and legal considerations. The Pre-Launch Phase was the critical runway to cementing a strong go-to-market plan, impacting all future activities and viability. Additionally, these nine months were critical to ensure the service was ready to go live to consumers for the first time outside a research setting, at a large national scale.

CycleTel Humsafar (note that CycleTel has been rebranded as CycleTel Humsafar, referenced as such moving forth) beta launched to select users in early April, and will be available to over four million people beginning May 2015. There have been slight project delays, but we do not anticipate that they will impact the overall project timeline.

Current Project Snapshot describes CycleTel Humsafar service rollout and timeline in greater detail. It also details our current status and go-to-market partnership with HCL Ltd., to offer CycleTel Humsafar on the Life Tools application.

Our goals for the nine months included:

1. Assess the current mobile market and distribution approaches in India to determine **go-to-market strategy and key business model** for launch
2. Solidify all **technology** requirements, functionality and operations for launch
3. Develop and design a **marketing and communications** plan, consumer-facing brand identity, and customer acquisition partnerships for launch

The report is structured around these three goals.

Go-to-Market Strategy focuses on the strategic drivers and framework for assessing and determining the most viable go-to-market model for the CycleTel Humsafar. It outlines the process we undertook in understanding the current commercial mobile environment in India and mobile acquisition distribution strategies to best assess our options for rollout, with both sustainability and social impact in mind. This section details our decision to partner with HCL Ltd, who manages the application Life Tools (a pre-embedded basic phone SMS app with over 50 million users in India) to offer the CycleTel Humsafar service to users.

The strategy to work exclusively on the Life Tools application was driven by technology and marketing considerations. **Technology Milestones** describes how all technology components (technology platform, SMS gateway, payment system, and call center) have been solidified and integrated for operational launch, and **Marketing and Communications Milestones** describes how marketing and communications partners have been identified and confirmed for the first customer acquisition experiment.

We conclude with **Conclusions** to reflect on the remainder of the project.

II. CURRENT PROJECT SNAPSHOT

Section II outlines current status nine months into the DIV project, highlighting the major milestone of selecting our go-to-market strategy to partner with HCL Ltd. The CycleTel DIV Project is designed around four phases, as illustrated below. This report outlines all activities in the Pre-Launch phase, now complete.



The timeline is delayed by about two months due to longer than anticipated start-up time in negotiating a large partnership and revenue-share agreement with HCL. This should not significantly impact the timeline of the project.

A. Where We Are Now: Partnership with Life Tools

IRH has integrated the CycleTel Humsafar system with the Life Tools application. Life Tools is an information platform that is pre-downloaded on Nokia handsets¹ in India and provides information on agriculture, health, and education to over 50 million users across the country. This integration, in essence, makes CycleTel Humsafar a part of the Life Tools mobile application, rather than a stand-alone service. HCL Ltd. is the private sector entity that owns and manages Life Tools. Details of the decision making process to proceed with this model is outlined in **Section III**.

¹ Life Tools, formerly known as Nokia Life, was owned by Nokia until 2013 when Nokia was bought by Microsoft. When the acquisition occurred, Nokia/Microsoft originally had intended to cancel the Life Tools service but subsequently maintained it by outsourcing to HCL, the current partner. As such, the named partner is now HCL, and the named service is Life Tools.

The CycleTel Humsafar service, as part of Life Tools, will fully launch in May 2015, and will be offered in 12 languages nationally over the course of 18 months. IRH will take a phased approach to rollout in order to best accommodate the large scale of users. The phasing will be done on a geographical basis, and will enable the team to incorporate lessons and iterate along the way. The phases are as follows:

Table 1. CycleTel Humsafar Roll-Out

| Phase | Languages/zones targeted | States targeted | Service availability Start Date |
|------------------|--|---|---|
| Phase I | English Hindi Punjabi Oriya | Uttar Pradesh East Uttar Pradesh West Haryana Delhi Himachal Pradesh Punjab Orissa | May 2015 |
| Phase II | English Hindi Bengali Assamese Marathi Gujarati | Bihar and Jharkhand West Bengal Kolkata Assam Maharashtra Mumbai Gujarat | October 2015 |
| Phase III | English Hindi Tamil Kannada Telegu Malyalam | Tamil Nadu Chennai Karnataka Andhra Pradesh Kerala Madhya Pradesh and Chhattisgar Rajasthan | April 2016 (Note this stage will not be part of the DIV project due to timing) |

A commercial agreement between HCL and IRH was negotiated, with the following result:

- Users will pay 10 Rs per month for service use. This will enable us to test the user payment model.
- HCL will retain 90% of the revenue generated from the paid service; IRH will retain 10%, which will be used for program expenses. As discussed in Section III, this rate was comparable with other revenue share agreements with mobile network operators (MNOs).
- HCL will cover all SMS deployment costs and technology maintenance costs for the service. This covers the majority expenditure for cost of goods, relieving IRH of a large cost item.

- HCL has agreed to support (technically and financially) the service through December 2016. At that date, HCL will decide whether to continue to support CycleTel Humsafar. If the service is stopped, HCL and IRH will agree upon a transition plan to avoid interruption of the CycleTel service for users.

B. Why Life Tools?

Life Tools offered the best partnership opportunity for operational, technical and financial viability. They had a large user base to draw from, agreed to accept liability for service delivery, and funded their portion of the integration costs up front. Key compelling advantages of this partnership include:

- **Target Market** – The platform is embedded in entry-level smartphones and feature phones, compatible with the target group.
- **Multi lingual** – The Life Tools platform offers the user choice of 11 vernacular languages for content in addition to English. Local language functionality is unique to the Life Tools platform.
- **Built-in customer base and marketing channels** – The Life Tools platform has a user base of 50 million people. By embedding CycleTel in Life Tools, the cost of demand generation activities will be lowered, as it is a familiar tool and brand. Customer discovery will be higher.
- **A streamlined technology platform approach** – Life Tools seamlessly serves both roles of SMS aggregator for message deployment and payment partner for user fee collection.
- **A promising pathway for financial sustainability** – As outlined above, the commercial arrangement was one of the strongest offers compared to other options, and offers the potential for long term success.
- **Consumer liability protection** – IRH/GU's legal status in the US presented complications for consumer protection law in India. By integrating with Life Tools, all consumer liability was taken on by HCL.

One limitation of this partnership is the restrictions on the type of devices that host Life Tools; this makes it difficult to try offline marketing to support retained usage. Additionally, the existing interface is not ideally suited to the user experience with CycleTel Humsafar. However, we believe that HCL offers the most viable go-to-market strategic choice, as detailed in the next section.

III. GO-TO-MARKET STRATEGY

A. Introduction

Prior to the DIV project, CycleTel Humsafar had successfully undergone several rounds of testing with respect to usability, willingness to pay, acceptability, and product design. For the DIV project, the focus is on operationalizing processes and strategies that would enable acquiring and supporting 100,000-150,000 users across India. As such, the DIV key goals require new changes to our thinking and the service itself due to the following fundamental shifts:

- **Testing a paid model** – CycleTel had no payment functionality or revenue generation strategy, as it was a free service.
- **Reaching users at scale** – CycleTel Humsafar had approximately 1,500 users total. We did not have market-based strategies to gain and retain new customers.
- **Entering the consumer market** – All users were part of confined research studies; we did not have a consumer-facing brand, service, or legal protections.

The key work of the Pre-Launch Phase was solidifying the model in which to operationalize all of this in a sustainable and impactful way. This section outlines our journey in arriving at the go-to-market pathway, highlighting the available options. This context is critical to understanding the work IRH completed in the past nine months, and why we believe that working with HCL and Life Tools is the most suitable moving forth.

B. Key Evaluation Criteria

To help focus our assessment of the most appropriate go-to-market models, we used three key criteria points:

1. **Scalability:** To achieve the goal of going from a few hundred users to hundreds of thousands requires a fundamental shift in the service model, firstly in the type of relationships that were pursued and secondly the cost structure for partnerships. We prioritized initiating relationships that had a captive consumer base that could be reached with limited resources or partnerships that were easily replicable (e.g. several small partners that could be added into a network). We considered cost structure as related to scale, with aim on containing or lowering costs as we expanded our user base. So partnerships where operational expenses would linearly rise with scale or where continued investment in fixed cost was required were deprioritized.
2. **Revenue Generation Potential:** The goal of exploring a revenue generation model as a route to cost-recovery/effectiveness is key to the DIV project. This objective dictated our strategy going ahead in model selection (as a common model in the technology space is to first acquire a user base and then consider ways on monetizing the service). However, we decided not to delay revenue generation for

the latter, and our choice of model needed to effectively and efficiently enable us to do so. Though supplemental revenue generation may be looked at from alternate sources, it was important to start with a model where at least the cost of goods was covered.

3. **Operational Feasibility** – As DIV is a two-year project, the timeline became an important consideration during partnership exploration and negotiations. We wanted to prioritize pathways that would be feasible under project timelines as well as the quickly evolving India mobile market. While some models sounded compelling, they were not feasible because of lag time, technical investment, operation complexity, etc. Priority was given to operationalizing the service with one feasible partner and acquiring paying users.

C. Pathways to Scale

A guiding question when developing our go-to-market strategy was: “How do new products and services gain and retain users?”

CycleTel Humsafar is a unique service. It is a digital/ mobile service; as such, we explored how other mHealth services scale their user bases and how Value Added Services (VAS)² like CycleTel Humsafar reach potential users and enter a market. In addition, it is a new family planning product. Though not a physical product, it represents a new family planning method, a new brand, and a new service. We explored how other new products scale their user bases and how family planning commodities reach potential users and enter markets. We spoke with both 1) digital/mobile service partners and 2) more traditional offline product partners.

1. The VAS Market: Digital Partners

VAS services are owned, managed, and/or deployed by a variety of telecommunications actors, including:

- **SMS Gateways** – Gateways provide the technical functionality to transmit SMSes from a service's tech platform to end users. Unicel is one example.
- **Mobile Network Operators (MNOs)** – MNOs are telecommunications service providers such as Airtel, Idea, and Vodafone. These companies promote a range of mobile-enabled services to their user bases. In India, the telecoms sector is highly fragmented (there are 23 different geographical circles; each circle has about 5-6 MNOs offering services to users). This fragmentation creates a major barrier in creating universal availability, as each circle behaves as an independent entity and individually decides the services that will be offered to its user base.
- **Aggregators** – Aggregators manage VAS for content providers as well as MNOs. They tend to have partnerships across multiple MNOs so content providers can avoid

² VAS services are additive services on the phone that add value beyond standard voice calls. Common VAS services are ringtones, horoscopes, cricket scores, etc.

independent deals with each separate MNO. Aggregators are integrated with MNOs for other services such as entertainment or bill pay and can provide carrier billing. Aggregators with a large presence in India (and globally) include One97 on OnMobile.

- **Handset Manufacturers** – Manufactures of phone hardware/phone devices, such as Nokia, Intex, and Micromax have embedded software applications on their phones to enable in-phone purchase of games, entertainment, and other VAS.

We held conversations and early negotiations with about ten of these actors (**see Appendix I**). The initial discussions with these partners were quite promising as CycleTel Humsafar presented a new business model; however, macro-economic factors affected partners' eagerness to take on new services. We had limited options in pursuing this route. Details of the evolving VAS market are included in Appendix I.

2. The Distribution Market – Offline Partners

We engaged with over 50 potential offline distribution and marketing partners, including community-based NGOs, microfinance groups, other mHealth services, private health clinics, social enterprises, etc. We reached out to these partners to explore a B-2-B (business-to-business) model and to help us distribute CycleTel Humsafar to their communities and/or user groups. These partners would be based on more traditional distribution supply, where intermediaries (such as agents, community leaders, health providers, etc.) would be the touch point between CycleTel Humsafar and the user. Initial discussions showed much interest in the service, but operational barriers seem to challenge partnership opportunities.

3. Comparing the Two Market and Pathways Forward

Below is a list of benefits and challenges of working with an offline partner judged against our criteria:

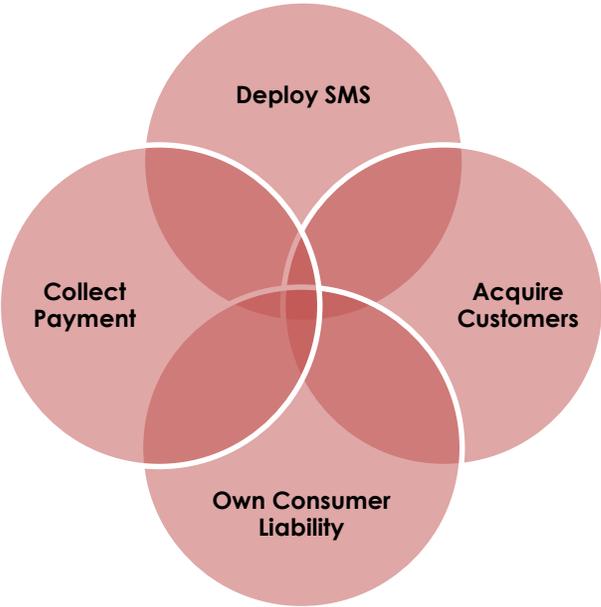
Table 2. SWOT Analysis and Criteria Scoring for Digital and Offline Partners

| | Digital Partner | Offline Partner |
|--------------------|---|--|
| <i>Example</i> | <i>Airtel, OnMobile, Unicel, Life Tools</i> | <i>Praena, World Health Partners, SEWA</i> |
| Strength | <ul style="list-style-type: none"> • Scale • Seamless payment collection • Expertise in VAS market | <ul style="list-style-type: none"> • Extended customer engagement • Mission alignment • May be leveraged to create referral/agent model • Customer trust and loyalty |
| Weakness | <ul style="list-style-type: none"> • Customer anonymity • Customer retention | <ul style="list-style-type: none"> • Not cost effective • Incremental growth • Investment required in product development |
| Opportunity | <ul style="list-style-type: none"> • Rapid national scale-up • Product development support | <ul style="list-style-type: none"> • Acquiring loyal customers • Inputs for product development |
| Threat | <ul style="list-style-type: none"> • Disadvantageous revenue model • Partner may demand exclusivity | <ul style="list-style-type: none"> • Too many different partners to manage • Difficult to scale |

| | | |
|--------------------------------|---|------------------------|
| | • Partner may not be completely engaged | • Payment tracking low |
| Scalability | H | L |
| Revenue Potential | H | M |
| Operational Feasibility | M | L |

No matter how IRH structured the service, we knew that we would have to rely on one or more partners to provide the following four key components needed for successful service operations and market strategy:

1. SMS Deployment Functionality – The CycleTel Humsafar software needs to “speak” with an SMS deployment partner to deliver messages from the CycleTel system to users across mobile networks. Unicel had been contracted as the deployment partner pre-DIV and this functionality already existed.
2. Payment Functionality – IRH needed to enable a way for user payments to be collected, and thus searched for an organization that could enable carrier billing across MNOs and provide a short code³ to run the CycleTel service. Large established aggregators such as One97 or OnMobile as well as smaller startups like Yippster provide this service. Most payment platforms keep between 70%-80% of the revenue in addition to a fixed monthly management fee. The upfront technology development cost for integration in both cases would have to be borne by CycleTel.
3. Customer Acquisition Reach – IRH needed a strong customer acquisition strategy as CycleTel Humsafar would be a new offering in the market. Acquisition strategies could include, for example, NGOs or other social enterprises that support adoption for CycleTel Humsafar by in-person events, product bundling, or an agent model. Alternatively, several VAS platforms provide digital marketing pushes out to their already existing user base.



³ A short code re special telephone numbers, significantly shorter than full telephone numbers that can be used to address SMS and MMS messages from certain service providers' mobile phones or fixed phones.

4. Consumer Liability Ownership – IRH needed a partner in India to serve as the service provider of CycleTel Humsafar, as it was now transforming into a paid consumer service. (More rigorous and complex consumer protection and telecommunications regulations apply once consumers pay for a product/service). As a US-based non-profit, IRH could not take on the liability of a commercial consumer service in India, and thus required a partner that could stand behind the service in-country.

IRH could have chosen to operationalize the service through a consortium of digital and offline partners that would create product availability, with the different relationships working independently. This would entail working with a separate SMS deployment partner, a separate payment partner, and separate offline marketing partners. It would also require IRH to establish its own legal presence to manage consumer liabilities in India.

However, we realized that we could pursue an **Integrated Approach**: operationalizing the service as part of service suite, where companies who were marketing similar products or interacting with similar demographic could add CycleTel Humsafar to their suite of services. This would only require one partner for payment and deployment, and offer customer outreach potential and legal protection.

Based on Table 3 below, it became apparent that an integrated model that relied on an In-App Service Provider provided the most scalable, feasible, and cost effective route. As such negotiations continued with Nokia Life (now Life Tools/HCL) to solidify a partnership and route to market.

Table 3. Comparison of Services and Digital Partners

| Category | Actor | Deploy SMS | Collect Payment | Acquire Customers | Legal Liability Ownership |
|---------------------|------------------------------------|------------|-----------------|-------------------|---------------------------|
| Independent Service | SMS Gateway | Y | N | N | N |
| | MNO | Y | Y | N | N |
| | Aggregators | Y | Y | N | N |
| Integrated Service | Handset Provider (In- App Service) | Y | Y | Y | Y |

IV. TECHNOLOGY MILESTONES

The strategic decision to partner with HCL drove the majority of final technology outcomes. Our key learning was on the challenges of operating across multiple technology platforms and partners, influencing the decision to want to streamline SMS payment and deployment systems via HCL.

Therefore, HCL and our existing technology partner, ThoughtWorks, have integrated the CycleTel system with the Life Tools platform to ensure seamless service delivery. Life Tools will now serve as the **technology platform**, **SMS gateway**, and **payment system** for CycleTel.

A. Technology Platform

Milestone: Ensure functionality and operations of technology platform.

IRH integrated its proprietary CycleTel Humsafar software system with HCL's software system. Technical integration work began in October 2014 and was completed in March 2015. This included user interface redesign, backend coding, hosting load, and multi-lingual functionality.

HCL and IRH (along with technology partner ThoughtWorks) developed user flows and backend system integration work plans and documentation. As the Life Tools' user interface and technology backends are different and not fully compatible with the technology being used to deploy the CycleTel Humsafar service, significant changes to the code were required so that the current system can provide the new functionality. Major changes include (see **Appendix IV** for product interface screenshots):

- **Registration flow**: Because of platform requirements, HCL had to replicate CycleTel's screening logic on the clients via the Settings tab in the Life Tools platform. Upon receiving information from a user, Life Tools will pass user responses to the CycleTel system, and then will receive a reply from the CycleTel system indicating whether the user is eligible or ineligible for the CycleTel Humsafar service. CycleTel's system needed to be reformulated so that it can exchange that information with the Life Tools platform.
- **Multi-lingual delivery**: Life Tools is in 12 languages, but CycleTel currently can accept only English and Hinglish, and cannot accept any non-Roman characters. The CycleTel system needed to code each message so that Life Tools knows what message to send, and in which language to send it.
- **Billing and payment**: CycleTel was unable to process billing information. Life Tools could bill customers for the CycleTel Humsafar service, but the CycleTel system had to be updated to be able to identify which users are able to pay (based on eligibility for the service) and determine whether or not to send messages according to if payment was sent.
- **Unique IDs**: Because of telecommunication regulations, HCL cannot share phone numbers – which the CycleTel system currently uses as user IDs -- with IRH. Instead,

Life Tools will create unique numeric user IDs for IRH's analysis and contact purposes. The CycleTel system was further developed to be able to read and store these IDs as if they are phone numbers.

These technical changes were done by a development team at ThoughtWorks and CycleTel's technical lead, Himanshu Garg. Mr. Garg was hired under the DIV project in October, after interviews and vetting by IRH. DC staff traveled to India to orient him and facilitate his work with ThoughtWorks and HCL.

In addition to the technical integration, other activities were required to prepare for launch. New messages had to be written to reflect the new platform and user interface, and all messages had to be translated and back translated into Hindi, Oriya, and Punjabi.

After ThoughtWorks and HCL finished technical development, testing had to be completed in the first four languages before launch on April 7, 2015.

Our key lesson was how integration processes can be more extended than originally anticipated, due to the complex nature of the technical development required. We also discovered that the Life Tools user interface had substantial limitations, and each problem had to be addressed before integration could continue. For example, the eligibility questions have to be done through the Settings section of the Life Tools app, and all messages and available selections had to be adapted to fit the user interface.

B. SMS Gateway

Milestone: Select and integrate with SMS gateway

SMS gateway functionality is fulfilled by HCL. HCL has negotiated agreements with all MNOs across India to deploy the SMSes within the Life Tools application at a fixed rate. As all CycleTel Humsafar messages will be sent and received within that platform, HCL assumed responsibility for all message transmission within their app-specific inbox.

At the start of the DIV project, IRH was using Unicef, an SMS gateway, to send out all CycleTel Humsafar messages. However, because we decided to work with HCL's Life Tools platform, no additional SMS gateway was required.

Working with the Life Tools platform has many benefits; importantly, the platform is available across networks, so customers of any MNO can access it. This partnership also allows IRH to avoid individual negotiations with multiple MNOs and focus our efforts on primary service delivery. Due to this shift in strategy, as of March 2015, IRH will no longer use Unicef's services.

Our key learning is that working with a platform functional across MNOs like Life Tools is more effective than individual negotiations, but upfront integration efforts can be substantial.

C. Payment System

Milestone: Select and integrate with payment system.

Life Tools includes a billing and payment system. HCL therefore is responsible for all mobile billing transactions. Their technology is integrated seamlessly with the CycleTel Humsafar platform. Technical integration was complete in March 2015. Moving forth, the 10 Rs per month payment will be deducted from the users' mobile phone credit by the MNO (via HCL) directly.

Choosing, deploying, and testing a viable payment platform for the service was always a key goal of the CycleTel team, as discussed in Section III. A major split in options was how payment would be collected: via mobile money or via cash transactions. We learned from previous experience that cash transactions poses significant challenges in efficiency and scalability, and without automation it would be difficult to reach scale. We also explored online payments, but since the product was targeted at users who were expected to not have bank accounts or access to online payment systems, a mobile payment system would be required. It was determined that especially because the payments themselves were small recurring amounts, the only practical way for automating payment was to enable carrier billing. After several months of conversations, we determined that HCL was our most viable payment partner.

A key lesson was that developing a custom payment platform and being responsible for billing is too challenging for a single-use application. Integrating with a large platform is an easier and more appropriate way to reach users and facilitate payment.

D. Call Center

Milestone: Select and prepare call center as helpline for CycleTel users.

IRH solidified a partnership with the Indian Society of Health Professionals (ISHP) in late 2014 to serve as the call center and helpline for CycleTel Humsafar.

ISHP has been a reliable partner since CycleTel was first launched in 2010. The decision to continue to work with them was easy; they have skilled and trained call center counselors, strong process controls, and a data management system that works. Additional training was required to prepare for scale-up and was conducted by IRH staff from the DC and Delhi offices in February.

A key learning was that as our product becomes more complex (multi-lingual, integrated), having qualified, experienced agents is even more important to ensuring that users have a positive experience.

V. MARKETING AND COMMUNICATION PARTNER MILESTONES

Our marketing and communication plan is closely tied to our strategic and technology decisions. Because we decided to partner with HCL –making CycleTel Humsafar available nationwide though only on select phones – our marketing efforts must be focused on reaching people who have access to CycleTel Humsafar through the Life Tools app. In a country as large as India, reaching the 25 million Life Tools users through offline channels would be a difficult and inefficient process. Therefore, we decided to focus on digital channels, which would allow us to target Life Tools users and would increase the effectiveness of our efforts.

Before we decided to partner with HCL, we explored other offline marketing possibilities. A description of these potential partners can be found in **Appendix II**.

A. Communications Partner

Milestone: Select a communications and marketing partner.

In September 2014, IRH selected Boring Brands as the communication partner. Boring Brands will create consumer facing branding and communication materials.

During June 2014, an request for proposals was developed and 12 organizations responded to the pitch. Organizations included a mix of multi-national agencies and boutique practices. Six of the organization were invited for a full-in person pitch. Based on creative presentation four organization out of the six were requested to present detailed budget for the branding assignment.

Boring Brands was selected because of its past experience in managing other technology start-ups and running small-scale targeted marketing campaigns. Boring Brands is India's first and fastest-growing full-service integrated marketing agency for global startups. The company has worked with over 125 startups across 25+ industries as diverse as affiliate marketing, wearable devices, m-commerce, m-learning, ad networks, e-commerce, enterprise security, and others since 2009. With a 30member-strong team, the company has worked in eight countries so far, and has some very prestigious startups on its roster – Aspiring Minds, Freecharge, Madrat Games, CashKaro.com, and Jombay, among others.

A key strength that has emerged in working with them is their focus on capturing performance data and using it to refine the campaign.

A key learning was that while finalizing a marketing partner, it is very important that the organization understands the business model and is aware of the market dynamics in the space to provide informed advice. Only creative or visual expertise does not service well while working with digital media campaigns.

B. Brand Identity and Communications Activity

Milestone: Develop brand identity and communications activities.

Since September, Boring Brands has created a brand identity for CycleTel, including a consumer-facing website www.cycletel.in. CycleTel.in includes engaging content on family planning and SDM and provides instructions on how to register for CycleTel Humsafar. It also hosts the terms and conditions sheet, a necessary consumer protection document. The website is visually appealing.

Boring Brands also created a logo, color palette and template that can be applied to all consumer-facing communications. The name CycleTel Humsafar emerged as the new brand name after a naming exercise, which included testing various names with potential users.

Appendix VI includes screenshots of the website and the new logo.

C. Customer Acquisition Strategies

Milestone: Select and solidify marketing partners and strategies.

The DIV project is structured around frugal experiments, designed to test marketing and distribution strategies. Creating availability is only the first step towards adoption. Due to the nature of the HCL partnership, IRH will focus on recruiting Life Tools users into CycleTel Humsafar by creating awareness and curiosity about the new service. As more users join, the marketing focus will shift to emphasize retention and continued engagement.

IRH has now identified the first marketing experiment, which will take place during Phase 1 of rollout. During this phase, we will test the effectiveness of marketing CycleTel Humsafar through pre-recorded voice messages known as audio spots.

1. *Audio Spots with Social Media support*

Audio spots are a common marketing tactic in India. Consumers, in this case users of Life Tools, will receive a phone call. When they pick up, a pre-recorded message will play for them. They can then choose to enroll in CycleTel Humsafar immediately by pressing 1 on their phone. This creates an instant action step for the consumer and allows us to track the success of each audio spot.

Scripts for the audio spot have been reviewed and a quick consumer feedback survey has been conducted to refine the language. Final recording has been completed and small push will be made to Life Tool users in the third week of April, followed by a full-scale push in the second week of May.

The objective of this activity is to promote CycleTel Humsafar and aid discoverability. Boring Brands presented three different concepts for audio scripts and based on peer review and in consultation with Life Tools team, a testimonial route was decided. A rough cut was

produced for six different scripts that were shared with Life Tools call center operators, who interact with Life Tools users daily as well conducting in-person interviews, to get feedback on language. Three final scripts were produced based on this feedback. A small test push will be done to check functionality, followed by a final push to the Hindi-speaking circles of Uttar Pradesh, Delhi, Haryana, and Himachal Pradesh circles in the second week of May.

As there is a varied demographic that will hear this audio, it is critical that we make the message clear and simple for them to be able to respond to it directly. We also placed a high priority on engaging the audience through music and voices. Early tests with a limited group showed that users preferred spots that had both male and female voices and included music. As the spots are released more widely, we will track which prompts the most user interaction and later, retention.

To support demand generation efforts, IRH will also initiate a social media strategy on Facebook, intended to target Life Tools users. Using phone numbers provided by HCL for Life Tools users, IRH will be able to run targeted Facebook ads based on the status of the user in the CycleTel Humsafar service. Ad campaigns will be targeted at improving discoverability of the service on Life Tools. Moreover, IRH will create a Facebook page for CycleTel Humsafar, which will feature unique and engaging content. Page management will aim to support retention by providing relevant information to the users. The Facebook interface allows for pulling out rich data on user interactions and iterating the approach real time. Boring Brands has shared concepts for ad and page management campaigns which are currently under review. IRH and Boring Brands will co-create content bucket for about a month worth of posts. The first post will be made during the second week of May.

2. Further Marketing Experiments

The second phase of rollout will allow us to reach an entirely new group of Life Tools users in different geographies and languages. We are exploring possibilities for how to reach them, including incentives such as ring tones and point of sales materials. However, we will also use the lessons of Phase 1 to guide our thinking and consider more hybrid approaches, such as audio-spots plus Facebook plus an additional component.

VI. CONCLUSIONS

The previous nine months of Pre-Launch activity has been full of iterative learning. We began the project with ideas and potential models for scale, and were able to reality-check our assumptions. Some of our initial assumptions did not hold up; others findings were positively surprising and unexpected. We are pleased to have had the runway to devote the time and thinking to develop the critical foundations for moving CycleTel Humsafar forth across India.

We look forward to the next few months when the CycleTel Humsafar service launches to Phase 1 customers. We anticipate a surge in user uptake, especially coinciding with our marketing pushes. As our relationship with HCL and the Life Tools service evolves, we will begin to explore other customer discovery and acquisition strategies to increase user uptake. Alongside of the service push, we also will begin to implement our evaluation plan and capture KPIs to assess social and financial progress of CycleTel Humsafar. We look forward to sharing our findings throughout the project.

VII. APPENDICES

Appendix I: VAS Market in India

One of the first activities undertaken with the commencement of DIV was to better understand the commercial mobile market in India to build out our go-to-market model. Based on our decision to pursue a VAS strategy, we assessed the commercial mobile market in India to build out our go-to-market model.

We held conversations and early negotiations with about 20 of these actors (**see Table 4**). The initial discussions with these partners were quite promising as CycleTel Humsafar presented a clear win:

- **Customized Content:** Unlike the typical content-based services that required partners to keep generating new content, CycleTel algorithm could deliver customized service.
- **Repeat Customers:** The service requires monthly subscription but there is greater potential for repeat purchase if someone is using it as a family planning method.
- **Call Center Support:** CycleTel's toll-free call center line was seen as a major plus as it made the service more comprehensive without any additional cost to the partner.

However, our partnerships discussions were often weighed down by macro factors affecting the partner's eagerness to take on new services. Our conversations reflected a universal market shift away from VAS and initiatives in the mHealth space among all of the major players. We identified a general trend towards data-enabled services instead of SMS due to the recent changes in TRAI (Telecom Regulatory Authority of India) with respect to customer acquisition and billing users for subscription services. In general, this shift was preventing many aggregators and MNOs from investing in any new SMS-based VAS services because they thought the opportunity costs were too high when they could focus on maximizing profitability for the existing portfolio and proven services.

Our assessment indicated that the macro-environment would have significant impact on pathways for scale:

- **Nascent Health VAS Market:** VAS in India has been limited to entertainment. In one particular discussion with Airtel, it was highlighted that mHealth services in general had not taken off and that MNOs were only pursuing global services such as 'Call a Doctor'. Family planning is a niche service, worrying Airtel that the percentage conversion will not be as high as a generic service.
- **Upfront Investment:** In addition to the opportunity cost, the partner had to make investment in technology integration since this was a family planning method and not just content. The cost of ineligible users, who were dropped during screening, raised some concerns.

- **Consumer Liability:** New regulations have placed service delivery liability (e.g. quality of information, reliability of connection, data security) onto the aggregator/telecom, which was a concern when dealing with a health product. Most existing health services are limited to generic advice and information, so telecoms found it difficult to understand what the consumer liability was and who was going to take it for a service like ours.

In the end, we concluded that using our criteria of operational feasibility, seeking a go-to-market strategy with an MNO or Aggregator would not be doable; HCL Ltd. emerged as the strongest partner.

Table 4. MNOs, Aggregators, Payment Partners

| Name | Category |
|-------------------|---------------------|
| Strikeone | Aggregator |
| Qubecell | Mobile Money |
| Yippster | Mobile Money |
| Eko | Mobile Money |
| One97 | Aggregator |
| Tata Teleservices | MNO |
| Airtel | MNO |
| IMImobile | Aggregator |
| Easyngo Platform | Technology Platform |
| Onmobile | Aggregator |
| Fortumo | Mobile Money |
| Vodafone | MNO |
| Uninor | MNO |
| BSNL | MNO |
| Aircel | MNO |
| Comviva | Aggregator |
| Apalya | Aggregator |
| Ibibo | Aggregator |
| iPayy | Mobile Money |
| Innoz | Mobile Search |
| Unicel | Gateway |

Appendix II: Marketing Partner Landscape

We engaged with over 50 potential offline distribution and marketing partners, including community based NGOs, microfinance groups, other mHealth services, private health clinics, social enterprises etc. We reached out to these partners to explore a B-2-B model and to help us distribute CycleTel Humsafar to their communities and/or user groups. These partners would be based on more traditional distribution supply, where intermediaries (such as agents, community leaders, health providers, etc.) would be the touch point between CycleTel Humsafar and the user.

These conversations commenced at the very start of the DIV project (and others occurred prior to project launch). Based on project timelines, we needed to determine within the first six months if we would pursue any of these partnerships. Once the decision was made to launch CycleTel Humsafar on Life Tools exclusively, we recognized several common barriers to offline marketing partners. Most importantly, not having CycleTel Humsafar on all devices made universal mass marketing challenging, as only a segment of all people within a B-2-B's market would be eligible (see **Appendix III** for further details).

Table 5. Offline Distribution/Marketing Partners

| Name | Description |
|--------------------------------------|-------------------------|
| Prerana | NGO |
| mHealth Lab, Jhansi | Social Enterprise-Govt. |
| PSI | NGO |
| Mamata | NGO |
| Mann Foundation | NGO / Cooperative |
| Sewa | NGO |
| IDSA | Industry Group |
| CEDPA | NGO |
| ZMQ | Mhealth Venture |
| HarVa | Social Enterprise |
| Gurgaon in Awaz | Social Enterprise |
| Tribhuvandas Foundation (Amul) | NGO |
| Humana | NGO |
| VLCC | Beauty Brand |
| Family Planning Association of India | NGO |
| Dasra | NGO |
| Digital Empowerment Foundation | NGO |
| SIFPSA | Govt-NGO |
| World Vision | NGO |
| Urban Health Resource Centre | NGO |
| Global Care | NGO |
| Public Health Foundation India | NGO |
| RAL | Product Manufacturer |
| Mestrupedia | Social Enterprise |
| Samhita | Social Enterprise |
| NGO Box | Social Enterprise |
| Gram Vani | Social Enterprise |
| Shanti Life | MFI |

| | |
|--|--------------------------|
| NASS | Media Group |
| Breakthrough | NGO / Campaign Organiser |
| Kriti Social Initiatives | Social Enterprise |
| Smile | NGO |
| Swaasthaya | NGO |
| Development Alternatives | NGO |
| JustRojgar | Social Enterprise |
| Mentrupedia | Mhealth Venture |
| NSDC | Government Organisation |
| PiC | NGO |
| NBCFDC | Government Organisation |
| Ujjivan | MFI |
| Aakar | Product Manufacturer |
| Azyh | Social Enterprise |
| Global Health Points | Social Enterprise |
| Lauruse Edutech | Social Enterprise |
| Drishtee | Social Enterprise |
| Amway | MNC |
| ACCESS Health International | Industry Group |
| ICPTH | Industry Group |
| Sapna | NGO |
| Sonata | MFI |
| Cashpoor | MFI |
| Population Foundation of India | NGO |
| Sankalp for Women | NGO |
| Sevamob | Social Enterprise |
| Prayatn | NGO |
| Datamation Foundation | NGO |
| Center for advocacy and research | NGO |
| The maids company | Social Enterprise |
| UMA | NGO |
| Sakhi Arogya Samudaya Trust | Social Enterprise |
| Sakshi Centre for Information, Education & Communication | NGO |
| Working Women's Forum | NGO |
| Saath | NGO |
| Healthphone | NGO |
| Healing Fields Foundation | NGO |
| Healthpoint | Health Provider |
| Arogya Parivar Novratis | Health Provider |
| Apollo Clinics Venture | Health Provider |
| Health Management and Research Institute | NGO |
| Don't worry (Mankind) | Social Enterprise |
| Manforce (Mankind Pharma) | MNC |
| Durex (Reckitt Benckiser) | MNC |

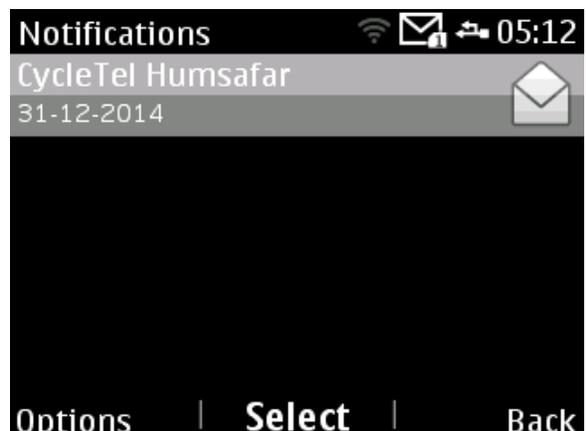
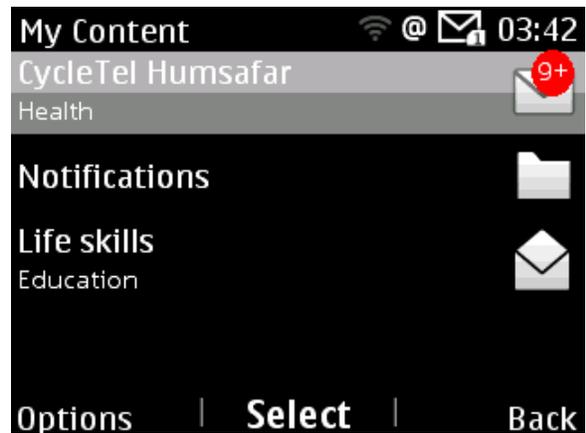
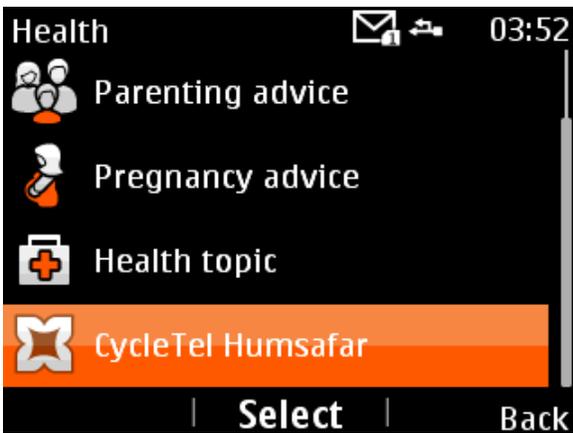
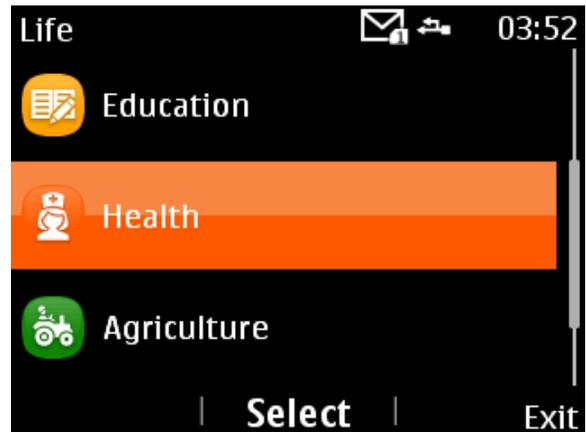
Appendix III: Why an Independent Service Didn't Work

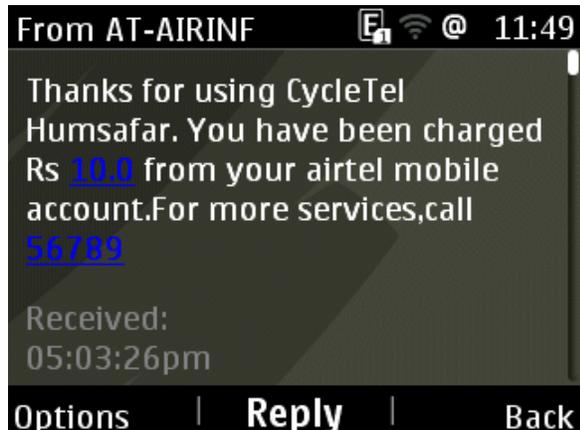
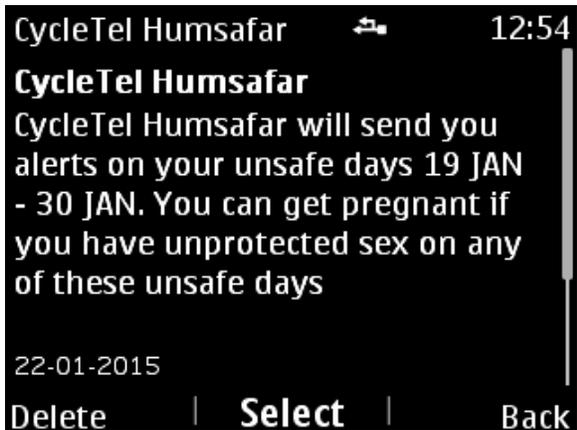
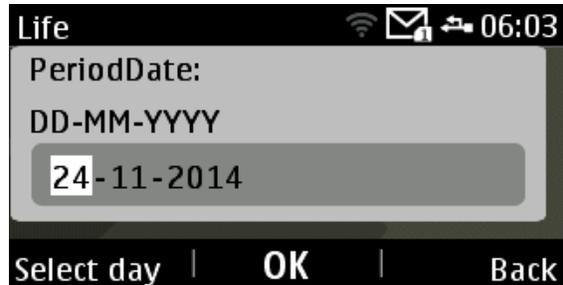
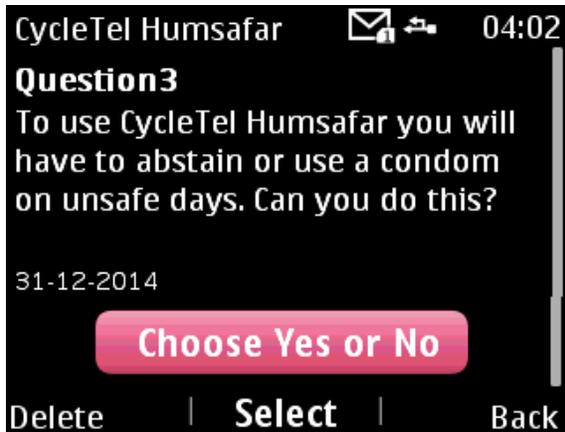
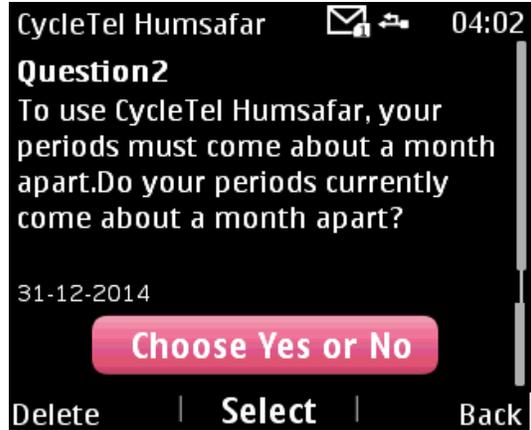
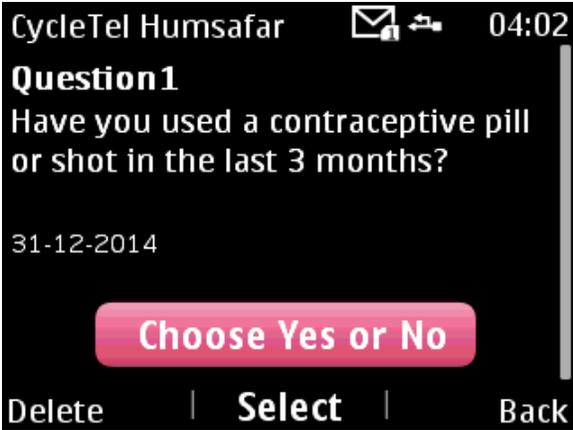
IRH ran into several barriers when assessing an independent service approach against the four keys needs and the three strategic pillars:

1. **SMS Deployment in English/Hinglish only, and tied to Payment Partner:** In order to have CycleTel Humsafar available for all users across geographies and MNO networks, IRH would have to use a short code that belonged to the payment partner. This would create large dependency issues of CycleTel Humsafar living on a short code that wouldn't belong to us. Similarly, this route would only enable the service in English and Hinglish, which did not meet our scale criteria.
2. **Payment Integration Costly and Complex:** A significant investment was required in integrating the CycleTel platform with an independent payment partner. These were estimated to be an upward of \$70,000 based on estimates prepared by ThoughtWorks. Additionally this upfront investment would not offset any operational costs and CycleTel would continue to bear the cost of service delivery. In addition to the technology cost there were no economies of scale that could be achieved in this model with respect to consumer acquisition strategies. While this met our revenue generation criteria, it did not meet our operational feasibility standard.
3. **Customer Acquisition Reliant on Offline Partners:** In this scenario, to target users, we would need to partner with about five to seven organizations, which in our experience had limited scale. The other challenge in operationalizing such relationships was their preference in running standalone campaigns for CycleTel. This was not cost effective as resource sharing could not take place despite evident complementarity.
4. **Tax and Legal Liabilities:** Being incubated by a US entity presented several challenges in operationalizing the service in India. To operate as an independent service, IRH/GU would need to set up a legal entity in India that could operate autonomously or under IRH's name. It was only after consulting with lawyers and tax counsel that the liability issues became evident. There was tax liability (perceived that the entity would have income from overseas grants), as well as consumer liability (of standing behind the service as India-based consumer product). This was only accentuated by the complexity of telecom regulations.

A key learning is that individual enterprise development is highly dependent on the mobile ecosystem. India presently does not have a mature and competitive market for mPayments, which restricted IRH's choices for growth, and the evolving regulatory space proved to be a barrier to this path.

Appendix IV: CycleTel Humsafar Service Screen Shots





Appendix V: CycleTel Humsafar Logo and Website



Appendix VI: Gantt Progress

Key

| | |
|---|-----------------------------------|
| ✓ | Activity Complete |
| ✘ | Activity Delayed |
| ⊖ | Strategy Change Impacted Activity |
|  | Original Timeline |
|  | Actual Activity Dates |

March 2015

ASSESSING THE SOCIAL IMPACT OF CYCLETEL HUMSAFAR IN INDIA RESEARCH PROTOCOL

Georgetown University's Institute for Reproductive Health

Contact:

*Carolyn Ashcroft, MBA
Principal Investigator, CycleTel DIV Project
Institute for Reproductive Health
Georgetown University
1825 Connecticut Avenue, Suite 699
Washington, DC 20008
Email: alexis.ettinger@georgetown.edu
Phone: 202-6871259
Fax: (202) 537-7450*



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Institute for Reproductive Health | Georgetown University
1825 Connecticut Ave., NW, Suite 699
Washington, DC 20008 USA

irhinfo@georgetown.edu
www.irh.org

ACRONYMS AND ABBREVIATIONS

| | |
|---------|--|
| DIV | Development Innovation Ventures |
| FP | Family planning |
| GOI | Government of India |
| IRH | Institute for Reproductive Health |
| ISHP | Indian Society of Health Professionals |
| mHealth | Mobile Health |
| SDM | Standard Days Method |
| SMS | Short Message Service |
| TRAI | Telecom Regulatory Authority of India |
| USAID | United States Agency for International Development |

1. INTRODUCTION

1.1. Background

Georgetown University's Institute for Reproductive (IRH) has received funding from the United States Agency for International Development (USAID) through the Development Innovation Ventures (DIV) to assess the market viability, scalability, and social impact of CycleTel™ Humsafar, an SMS-based mobile health service in India. IRH worked to develop and test CycleTel Humsafar to facilitate the use of Standard Days Method (SDM) under the Fertility Awareness-based Methods (FAM) Project. The first and only family planning (FP) method available directly to a woman via SMS on her mobile phone, CycleTel Humsafar alerts women of their fertile days each month and indicates when unprotected sex should be avoided to prevent unwanted pregnancies based on SDM.

The DIV project will specifically test customer uptake strategies and business model operations to determine how to sustain large scale implementation and development impacts. It aims to understand whether CycleTel Humsafar is a cost-effective FP tool that can be sustained at scale in the market.

A key part of understanding CycleTel Humsafar's potential in the market is assessing its social impact. As such, the DIV research protocol below outlines how IRH will assess the social impact of CycleTel Humsafar in terms of FP outcomes on users. This research aims to address knowledge gaps in the use of CycleTel Humsafar and understand its social benefits and cost.

The social impact plan is designed according to the specific structure of the DIV project which is built around two phased marketing experiments implemented by partners. These experiments will be implemented sequentially over the course of the project. Data to assess the social impact of CycleTel Humsafar will be collected over a one year period drawing from information collected by the CycleTel Humsafar service on the number of new, continuing and discontinuing users. Additional information will be collected through customer feedback via SMS phone polls to provide insight into user satisfaction, reasons for continuation/discontinuation of the service, cost of use and ability to use the method correctly.

1.1.1. The Standard Days Method

SDM is a fertility awareness based method developed by IRH with the support of USAID. SDM identifies a fixed fertile window in the menstrual cycle when pregnancy is most likely. To prevent pregnancy, users avoid unprotected sex on days 8-19 of the woman's menstrual cycle. It is appropriate for women with cycles between 26 and 32 days long (approximately 80% of cycles). It has been rigorously tested and implemented in over 30 countries including India. It has been shown to be more than 95% effective in preventing pregnancy with correct use, and 88% effective with typical use (Arevalo et al. 2002). It is recognized as an evidence-based practice by the World Health Organization and is currently offered in over 30 countries worldwide. IRH has conducted multiple studies to understand the demand for an SDM in India. Unlike other methods (e.g., pills, IUD, injectables), the SDM is knowledge-based, requiring no commodity or visits to a health care provider with no side effects.

1.1.2. mHealth (Mobile Health)

Mobile phones are the fastest growing technology in the developing world. Of the 3 billion mobile subscribers in the world, 70% live in developing countries. According to the Telecom Regulatory Authority of India (TRAI) the total number of telecom subscribers was 903 million in 2013 growing from 22.8 million in 1999. With mobile penetration at more than 60% of the market, India has the world's second largest telecom market and will continue to grow. As early adopters of mobile technology tend to be of reproductive age, mobile phones are positioned to directly reach the population that needs FP information most.

Moreover, there is significant potential to support women and their partners avoid unplanned pregnancy and improve their reproductive health by using mobile technology to provide timely, actionable, personalized information. Emerging evidence across mHealth interventions shows statistically significant changes in knowledge of family planning after receiving reminders and information via phones (Riley, 2014).

1.1.3. CycleTel Humsafar

IRH developed the CycleTel Humsafar concept in response to the proliferation of mobile phones in developing countries, and corresponding evidence that mHealth may offer unprecedented opportunities for transformative outcomes in FP. With well over 6 billion mobile subscriptions worldwide, mobile phones can overcome accessibility and availability barriers, reaching women and men once before deemed unreachable. CycleTel Humsafar's availability directly on women's phones overcomes access barriers often present in the traditional and weak health systems.

The CycleTel Humsafar service is a simple system with the key feature of alerting women of their fertile days each month based on the SDM algorithm. When using CycleTel Humsafar, the woman only has to provide the date her menstrual period starts (each cycle), after which she can be advised of her fertility status on a regular basis via text messages. CycleTel Humsafar's functionality and acceptability have been validated in previous research.

1.2. Statement of the Problem

In developing countries, a woman's lifetime risk of dying due to pregnancy and childbirth is one in 75, nearly 100 times higher than the risk in developed countries. Studies also show that an estimated 220 million women are not using any FP method, despite wanting to avoid pregnancy (Singh and Darroch, 2012). Primary reasons for non-use are real or perceived side effects of existing contraceptive methods, inaccurate perceptions of pregnancy risk, and gender-related barriers that inhibit access to and use of FP. Providing these women with a simple, side effect-free method that can be used in low resource setting, increases accurate perception of pregnancy risk, and engages men is could help them meet their FP needs promises not only to save lives, but also improves other social, educational, environmental, and economic indicators.

India currently accounts for the largest unmet need for FP in the world (Sedgh 2007). Among Indian women between the ages of 15 and 49, 20% have an unmet need (IIPS 2010). India has long focused on permanent FP methods (37% of married women), with condoms (5.2%) as the second most used method followed by oral contraceptives (3.1%). Unmet need varies dramatically among states, ranging from 4.7% in Andhra Pradesh to 35% in Meghalaya (13% nationwide). Unmet need is highest among women who want more children in the future and among younger women. Among the most frequently cited reasons for not using a method are postpartum amenorrhea and breastfeeding (26%), opposition to use (15%), and fear of side effects (10%).

The Government of India (GOI) currently supports a mix of birth spacing and sterilization methods with a focus on long acting methods. Access to spacing methods such as pill, condoms and IUDs is low. However, women who have only had one or two children may not be ready for a permanent method. IRH has observed in previous research that there is a strong need for natural FP methods but women have limited or incorrect information about fertile days. The growing number of mobile subscribers in urban and rural India could increase the reach SDM and make FP options more accessible.

In India and around the world, SDM has proven to expand FP method choice and be feasible for providers and users alike. SDM, via CycleTel Humsafar, offers a noninvasive, non-hormonal, and easy to use FP choice to reduce the unmet need among these women (Lundgren et al. 2012; Arévalo, Jennings, and Sinai 2002).

1.4. Intervention

Under the FAM Project (also supported by USAID), IRH conducted multi-staged formative research from 2009-2012 on the feasibility and acceptability of CycleTel Humsafar among various populations in India. IRH followed a rigorous, step-wise product development process, including proof-of-concept testing, technology development, and automated testing along with mobile phone usage trends among the target audience. These studies conducted in different Indian areas have shown that CycleTel Humsafar functions well and is acceptable to users. For instance, 94% users were satisfied with CycleTel Humsafar as a method of preventing pregnancy. All users reported understanding messages received during fertile days. Ninety-five percent reported that CycleTel Humsafar made it easy for them to know the days when pregnancy is more likely (Jennings, Jha 2013). Women also reported that the service was easy to use and maintained their privacy while providing a timely reminder of their fertile and safe days. They also liked the fact that it had no side effects and did not affect their health.

To increase access to CycleTel Humsafar, IRH determined that an India-wide mobile network operator could effectively reach potential users and create demand for the service. As such, CycleTel Humsafar established a partnership with HCL Service Ltd., an Indian-based commercial technology company that oversees a mobile phone application called Life Tools¹. Life Tools is a revolutionary information platform on select handsets and provides information on agriculture, health and education to over 50 million users across India.

Through the HCL partnership, CycleTel Humsafar will be hosted as an opt-in SMS service on the Life Tools platform. An opt-in service means that a user need to voluntarily opt-in to the service, rather than randomly be pushed the service. CycleTel Humsafar is currently only available to Life Tools users.

From a usability standpoint, the CycleTel Humsafar service works in the following way:

- Life Tools users get a Notification message in their Life Tools inbox informing them of the new CycleTel Humsafar service on their phone, and inviting them to register if they are interested.
- Should one of these potential users wish to enroll, she clicks the “Activate” button in the body of the Notification message.
- She is then screened for SDM eligibility by answering three questions, and if the system deems her eligible, she sends the start date of her last period.
- Payment of INR 10 is then charged to her phone, and service does not begin until billing is confirmed.
- The service then calculates her fertile window and alerts her via SMS of her fertile days during her cycle.
- Additional messages support correct use of the method and help her monitor her cycle length.
- A user is reminded to re-enroll each cycle by sending in the date of her period if she wants to continue using the service.

Users will be able to activate the service at any point during the duration of the project once they have received the notification of having the CycleTel software on their phone. Users can avail the service multiple times (start-stop) and/or continuously on their device for the duration of the project.

The service will be available in 12 local India languages. Language of the service is based on what a user inputs as his/her preferred language. This study will evaluate users who are enrolled in the service in Hindi and English.

¹ HCL Services Ltd is a technology company that offers a wide spectrum of IT Services across India, South East Asia, and Middle East. HCL has over 35 years of industry experience, reach across 4000+ cities in India, and extensive domain knowledge across all industries and business functions. HCL Services Ltd is the exclusive third party that oversees, manages, and implements the Life Tools application.

2. RESEARCH OBJECTIVES

2.1. Main Objective

The objective of this study is to assess the social benefit of CycleTel Humsafar as a FP method. This research will provide insight into the experience of CycleTel Humsafar users and its ability to bring and retain new users to FP. Study results will provide valuable guidance for whether to further expand the CycleTel Humsafar service.

2.2. Research Questions

This study is designed to answer three main questions on CycleTel Humsafar's social impact:

1. Does CycleTel Humsafar bring new users to FP?
2. Does CycleTel Humsafar improve correct use and continuation of FP use?
3. Does CycleTel Humsafar use engage men in FP?

The study will also provide data to assess CycleTel Humsafar's cost effectiveness as a market-based solution, including a cost analysis and market segmentation based on user demographic data.

3. METHODOLOGY

3.1. Study Design

This protocol describes the research design and methods which will be used to assess the social impact of the CycleTel Humsafar service. The primary research question on the social impact of CycleTel Humsafar will be assessed through information obtained from two different sources: 1) automated data from the CycleTel Humsafar system, and 2) customer feedback via Polling Surveys.

The study will not be longitudinal; the same participant will not be followed through his/her CycleTel Humsafar use. Rather, the study is designed to gather information on users when they first enroll in the service (known as New Users), as well as when people discontinue using the service (known as Discontinued Users) or when they continue the service for more than three menstrual cycles (known as Continuing Users). All new users will be sent the New User Polling Survey, and then, depending on whether they chose to continue the service, they will also receive either the Continued or Discontinued User Polling Survey.

3.1.1. Automated CycleTel Humsafar System

The automated CycleTel Humsafar system captures and stores real-time user data on all user/service interactions in an online database. The system records information such as enrollment date, cycle start date, duration of cycles, number of cycles a user is on the system, drop out date, etc. These data points will be used to assess what stage of CycleTel Humsafar usage the user is currently in, i.e. if the user is a new, continuing or discontinuing user, and to determine method continuation. The system however does not collect any personal or demographic information of the users. Each user is identified by a unique customer ID provided by HCL and the Life Tools system.

3.1.2. Customer Feedback via Polling Surveys

The Life Tools application has a feature called Polls. Polls enable HCL to send questions to users to get feedback and responses via SMS. HCL uses this feature routinely with users of the Life Tools application. As such, HCL will employ the Polls function to send a series of questions to CycleTel Humsafar users.

Each polling question appears as a simple SMS message following by a list of close-ended multiple choice answers for users to select. A user can only select one of the four answers listed. Each question and its respective answers cannot exceed 360 characters total, due to Poll functionality restrictions.

IRH will design and conduct three different Polling Surveys. Each Polling Survey will have 10-12 polling questions each. These 10-12 polling questions will be sent to users across a two-week period (no more than one question per day).

Questions within a Polling Survey will not be correlated to a user; thus, a user may choose to answer questions 1, 5 and 8, or all the questions, only 1 question, or none. We will not track whether those who answer question 5, for example, are the same as those who answer any other questions. Participation is voluntary, and users can skip any or all of questions and exit the survey at any time.

The three different customer Polling Surveys reflect three different user stages, defined as:

- 1) New User: used CycleTel Humsafar for at least one cycle,
- 2) Continuing User: used CycleTel Humsafar for at least three cycles, and
- 3) Discontinued Users: discontinued use of CycleTel Humsafar.

HCL will market CycleTel Humsafar at two different marketing phases. The first phase will be from May-October 2015, and the second will be from November-March 2016. As such, we will administer each of the three different Poll surveys – new, continuing and discontinued users – during each marketing phase on a rolling basis.

Table 1: Purpose and Timing of Polling Surveys

| | New users (after 1 cycle) | Continuing users (after 3 cycles) | Discontinued users (any time) |
|-----|---|---|---|
| Why | <ul style="list-style-type: none"> • Determine users' demographic profile • Determine if users are new users of FP • Determine reason for CycleTel Humsafar uptake • Assess satisfaction with the service • Assess correct use • Assess male engagement | <ul style="list-style-type: none"> • Determine users' demographic profile • Determine if users are new users of FP • Determine reason for CycleTel Humsafar uptake • Assess satisfaction with the service • Assess correct use • Assess male engagement | <ul style="list-style-type: none"> • Determine users' demographic profile • Determine if users are new users of FP • Determine reason for CycleTel Humsafar uptake • Assess dis/satisfaction with the service • Assess correct use • Assess male engagement • Determine why they stopped using CycleTel Humsafar • Determine if they have transitioned to another FP method |
| Who | Users who have completed one cycle of use (entered two period dates) | Users who have completed three cycles of use (entered four period dates) | Users who have completed one cycle and not entered a subsequent period date after 50 days |

CycleTel Humsafar

3.1.4. Variables

Information will be collected to measure the social impact of the CycleTel Humsafar service:

1. CycleTel Humsafar users who are first-time FP users

2. Transition of discontinued CycleTel Humsafar users to another FP method
3. Correct use of CycleTel Humsafar (entering first day of period each cycle, avoiding unprotected intercourse during the fertile days)
4. CycleTel Humsafar continuation
5. Male engagement in CycleTel Humsafar use (male partner aware of CycleTel Humsafar use, avoiding unprotected intercourse during the fertile days)

We will also collect data to explore issues relevant to efforts to improve and expand the service, such as:

- Typical profile of users (sex, marital status, education, income)
- Motivation for CycleTel Humsafar use, including planning or preventing pregnancy

3.2. Study Population and Sampling

Inclusion criteria for study participants include:

- a) own or have access to a mobile phone;
- b) have subscribed to the CycleTel Humsafar service in English or Hindi; and
- c) can read and comprehend SMS messages in English or Hindi.

Every new user of CycleTel Humsafar service in English or Hindi will get an invitation via SMS to answer a series of polling questions in the New User Polling Survey. We cannot predict how many people will enroll in the service (it is an open market, opt-in service), but we anticipate a maximum of 10,000 new users in each marketing phase. There are two marketing phases, so we anticipate a total of 20,000 new users.

All new users, after one cycle of CycleTel Humsafar use, will need to re-enroll in the service; if they do so, they become continuing users. If they don't, they become discontinued users. All continued users and all discontinued users of CycleTel Humsafar service in English or Hindi will get an invitation via SMS to answer a series of polling questions based on their respective category. There will be fewer people in the continued and discontinued user categories, respectively, than in the new user category, as those segments are a proportion of the new user base. We approximate we will have a range of 200 -10,000 continuing users (1%-50% of new user base) and a range of 10,000- 19,800 discontinued users (50%-99% of new user base) users across the two phases. We do not know how many people will continue or discontinue use after three cycles, as it is determined by individual users. We use the maximum limits of those ranges (10,000 for continuing; 19,800 for discontinued) for our sample size below.

Based on similar experience by HCL with Survey Polls, we anticipate that on average of 2% of people will respond to each polling question. In other words, if we have 20,000 new users receiving the New User Polling Survey, we estimate that 400 people will answer each question. Based on these estimates, we anticipate the following number of study participants

- **New Polling Survey:** If we have 20,000 new users receiving the New User Polling Survey, our aim is for 400 people to answer each of the ten polling questions for a total of **4,000 participants** across the two phases (some individuals may answer multiple questions which would reduce this total.)
- **Continuing Polling Survey:** If we have 10,000 continuing users receiving the Continuing User Polling Survey (our maximum estimate), our aim is for 200 users to answer each of the ten polling questions for a total of **2,000 participants** at most across the two phases (some individuals may answer multiple questions which would reduce this total)
- **Discontinued Polling Survey:** If we have 19,800 discontinued users receiving the Discontinued Polling Survey (our maximum estimate), our aim is for 396 people to answer each of the 12 polling questions for a total of **4,752 participants** at most across the two phases (some individuals may answer multiple questions which would reduce this total).

In sum, our **sample size is 10,752** across the two phases and three Polling Surveys. As individuals who answer questions in the New User Survey will either be invited to participate in the Continuing User or Discontinued User Survey, some individuals may be part of two surveys, which would reduce the total number of unique participants.

The IRH Research Officer (based in India) will compile a list of new, continuing and discontinuing users from the CycleTel Humsafar database. The list of selected users (compiled by unique ID) will then be used to send Polling Surveys to those phone numbers. Due to India telco regulations and HCL's commercial policies, compiling the list of user phone numbers and pushing the poll will all be done by HCL exclusively; IRH will not have access to phone numbers or the polling push.

Due to the rolling nature of opt-in and enrollment, we will not be tracking the same individual throughout their CycleTel Humsafar usage. This will enable us to collect information on a larger number of individuals, rather than following the same individuals throughout their experience. The Polling Surveys will be administered on a rolling basis, as user status is determined on when individuals enroll.

3.3. Data Collection

3.3.1. Research Team

The research team will consist of the CycleTel M&E Officer (IRH India), the Principal Investigator (IRH Washington), and the Director for Social Innovation (IRH Washington). The CycleTel M&E Officer will be supervised by the US-based IRH research, monitoring, and evaluation team who will provide technical oversight and management. Routine communication between India-based and Washington-based teams will occur via weekly Skype calls, daily email exchanges as needed, and technical assistance visits for training and monitoring purposes by the Research Officer and the Principal Investigator so as to ensure quality throughout the duration of the study.

Key personnel supporting the proposed research include:

Victoria Jennings, PhD, Director IRH, oversees the Institute for Reproductive Health. As part of the study, she will provide oversight and guidance as needed, and ensure that learnings from this study are integrated into the IRH portfolio, and vice versa. Dr. Jennings, an anthropologist whose academic interests focus on health behavior and culture change, has 25 years' experience in the international FP and reproductive health field. She is a recognized leader in fertility awareness as well as in research, capacity building, and scaling up health interventions. She is responsible for overall direction of the Institute and serves on numerous boards and task forces on international health issues.

Alexis Ettinger, MSc, Director for Social Innovation, leads the Institute's mobile health (mHealth) portfolio and the strategic development of solutions under the FACT Project. With a master's degree in Reproductive Health and Population, she has nearly a decade of experience in social entrepreneurship and market-based innovations. Prior to IRH, she served as Head of Strategy for the Skoll Centre for Social Entrepreneurship at Saïd Business School, Oxford University. She has worked with Ashoka: Innovators for the Public, Eastside Consulting, Forster for Change and Criterion Institute, designing programs and partnerships to support social ventures and systems-level social impact initiatives. Ms. Ettinger has a BA from Dartmouth College and an MSc from the London School of Economics and Political Science.

Carolyn Ashcroft, MBA, Program Officer for mHealth, holds an MBA from the University of Oxford with a focus on social impact. She has experience in management consulting and strategic sourcing in New York City, and most recently, managed international research grant funding at King Abdullah University of Science and Technology in Saudi Arabia. At the Institute, she supports the mobile solutions team in developing and bringing to market CycleTel Humsafar, and other mHealth initiatives in several countries.

Danish Ahmad, MSW, M&E Officer, holds Master’s degree in Social Work from Aligarh Muslim University. He has five years of experience in Public Health research. Previously, he worked for Indian Institute of Health Management Research, Jaipur, He did large scale surveys as State Coordinator like National Family Health Survey (NFHS-4), District Level Household and Facility Survey (DLHS-4). He has also done several FP projects. In India he is looking after the monitoring & evaluation work of CycleTel under the FACT and DIV project.

3.3.2. Tools

Data will be obtained from two sources: 1) automated data from the CycleTel Humsafar system and 2) Polling Surveys. The indicators that we will collect to answer our evaluation questions and to improve the service are presented in Table 2 by source of the information and timing of data collection.

3.3.2.1. Automated Data

Automated data from the CycleTel Humsafar system will be used to capture uptake and continuation of SDM via the service. The automated data system is designed to record real-time user data each time a user inputs information into the system. This starts when the user voluntarily opts-in to enroll in the service by clicking “Activate”, and the system records this opt-in service consent and all information regarding their eligibility and first cycle. As such, we can assess SDM use by looking at system activity. For example, for the purposes of the social impact evaluation, we assume that if users input their cycle start date each month, they are continuing CycleTel Humsafar use. The system does not capture phone numbers, or any other identifying data (e.g. sex, age, marital status, socioeconomic status), nor does it provide information related to satisfaction, actual use, or behavioral outcomes. This means that obtaining and analyzing this data poses few privacy concerns, but does not provide all the information we need for this study. The Polling Surveys will complement this data.

3.3.2.2. Customer Polling Surveys

Three Polling Surveys will be created; one for New User Polling Survey, Continuing User Polling Survey, and Discontinued User Polling Survey. Each survey will consist of ten to twelve close-ended multiple choice questions asking users about their sex, educational level, and marital status, as well as previous use of FP and experience with CycleTel Humsafar.

All tools will be translated and back-translated into Hindi. The tools are designed to be administered via individual questions that take no more than one minute to complete. The time to participate in a Polling Survey will be no more than 10 minutes.

The instruments will be translated into Hindi by HCL’s translation team and back translated by a third party not involved in the original translation. The tools and recruitment methods used will be pre-tested by HCL’s call center staff, who interact users often. Any necessary changes will be made and translated before launch.

Table 2: Indicators, Data Source and Timing

| Data Source | Indicator | Polling Survey | | | Timing |
|--|--|----------------|------------|--------------|--------------------|
| | | New | Continuing | Discontinued | |
| User data, captured and stored in CycleTel Humsafar system; | <ul style="list-style-type: none"> # of new, continuing and discontinued users Average # of cycles per users | N/A | | | Continuous, Online |

| | | | | | |
|--|---|---|---|---|---------|
| reports generated by online reporting system | <ul style="list-style-type: none"> Date of enrollment per user | | | | |
| Polling Surveys via SMS with new, continuing and discontinued users | 1. User marital status/sex | ● | ● | ● | Rolling |
| | 2. User education | ● | ● | ● | |
| | 3. User HH income | ● | ● | ● | |
| | 4. Previous use of FP | ● | ● | ● | |
| | 5. Reasons for CycleTel Humsafar uptake | ● | ● | ● | |
| | 6. Reasons for discontinuation | | | ● | |
| | 7. Satisfaction/dissatisfaction with the service | ● | ● | ● | |
| | 8. Correct use | ● | ● | ● | |
| | 9. FP method uptake after CycleTel Humsafar | | | ● | |
| | 10. Male engagement/communication with partner | ● | ● | ● | |

3.3.3. Data Quality Assurance and Management

HCL, as administrator of the Polling Surveys, will manage the survey data collected using their existing, secure computer-based CRM data system. Data is stored at the HCL facilities in Mumbai to protect client phone numbers and ensure data remains private.

Data from these surveys will be shared with IRH via the CRM data system. The IRH research team will have a secure log in and will be able to access reports and download data into an encrypted, password-protected Excel spreadsheet with tabs for each type of survey.

Automated user data from CycleTel Humsafar is hosted on a separate IRH- managed system, hosted by CycleTel Humsafar. This data primarily relates to length of user engagement with the CycleTel Humsafar service. IRH researchers will have a secure log in for the CycleTel Humsafar system and will be able to access and download reports as an Excel spreadsheet.

Data reports from these systems will be collated by the IRH research team as needed for data analysis.

Any data downloaded from these secure systems will be stored in a secure, password-encrypted folder on Georgetown University’s Box system. The password will be given to the CycleTel Humsafar Manager to enable data uploading to GU Box and the password will be set to expire at the end of the study.

In DC, data files will be kept on the Principal Investigator’s password-protected, computer and only the research team will have access to it. Data will be stored on GU Box until project completion. Data will not be kept beyond the project period.

3.4. Data Analysis

Survey data will be used to answer the questions of whether CycleTel Humsafar brings new customers to FP, whether it facilitates correct use of FP, and whether men are involved in FP use. Analysis will be conducted to describe sources of information about CycleTel Humsafar, reasons for use/continuation/discontinuation, user satisfaction, male involvement, correct use and the percentage of users new to FP. Demographic information, such as sex, age, marital status, and/or education level among new, continuing and discontinued users will enable the CycleTel Humsafar team to focus further marketing efforts and provide valuable insight into factors which influence uptake and continued use of CycleTel Humsafar. Analysis will be conducted for each group and also by marketing experiment phase to identify differences in user profile, correct use and discontinuation by linguistic and geographic area. Results of automated data system will be used to determine CycleTel Humsafar continuation rates.

Moreover, survey data will be used to conduct a market segmentation analysis based on user educational level and income data. This study will create three user profiles: low, medium, and high socioeconomic status and assess births averted that correspond to each profile. The results of this analysis will then be compared to the background of the average CycleTel Humsafar user.

3.5. Ethical Considerations

3.5.1. Ethical Review and Approval Process

Prior to commencing the study, ethical clearance will be sought and obtained from the Georgetown University Institutional Review Board and a local review board in India, Centre for Operations Research and Training (CORT).

3.5.2. Informed Consent

Life Tools users agree to a legal service agreement prior to the start of service use, which includes permission to be contacted by HCL to ask for inclusion in market research. As such, users are familiar with receiving polling questions by HCL about service use. However, consent to get the content through polls will still be gained so IRH knows that users have “opted-in” to getting the questions. Consent will be obtained in the following way:

Prior to receiving the first polling questions, users will receive a message (in their inbox) that says:

Thanks for using CycleTel Humsafar! Your feedback is important. We'd like to send you a few questions for a research study from Georgetown University. You can choose to participate or not. It won't affect your service. Your responses will be private. Go to cycletel.in for more info. Press Yes to receive the questions or Exit.

The website link (cycletel.in) will have full details on the purpose of the survey, and a full consent form that users can read at their discretion. Only users who press “Yes” will get the questions.

3.5.3. Confidentiality

Data collected via the SMS platform will be stored on HCL's computer-based data system, which is encrypted and password-protected for data authorized personnel only. The server is stored in Mumbai and protected by HCL's surveillance and protection policy. HCL ensures privacy and confidentiality of customer data, as mandated by the India telecommunications regulations.

3.5.4. Potential Risks and Benefits

There are minimal risks that the participants may feel uncomfortable answering certain questions or not want others to see certain questions on their phones. However, in that case it is likely that they will choose not to respond to the poll or simply delete the questions. The consent process and confidentiality measures described above will serve to ease the minimal risks involved in participation in this study. IRH will work with Indian nationals to pre-test the Polling Survey questions to ensure they are culturally appropriate and gender sensitive. As users have the option to answer whichever questions they want (or none at all), there is minimal risk in feeling pressured to continue in the poll if they are uncomfortable. Further, IRH will conduct a training on the research methodology and protection of human subjects with the database manager, study team, and any HCL staff who are involved in any Polling Survey related implementation. HCL staff have previously been trained in ethics for the implementation of other human subject research, as well as trained in privacy and confidential with regards to Indian telecommunications regulation.

REFERENCES

Arévalo, Marcos, Victoria Jennings, and Irit Sinai. 2002. "Efficacy of a new method of family planning: the Standard Days Method." *Contraception* 65, no. 5: 333-338.

International Institute for Population Sciences (IIPS). 2010. *District Level Household and Facility Survey (DLHS-3), 2007-08*: India. Mumbai

Jennings, Victoria, Priya Jha. "Using Standard Days Method® via Text Messaging: CycleTel™ Automated Testing" Report on Results from Delhi-NCR, India May 2011-Jan 2012. Institute for Reproductive Health FAM Final Report 2013

Lundgren, Rebecka, Irit Sinai, Priya Jha, Marie Mukabatsinda, Luisa Sacieta, and Federico R. León. "Assessing the effect of introducing a new method into family planning programs in India, Peru, and Rwanda." *Reproductive Health* 9, no. 1 (2012): 17.

Sedgh G, Hussain R, Bankole A, et al. 2007. "Women with an unmet need for contraception in developing countries and their reasons for not using a method." *Occasional Report 37*. New York: Guttmacher Institute.

Telecom Regulatory Authority of India. 2013. *Press Release 75/2013: Highlights on Telecom Subscription Data as on 31st July, 2013*.

APPENDICES

Appendix 1: Consent Forms

Georgetown University, Institute for Reproductive Health Consent to Participate in Research Study Interview (CycleTel Humsafar)

STUDY TITLE: DIV Project: Assessing the Social Impact of CycleTel Humsafar in India

PRINCIPAL INVESTIGATOR: Carolyn Ashcroft

TELEPHONE: +1-202-687-4375

LOCAL INVESTIGATOR: CycleTel Helpline Number +1-800-800-8000

SPONSOR: The study is funded by the United States Agency for International Development (USAID)

INTRODUCTION

You recently subscribed to the CycleTel Humsafar service via Nokia Life. As a Life Tools customer, you agreed to be contacted for market research. You have been sent an SMS message inviting you to consider participating in a research study. **The decision to participate, or not to participate, is yours.** If you decide that you want to participate, you will get 10-12 SMS questions sent in your Life Tools inbox. If you decide that you do not want to participate, you will not get any SMS questions sent to you.

If you have any questions, you should call the Helpline number, +1-800-800-8000, and a counselor will further explain this study to you.

BACKGROUND AND PURPOSE

The objective of this study is to learn about users of CycleTel Humsafar and about those people's attitudes and behaviors around using the service. The study aims to understand the reasons for service use, management of fertile days, partner communication and satisfaction levels. This information will help with future programs that work on providing family planning information and services.

This study is being sponsored by the United States Agency for International Development (USAID). Life Tools is a partner in this study.

STUDY PLAN

If you decide to participate in this study you will respond to a maximum of 12 SMS questions in your Life Tools inbox. You can choose to skip any questions that you don't want to answer, or you can choose not to answer any questions. It will not affect your CycleTel Humsafar service.

RISKS

There are few risks associated with participating in this study. It is possible that answering SMS messages about personal topics will cause you distress. At any time, you can stop answering or skip any question you like. If you choose not to answer any or all questions, it will not affect your CycleTel Humsafar service.

Another risk is that other people may see these messages on your phone. If you are very concerned about this, you should not participate in the study.

BENEFITS

If you agree to take part in this study, it will not benefit you directly. You will not be paid or receive any compensation for participating in this study. However, we believe that information gathered in this study

will help us and other groups like us develop programs that will improve the lives of men and women in communities in India and around the world.

CONFIDENTIALITY

You may be worried that others will find out what you share with us. To reduce this risk, every effort will be made to keep any information collected about you confidential. We will never ask for your name. The tracking sheet and the database with your responses will be kept on password-protected computers and on a secure server in a locked office. Only the researchers will have access to any of the information we collect. Any publications or presentations that result from this research will not include any identifiable information. But note that the Georgetown University IRB is allowed to access your study records if there is a need to review the data for any reason.

The research team will not be able to connect you to the information gathered about you in this study.

YOUR RIGHTS AS A RESEARCH PARTICIPANT

Participation in this study is entirely voluntary at all times. You can choose not to participate at all or to stop answering questions at any time. If you decide not to answer any questions, your services from Life Tools will not be affected in any way.

You do not have to answer all the questions. Only respond to questions that you are comfortable responding to.

QUESTIONS OR CONCERNS?

If you have questions about the study, you may contact Carolyn Ashcroft at the Institute for Reproductive Health, Georgetown University, in Washington, D.C. at +1-202-687-4375. You may also contact a Helpline counselor at +1-800-800-8000.

Please call the Georgetown University IRB Office at +1-**202-687-6553** (8:30am to 5:00pm, Monday to Friday, Eastern Time) if you have any questions about your rights as a research participant.

Appendix 2: Survey Instruments

| POLLING SURVEY 1 | | | |
|---|---|------------------|-------------------------------------|
| CycleTel Humsafar Service New User Survey | | | |
| NO. | SMS POLLING QUESTION | RESPONSE OPTIONS | |
| 1. | Which describes you? | 1 | Married Man |
| | | 2 | Single Man |
| | | 3 | Married Woman |
| | | 4 | Single Woman |
| 2. | What is your highest education level? | 1 | Primary or less |
| | | 2 | Secondary |
| | | 3 | Intermediate |
| | | 4 | Graduate or above |
| 3. | What is your monthly family income? | 1 | 5000 or less |
| | | 2 | 5001-15000 |
| | | 3 | 15001-30000 |
| | | 4 | 30001 or above |
| 4. | Why are you using CycleTel Humsafar? | 1 | Prevent pregnancy |
| | | 2 | Plan pregnancy |
| | | 3 | Track menstrual cycle |
| 5. | Have you ever used a family planning method in the past before using CycleTel Humsafar? | 1 | Yes |
| | | 2 | No |
| | | 3 | I don't know |
| 6. | Why did you choose to use CycleTel Humsafar rather than another family planning method? | 1 | No effects on health |
| | | 2 | Effective |
| | | 3 | Easy to use |
| | | 4 | Convenient |
| 7. | What do you do on unsafe days to avoid pregnancy? | 1 | Avoid relations |
| | | 2 | Use Condoms |
| | | 3 | Do not pay attention to unsafe days |
| | | 4 | Not trying to avoid pregnancy |
| 8. | How satisfied are you with the CycleTel Humsafar service? | 1 | Not satisfied |
| | | 2 | Somewhat satisfied |
| | | 3 | Very satisfied |
| 9. | How does your partner feel about you using CycleTel Humsafar? | 1 | In favor |
| | | 2 | Opposed |
| | | 3 | Have not discussed with partner |
| | | 4 | I don't know |

POLLING SURVEY 2
CycleTel Humsafar Service Continuing User Survey

| NO. | SMS POLLING QUESTION | RESPONSE OPTIONS | |
|-----|---|------------------|---|
| 1. | Which describes you? | 1 | Married Man |
| | | 2 | Single Man |
| | | 3 | Married Woman |
| | | 4 | Single Woman |
| 2. | What is your highest education level? | 1 | Primary or less |
| | | 2 | Secondary |
| | | 3 | Intermediate |
| | | 4 | Graduate or above |
| 3. | What is your monthly family income? | 1 | 5000 or less |
| | | 2 | 5001-15000 |
| | | 3 | 15001-30000 |
| | | 4 | 30001 or above |
| 4. | Why are you using CycleTel Humsafar? | 1 | Prevent pregnancy |
| | | 2 | Plan pregnancy |
| | | 3 | Track menstrual cycle |
| 5. | Have you ever used a family planning method in the past before using CycleTel Humsafar? | 1 | Yes |
| | | 2 | No |
| | | 3 | I don't know |
| 6. | Why did you choose to use CycleTel Humsafar rather than another family planning method? | 1 | No effects on health |
| | | 2 | Effective |
| | | 3 | Easy to use |
| | | 4 | Convenient |
| 7. | What do you do on unsafe days to avoid pregnancy? | 1 | Avoid relations |
| | | 2 | Use Condoms |
| | | 3 | Do nothing |
| | | 4 | Not trying to avoid pregnancy |
| 8. | How satisfied are you with the CycleTel Humsafar service? | 1 | Not satisfied |
| | | 2 | Somewhat satisfied |
| | | 3 | Very satisfied |
| 9. | How does your partner feel about you using CycleTel Humsafar? | 1 | In favor |
| | | 2 | Opposed |
| | | 3 | Have not discussed with partner |
| | | 4 | I don't know |
| 10 | What challenges have you had with using CycleTel Humsafar ? | 1 | No challenge |
| | | 2 | Technical problems with the service/phone |
| | | 3 | Managing unsafe days |
| | | 4 | Partner/ Family disapproval |

POLLING SURVEY 3
CycleTel Humsafar Service Discontinued User Survey

| NO. | SMS POLLING QUESTION | RESPONSE OPTIONS | |
|-----|---|------------------|---|
| 1. | Which describes you? | 1 | Married Man |
| | | 2 | Single Man |
| | | 3 | Married Woman |
| | | 4 | Single Woman |
| 2. | What is your highest education level? | 1 | Primary or less |
| | | 2 | Secondary |
| | | 3 | Intermediate |
| | | 4 | Graduate or above |
| 3. | What is your monthly family income? | 1 | 5000 or less |
| | | 2 | 5001-15000 |
| | | 3 | 15001-30000 |
| | | 4 | 30001 or above |
| 4. | Why were you using CycleTel Humsafar? | 1 | Prevent pregnancy |
| | | 2 | Plan pregnancy |
| | | 3 | Track menstrual cycle |
| 5. | Have you ever used a family planning method in the past before using CycleTel Humsafar? | 1 | Yes |
| | | 2 | No |
| | | 3 | I don't know |
| 6. | Why did you choose to use CycleTel Humsafar rather than another family planning method? | 1 | No effects on health |
| | | 2 | Effective |
| | | 3 | Easy to use |
| | | 4 | Convenient |
| 7. | While using CycleTel, what did you do on unsafe days to avoid pregnancy? | 1 | Avoid relations |
| | | 2 | Use Condoms |
| | | 3 | Do nothing |
| | | 4 | Not trying to avoid pregnancy |
| 8. | Why did you stop using CycleTel Humsafar? | 1 | No need for a FP method |
| | | 2 | Too difficult |
| | | 3 | Cycles are out of range |
| | | 4 | Decided to use different method |
| 9 | What best describes you or your partner? | 1 | Pregnant – planned |
| | | 2 | Pregnant- unplanned |
| | | 3 | Not pregnant |
| | | 4 | Not sure |
| 10. | How did your partner feel about you using CycleTel Humsafar? | 1 | In favor |
| | | 2 | Opposed |
| | | 3 | Did not discussed with partner |
| | | 4 | I don't know |
| 11 | What challenges have you had with using CycleTel Humsafar ? | 1 | No challenge |
| | | 2 | Technical problems with the service/phone |
| | | 3 | Managing unsafe days |
| | | 4 | Partner/ Family disapproval |
| 12. | Which best describes your family planning use? | 1 | Currently using a method |
| | | 2 | Not currently using, but intend to use a method in the future |
| | | 3 | Do not intend to use a method |

| | | | |
|-----|---|---|----------------------|
| | | 4 | Have not decided yet |
| 13. | Which family planning method did you switch to, if any? | 1 | Sterilization |
| | | 2 | Pills |
| | | 3 | Other |
| | | 4 | None |

CYCLETEL™: EXPANDING ACCESS TO FAMILY PLANNING VIA MOBILE PHONES

MILESTONE 4

JULY 31, 2015

INSTITUTE FOR REPRODUCTIVE HEALTH, GEORGETOWN UNIVERSITY JULY 2015

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I. Executive Summary

The following report details the progress of the CycleTel project over the previous 12 months. The following deliverables were met:

- **Key Performance Indicators (KPI) report: Section IV: Key Performance Indicators** of the report details user numbers and the cost of supporting the CycleTel service. The full KPI report can be found in **Appendix 1: Key Performance Indicators**.
- **Summary of challenges and opportunities encountered by the project to-date:** The CycleTel project finished its first year on June 30, 2015. In the last 12 months, the team has learned a great deal about operationalizing an SMS-based service. We have implemented our first marketing experiment and experienced some success in generating customer interest. In particular, this report highlights the lessons from implementing an out-bound dial (OBD) caller campaign and a Facebook social media push, which has important implications for CycleTel and other programs exploring digital marketing. **Section II: Marketing and Communications** addresses these efforts.
- **Summary of any strategic or technological adaptations the program decided to make based on experiences to-date,** including
 - **Payment functionality:** In months 9-12 of the project, the CycleTel services, as offered on the Life Tools platform was capable of accepting user payment of 10 INR per month. A larger discussion of Life Tools will follow in **Section III: Updates to Technical Platform**.
 - **Data collection/reporting:** The CycleTel system is capable of collecting data, including date that a user registers, answers to the screening questions, and period start date for all users.
 - **Call center:** The call center launched in April and is fully operational. It has accepted several hundred calls regarding the CycleTel service and we continue to expand the call center's capabilities.
- **Assessment summary of early customer traction trajectory (including partnerships, pricing, and customer acquisition strategies):** Two marketing experiments were launched in June, an OBD campaign and a Facebook campaign. Details of both are included in **Section II: Marketing and Communication**.
- **Any course corrections needed:** At the end of the first year, it is anticipated that the CycleTel team will have to implement several operation changes moving forward. These are discussed in **Section III: Updates to Technical Platform** and **Section V: Next Steps**

As detailed in the April 2015 Milestone 3 report, IRH conducted a comprehensive search for partners in 2014 to address our need for a payment platform to take on user fees and a distribution partner with a wide user base. The result of this search was a partnership with the private sector entity, HCL Ltd. and the inclusion of CycleTel (branded as CycleTel Humsafar) in their Life Tools platform, an information platform that is pre-downloaded on Nokia handsets¹ in India and provides information on agriculture, health, and education to over 50 million users across the country.

During the fall of 2014 and spring of 2015, IRH and our technical partner, Thoughtworks, integrated the CycleTel system with the Life Tools platform, which made CycleTel Humsafar a part of the Life Tools

¹ Life Tools, formerly known as Nokia Life, was owned by Nokia until 2013 when Nokia was bought by Microsoft. When the acquisition occurred, Nokia/Microsoft originally had intended to cancel the Life Tools service but subsequently maintained it by outsourcing to HCL, the current partner. As such, the named partner is HCL, and the named service is Life Tools.

mobile application, rather than a stand-alone service. All marketing and communications efforts were targeted towards Life Tools users and implemented in partnership with HCL.

II. Marketing and Communication

CycleTel launched in April, 2015 by sending an opt-in message to 3.5 million recent Life Tools users in English, Hindi, Punjabi, and Oriya. This brief message alerted users to the fact that the CycleTel service was now available on their phones. In order to encourage users to register, we conducted our first marketing experiments, a two part digital campaign targeting those 3.5 million people, including both an OBD campaign and a Facebook campaign.

"The first family planning method by SMS in India" [How it works?](#)

No side effects, No effect on health

CycleTel Humsafar on my mobile, choice in my hand

Helped me speak openly with my husband

CycleTel Humsafar never forgets.

Zero Side Effects | 100% Natural | Accessible | Confidential | Personalized | Involves Men

What is CycleTel Humsafar?
A Family Planning Method that Cares for You

CycleTel Humsafar is an SMS-based service that works on proven scientific principles to help you avoid unwanted pregnancy. It is based on the scientifically-tested Standard Days Method®, which is trusted by millions of families worldwide.

Register

Registering for CycleTel Humsafar is easy - just go to Life Tools application on your Nokia phone and [follow the instructions](#)

[Know More](#)

Website

Boring Brands, our marketing and communication partner, completed a consumer facing, English language website for CycleTel in April 2015. The website, which can be found at cycletel.in, contains information on the Standard Days Method® (SDM), instructions on how to register for CycleTel Humsafar on the Life Tools platform, and the legal terms and conditions for the service.

Outbound Dialer (OBD) Campaign

At the beginning of June, Boring Brands, conducted an OBD campaign promoting CycleTel. They recorded three different thirty seconds long advertising spots and tested both the technology and response rates for all three scripts with 3,000 users (see Appendix 2: Outbound dialer scripts). Based on that test, script 1 and 3 were chosen for the larger push. The test also confirmed that technology was working appropriately at that time. Therefore, IRH and HCL moved forward and sent the two chosen advertisements out to approximately 1.8 million Hindi speaking people.

The ads were sent through the HCL system and instructed interested people to press 1 during or after listening to the spot.

This campaign started on June 6, 2015, and was sent to 1,800,000 Hindi speaking users. Over 500,000 people listened to all or part of the ad and approximately 15,000 people pressed 1. However, not one person succeeded in answering the first CycleTel Humsafar screening question; people must answer all three screening questions correctly in order to be registered for the service. In addition, the CycleTel test phones did not get the welcome message or the first screening question after receiving the ad and pressing one.

We are investigating why no response was received, with the hypothesis that technical issues with the HCL system prevented the questions from being sent or answered correctly.

- We obtained delivery reports from HCL's SMS aggregator for the 15,000 people who pressed 1. These reports seem to indicate that people received the welcome message and question 1.

However, the vendor was unable to distinguish between CycleTel messages and messages sent by other services. We tried to narrow down the time period to rule out other service messages, but the results are inconclusive.

- We attempted to conduct surveys with 60 users who had pressed 1. However, we did not receive those phone numbers until a month after the OBD was released. Out of the 36 people that our call center reached, only one remembered hearing the message.
- We sent out the OBD to a small batch of 5,000 people on July 20, 2015, while carefully monitoring the technical system. The delivery reports indicated that the messages were sent correctly, but the CycleTel test phones did not receive the messages. We conducted a phone survey on July 24, 2015, with the following results:

| Customer who pressed 1 | Survey Participants | Customers who said they heard the OBD | Customers who said they pressed 1 | Customers who remember the welcome message |
|------------------------|---------------------|---------------------------------------|-----------------------------------|--|
| 259 | 53 | 17 | 7 | 1 |

While these results seem to indicate that participants did not receive the welcome message, the small sample size and participants' lack of clear memories of the ad makes it difficult to draw firm conclusions.

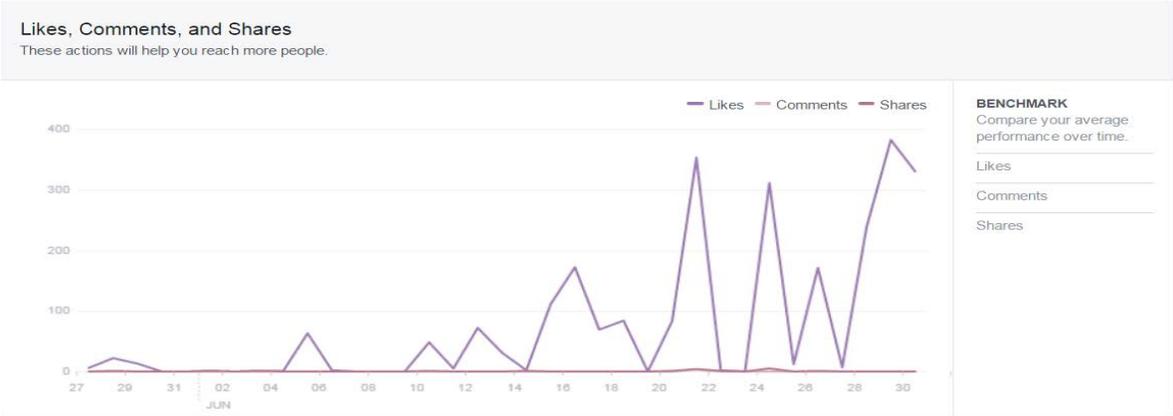
In the absence of technical problems, lack of user response could be attributed to other reasons. Some possibilities that we explored:

- **Cost:** We designed our messaging so that users were not informed of the monthly price until they had completed the screening questions. All users dropped out of the process before they knew that it cost 10 INR/ month. However, during the surveys, several customers told us that they did not press one because they were concerned that they would be charged.
- **Usability problems:** Perhaps the technology allowed people to register, but they were unable to navigate in order to choose *Yes or No* in answer to the question.
- **Gender issues:** We know that the majority of the Life Tools user base is male. It is possible that, when confronted with a question that applies to women, they assumed that the product was not for them and lost interest.
- **Difficulty with the Screening Question:** While the screening questions have been extensively tested for clarity, it is possible that users were not able to comprehend the question.
- **Phone switchers:** The service is only available for people with specific Nokia handsets. If they used to have a Nokia phone but then switched to another phone, they would still be in our database. However, they would receive only garbled messages or nothing at all.
- **Language barriers:** Due to technical limitations, while the OBD was targeted to Hindi speaking users and the screening questions appear in Hindi, the answers only appear in English. This was found to be a significant obstacle in another service that we provided, where people were unable to answer simple questions such as sex, marital status or gender because of this language barrier.

However, we do not believe that any of these alternate possibilities would result in universal inability to register. It seems that technical problems are the most likely explanation. We plan to send a follow up message to each of those people, with instructions of how to sign up for the service and providing the call center phone number for additional questions.

Facebook campaign

We sent targeted Facebooks posts and ads to people with access to the Life Tools platform by uploading a database of HCL phone numbers and matching those with Facebook accounts. Example posts can be found in Appendix 3: Example Facebook posts. These posts were designed by Boring Brands to begin a general conversation on family planning, support the key messages of the OBD ads, and attract interest of CycleTel Humsafar. Over the course of the five week campaign, approximately 85,000 people were reached and approximately 4,700 people were engaged with the page through likes, comments or shares. See the screenshots below for examples of user audience reach and engagement.



Print Article

A newspaper in Bihar, India printed an article on CycleTel on June 1, 2015 (text can be found in Appendix 4). We did not initiate this article, and it contained only minimal information, but it resulted in almost 200 calls to the call center. However, CycleTel was not available on the Life Tools platform in Bihar, so we were unable to convert that interest to registrations. Its success is evidence that print media is a viable means to reach our target audience.

III. Updates to Technical Platform

In months 9-12 of the project, the Life Tools platform was capable of accepting user payment of 10 INR per month. Users who register for the system would be informed of the monthly price at the end of the registration process in order to assess whether payment deterred user engagement. As users register, the Life Tool system can initiate billing with mobile operators. Once that billing is confirmed, the Life Tools system could inform our system, which then can enroll the user in the CycleTel system. This process would be repeated monthly, as each user enters their next period date.

The CycleTel system can capture all user interactions, including date of activation, answers to the screening questions, reminder messages sent, and period start date for all users. One of the features of the Life Tools integration is that phone numbers are not shared without explicit permission from the user; therefore, users are tracked in our system by a unique ID.

The call center, hosted and supported at the Indian Society for Health Professionals (ISHP), is operational and has accepted over 600 calls regarding the CycleTel service since it launched in April. We continue to expand the call center's capabilities to enable call center registration and assess the results of our marketing experiments.

On June 16, 2015, IRH was informed that HCL would no longer support the Life Tools platform on any phones, and that the platform would be shut down as of June 30, 2015. The Life Tools platform was originally named Nokia Life and was operated by Nokia. In the fall of 2013, Microsoft purchased Nokia. Rather than shut down the Nokia Life platform, Microsoft transferred the Nokia Life platform to another company, HCL, which operated it as the Life Tools starting in January 2014. Since that transfer, HCL has negotiated with Microsoft to be able to continue to offer Life Tools on Nokia phones, particularly the Nokia Asha line of phones. Those negotiations have resulted in the shutdown of the Life Tools platform, including CycleTel, on June 30, 2015.

In light of that decision, HCL's strategy will shift away from the Nokia Asha phones that our service is based on. They are now moving onto different handsets and manufacturers, including Intex and Karbonn, with a new brand, Go Life. However, these new devices and handsets cannot accept user inputs via text. This means that users would not be able to answer the screening questions or enter their period date through the phone. As an alternative method, HCL has suggested that users use the call center to register and then call each month to register their period date. Given the additional barriers that this would present for users, the lower volume of handsets that Go Life will be on, and the continuing instability of the HCL business unit, IRH does not see this partnership as sustainable or beneficial.

Immediate Impacts:

The CycleTel system is still functional, but cannot be accessed through the Life Tools platform. People who were reached through the OBD or Facebook campaigns can no longer register for the CycleTel services. As part of the transition plan, HCL has agreed to deliver phone numbers of any user who tries to register for CycleTel.

In order to restore access to CycleTel as soon as possible, IRH has begun negotiations with our previous SMS gateway provider, Unicef. Before the integration with the Life Tools platform, Unicef provided a phone number that users could text and a pass-through service that delivered SMS from the system to the user. A return to Unicef and the separation from the Life Tools platform has both benefits and limitations.

Benefits:

- Users are no longer tied to specific handset and the Life Tools platform. We can now segment the market according to the most promising demographic indicators, and users who switch phone can continue to use the service.
- We can implement offline marketing experiments, instead of being limited to digital marketing.

- We will have additional control over our user information, including confirmation that messages are being sent out and the ability to run surveys when we want.
- Messages will be delivered through SMS, not a separate inbox, eliminating some user error issues.
- Our dedicated and trained call center, ISHP, will be able to register people directly over the phone.
- CycleTel system can be expanded to additional languages beyond English and Hinglish

Limitations:

- We no longer have a built in user database to market to and will have to find people on our own.
- CycleTel will no longer be available in all of the languages and character sets that the Life Tools app supports. Instead of 12 languages, we will now only be available in English, Hindi and Hinglish.
- Users fees can no longer be charged directly for the service without the Life Tools payment mechanism.
- Users must text a long phone number and pay standard SMS rates, and IRH must pay for each message the CycleTel system sends.

The research protocol has been approved by both a local IRB and Georgetown University IRB. When we have recruited users, we will collect data on new, continuing, and discontinued users.

IV. Key Performance Indicators

Due to technical problems with registration and the short recruitment time available before the Life Tools platform shut down, the marketing experiments did not result in any users or customer revenue. However, we did reach a number of users and approximately 3% indicated interest in CycleTel.

Table 1: KPI Summary

| KPI | RESULT JUNE 30, 2015 |
|--|---|
| Expenditure: Cost of Good (cost to operate technical service), as based on: | |
| Cost of SMS deployment | \$0 – covered by Life Tools |
| Phone line rentals | \$0 – covered by Life Tools |
| Hosting charges | Mar 21, 2015 – June 20, 2015 \$1,645 |
| Software maintenance, oversight and development | \$2,625 |
| Call center operator and phone bill costs | \$8,106 |
| Total expenditure | \$12,375 |
| Revenue - via customer sales | \$0 |
| Pricing - cost of service to user | 10 INR/ month |
| Pre-users | |
| # of people sent the service push | 3,533,456.00 |

| | |
|---|--|
| # of people who received the OBD | 1,824,562 (sent) 540,863 (listened) 15,891 (pressed one) |
| # of people reached on Facebook | 85,895 (4,765 Likes) |
| # of inquiries to call center | 655 |
| # of people who activated | 15,891 |
| Initiators | |
| # of new initiators acquired during the quarter | 15,891 |
| # of cumulative initiators, ever | 15,891 |
| Registrants | |
| # of new registrants acquired during the quarter | 0 |
| # of cumulative registrants, ever | 0 |
| % of initiators who did not convert to registrants that quarter | 100% |

V. Next Steps

Despite difficulties in gaining registration, the last three months have shown a promising level of engagement and interest in CycleTel. We propose a two part strategy to capitalize on that interest and find a new path to financial sustainability. This strategy will be implemented in September 2015, after the CycleTel product is integrated with Unicef and Hindi language capabilities are tested.

1. Recruit users

Our partnership with Life Tools limited our recruitment efforts to digital marketing channels. Without that partnership, we can now explore new and more direct channels of user engagement, including:

- Offer CycleTel at no charge to users, in order to build the customer base more quickly
- Renew our partnerships with Prerana, a Delhi-based NGO, who offered us a way to test how CycleTel could be distributed in conjunction with intensive user engagement with trained health facilitators.
- Test mass market approaches including print ads, PR events, and radio spots.
- Explore partnerships with health workers, including leveraging an existing partnership with clinics in Jharkhand.
- Implement a more targeted digital media approach, with an audience of women ages 18-35, rather than Life Tools users exclusively.

2. Explore alternative revenue sources

- Explore corporate partnerships, including the makers of menstrual pads.
- Explore the potential for the operator of the CycleTel system to gain revenue by providing services (e.g., market research) to companies with compatible products.
- Discuss sponsorship by health-focused NGO partners
- Lower costs through negotiation with partners and searching for operational efficiencies

Throughout this process, IRH will collect research on CycleTel users by conducting user surveys (in person, by phone, or through SMS channels), by tracking user activity on the CycleTel system, and through direct engagement with distribution partners.

Appendix 1: Key Performance Indicators

| KPI | RESULT JUNE 30, 2015 |
|--|--|
| Expenditure: Cost of Good (cost to operate technical service), as based on: | |
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| Software maintenance, oversight and development | \$2,625 |
| Call center operator and phone bill costs | \$8,106 |
| Total expenditure | \$12,375 |
| Revenue - via customer sales | \$0 |
| Pricing - cost of service to user | 10 INR/ month |
| Pre-users | |
| # of people sent the service push | 3,533,456.00 |
| # of people who received the OBD | 1,824,562 (sent) 540,863 (listened) 15,891 (pressed one) |
| # of people reached on Facebook | 85,895 (4,765 Likes) |
| # of inquiries to call center | 655 |
| # of people who activated | 15,891 |
| Initiators | |
| # of new initiators acquired during the quarter | 15,891 |
| # of cumulative initiators, ever | 15,891 |
| Registrants | |
| # of new registrants acquired during the quarter | 0 |
| # of cumulative registrants, ever | 0 |
| % of initiators who did not convert to registrants that quarter | 100% |
| Users | |
| # of new users acquired during the quarter | 0 |
| # of all active users during the quarter | 0 |
| # of cumulative users, ever | 0 |
| Quarterly snapshot of non-conversions (registrants to users): | N/A |
| Cumulative non-conversion (registrants to users): | N/A |
| Cumulative churn rate : | N/A |
| Customers: | |
| # of new customers acquired that quarter | 0 |
| # of all current customers that quarter | 0 |
| # of cumulative customers, ever | 0 |
| After-sales servicing | |
| # of calls to the call center | 0 |
| Duration of use of service (<i>captured once at end of</i>) | |

| | |
|-------------------------------------|---|
| <i>project).</i> | |
| # of users who used the service for | |
| 0-3 cycles | 0 |
| 3-6 cycles | 0 |
| 6-12 cycles | 0 |
| +12 cycles | 0 |

Appendix 2: Outbound dialer scripts

| Script | Targeting | Narration by | Message |
|--------|-----------|---------------|----------------------|
| 1 | Women | Man and Woman | Involve your partner |

| | |
|--|--|
| Namaste! | Hi! |
| F: Kya aap apna parivaar badane ke liye abhi tayaar nahin hai? | F: Do you feel you're not yet ready to have a baby? |
| M: Toh mat badaye. CycleTel Humsafar ko apnaye. Ye parivaar niyojan ka ek asaan tarika hai. | M: Then don't, and start using CycleTel Humsafar. It's an easy method of family planning. |
| F: Apne Asha phone par CycleTel Humsafar ko shuroo karne ke liye abhi 1 dabayen...Yeh mujhe mahine ke un dino satark karta hai, jab main maa ban sakti hoon. | F: Press 1 to activate CycleTel Humsafar on your Asha phone, now. It alerts me on the days of the month when I can get pregnant. |
| M: Is saral tareeke se hum apne bachon main sahi antar kar paye hain... F: 1 dabane pe paise nahin katenge; bas jaanch ke liye sawaal aayenge. | M: Using this easy method we've been able to create right gap between our children. F: You will not be charged on pressing 1; you'll only have to answer some simple questions. |
| Both: - Aur jaankaari ke liye 1 dabayein. | Both: For more information, press 1. |

| Script | Targeting | Narration by | Messaging |
|--------|-----------|---------------------------|---------------------|
| 2 | Man | Couple – lead in by woman | Easy and Accessible |

Main Idea: Repeat CycleTelHumsafar core message to make the listener familiar with it.

| | |
|--|--|
| Namaste! | Hi! |
| F: Yaad hai jab hamein parivaar niyojan ki baat karne mein sharm aati thi? | F: Remember when we used to shy from discussing family planning? |
| M: (hansi) Ab nahin! | M: (Laughs) Not anymore! |
| CycleTel Humsafar se hum apne bachon main | With the help of CycleTel Humsafar, family planning |

| | |
|---|--|
| sahi antar kar paye hain... | has become very easy. |
| F: Sirf 1 daba kar apne Asha phone par uplabdh CycleTel Humsafar ko shuroo karen. Yeh service aapko, sms ke zariye, un dino satark karega jab aap maa ban sakti hain. Yeh ek parkartik garbh nirodhak upaay hai bina kisi nuksaan ke. | F: Just press 1 to activate CycleTel Humsafar on your Asha phone. This service sends SMS reminders on days each month when you could get pregnant. It's a natural way to avoid pregnancy with no side effects. |
| M: Na internet connection ki fikar aur naa hi kutch download karne ki zaroorat... | M: And no need to download an app or worry about internet connection! |
| Both: Abhi,1 dabayen aur shuroo Karen. | Both: Press 1 to start it now! |

Couple:

| Script | Targeting | Narration by | Message |
|--------|-----------|------------------|------------------|
| 3 | Woman | 2 female friends | Safe and Natural |

| | |
|---|---|
| F 1: Are , Kya tu jaanti hai... mahine ke kuch din hote hain jab tu maa ban sakti hain? | F 1: Did you know that you can get pregnant only during certain days of the month? |
| F2: Sahi Didi! [Excitedly thinking] Un dinon ki jaankari mil jaaye to... Maa banna taal paaongi, isse parivar niyojan kitna asaan ho jayega. Magar... pata kaise chalega? | F 2: Oh wow Didi! [Thinking excitedly] If I know those dates, I would be able to avoid pregnancy; this would make family planning so convenient! But...how would we know? |
| F1: Apne Asha phone par 1 dabakar CycleTel Humsafar shuroo karo. Ye sms ke zariye un dino satark karta hai, jab tum maa ban sakti ho. Aur haan...yeh prakratik tareeka hai – bina kisi dushprabhav ke. | F1 - But of course! – press 1 on your Asha phone to start CycleTel Humsafar...this service sends SMS alerts on those days when you can get pregnant This service is natural and has no side effects. |
| F2 – Wah Didi...shukriya... | F2 – Thank you so much Didi! |
| Both: Aur jaankaari ke liye 1 dabayein. | Both: For more information, press 1. |

Appendix 3: Example Facebook posts

| Image | Post Text |
|--|---|
|  <p>Is CycleTel Humsafar for me?</p> <p>Yes, if you have menstrual cycles that are 26-32 days long</p> <p>CycleTel HUMSAFAR</p> | <p>Most women have menstrual cycles that are 26-32 days long. If your period comes every 26 to 32 days, then you can use CycleTel Humsafar! To learn more about this service call 1800 1800 8000 (Toll Free) or visit http://cycletel.in</p> |
|  <p>ARE YOU NOT READY TO HAVE A BABY YET ?</p> <p>You need to avoid having unprotected sex on days 8 through 19 of your menstrual cycle</p> <p>CycleTel HUMSAFAR</p> | <p>If you're not ready to have a baby yet, you could avoid having unprotected sex on days 8 through 19 of your menstrual cycle. These are unsafe days when you run the highest chance of getting pregnant. CycleTel Humsafar makes it easy for you to remember those days. Know more at Toll free number 1800 1800 8000 or visit http://cycletel.in.</p> |

DID YOU KNOW?

Over 222 million women worldwide want to avoid pregnancy but are not using a modern method of family planning

 CycleTel HUMSAFAR

Did you know over 222 million women worldwide want to avoid pregnancy but are not using a modern method of family planning? Thankfully, we now have an easy-to-use, SMS-driven, and highly useful solution. Look for CycleTel Humsafar service on your Asha Phone. Call 1800 1800 8000 (Toll Free) to know more

