Impact study 2015 - 2016

TTC MOBILE

Contents

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TTC Mobile enables organizations to engage in conversation with target audiences in emerging markets via interactive mobile solutions

Key figures 2008-2015:

150 projects
• Data collection 40
• SMS information 103
• Consultancy 7

118 clients

5 continents

25 countries

More than 1.5 million end-users
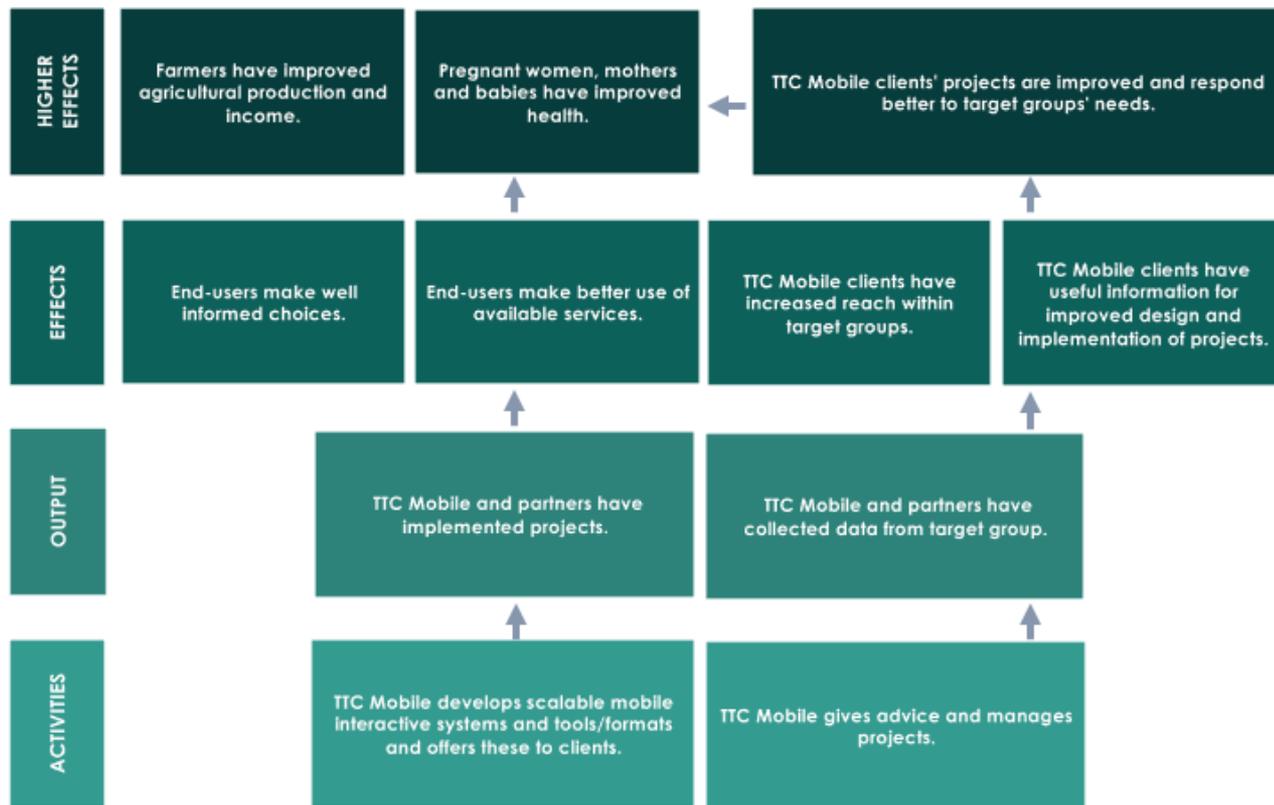
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Impact value chain

As a social enterprise, TTC Mobile wants to have a positive influence on society and create social impact. Social impact is the change that can be attributed to the activities of your company. Both positive and negative.

If the right activities are chosen, the results (or outputs) lead to positive outcomes for individuals, groups or even society as a whole.

The business model of a social enterprise can be explained through an impact value chain. This describes the pathways to the change that the company is striving for.

The simplified impact value chain of TTC Mobile is shown here on this slide. This was the starting point for this impact research.

Please note that TTC Mobile is in part dependent on its partners for creating impact. The company's impact on end-users should be considered "shared impact".

HIGHER EFFECTS

Farmers have improved agricultural production and income.

Pregnant women, mothers and babies have improved health.

TTC Mobile clients' projects are improved and respond better to target groups' needs.

EFFECTS

End-users make well informed choices.

End-users make better use of available services.

TTC Mobile clients have increased reach within target groups.

TTC Mobile clients have useful information for improved design and implementation of projects.

OUTPUT

TTC Mobile and partners have implemented projects.

TTC Mobile and partners have collected data from target group.

ACTIVITIES

TTC Mobile develops scalable mobile interactive systems and tools/formats and offers these to clients.

TTC Mobile gives advice and manages projects.

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Research goals and process

TTC Mobile had the following research goals for this impact study:
gain insight into its social impact and added value, and
learn ways to achieve maximum impact.

Research steps:

Identify (key) **stakeholders** → Map potential **effects** → Develop **indicators** and **measurement plan** → Develop tools and **measure** indicators → Analysis and impact **report**

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Data collection overview

END-USERS

To examine TTC Mobile and its partners' impact on end-users, two cases were identified. These reflect the two main themes that TTC Mobile works on: **agricultural development** and **maternal & infant health.**

SMS survey
720 farmers in Bolivia and 4000 young mothers in Tanzania who were part of a TTC Mobile project received an invitation to take part in an SMS survey. The response in both cases was too limited to draw conclusions.

Telephone interview
To increase the number of respondents, phone interviews were also conducted. 97 farmers in Bolivia were included in the telephone survey. 307 people who made use of the TTC Mobile project were called in Tanzania. The respondents were randomly selected.

In total 116 farmers in Bolivia and 374 registered users of the TTC Mobile project in Tanzania completed the survey. In both cases this was a sufficiently large sample to draw conclusions for the entire research population.

Desk research
The existing evidence base relating to the effectiveness of mobile solutions was examined through desk research. Both academic studies and practical evaluations were explored to further substantiate the research findings.

CLIENTS

Online survey
All 21 clients who worked with TTC Mobile in 2014 received an online survey. This focused on the added value of working with TTC Mobile and mobile solutions. They were asked about their experiences with TTC Mobile and future use of mobile solutions. Eight clients responded to the survey.

In depth interviews
Five clients were approached for in-depth interviews. The respondents for these were selected to reflect both the different TTC Mobile services and the variety of clients that TTC Mobile works with. Three of these clients also participated in the survey.

In total, data was collected from 10 clients.

Respondent overview
Online survey:
Good World Solutions, WWF ROA, CORDAID, GIZ, and AIID
Interview:
CDC foundation and Tobacco Free Kids
Both:
Bamboo Finance, ICCO, and Fhi360

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Research results

Impact on clients

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Main effect on TTC Mobile's clients

Larger & broader reach

The majority of the clients indicate that working with mobile services enables them to reach more people. Furthermore, several clients indicate that working with mobile solutions lets them reach people who are otherwise hard to reach such as women, young people and people in rural areas.

"Mobile interventions gave a total different dimension to our project: more reach and faster , more agile and real-time data."

Low cost solutions

All clients participating in the survey mention that the dissemination of information by SMS is efficient and more cost effective (cost per reached person) than the other methods they use such as field visits or telephone interviews.

"Our business is listening to the voice of workers around the world. At the moment, mobile is the best way to do that quickly, securely and cost effectively."

SMS reach improved by using other media

Clients agree that mobile approaches are efficient and effective. Several clients indicate that combining a mobile project with more traditional media like radio or TV helps gain public traction and broaden the target groups' awareness of the intervention and therefore reach.

Cost efficiency is not always the case

Two scenarios emerged in which clients did not experience cost efficiency:
a. clients argue that technical facilitation (sec) can be done by local partners with lower costs.
b. start-up costs are substantial if it is not possible to scale up the project. If scaling up is not an option, the cost advantages of mobile solutions are minimised.

"The key is very efficient data exchange within and between organizations."

Data used for adjustments

Clients collected data for research purposes and gathered information from end-users during SMS projects. More than half of the clients indicate they used the collected data to improve projects, policies and monitoring. Others used the data for upward and downward accountability.

To scale up or not to scale up, that's the question

Clients indicate that projects in health and micro-finance can be up-scaled quite easily, yielding a high reach with minimal investments. With minor adjustments the intervention can be rolled out in multiple contexts. Scaling up agro-economic projects can be more complex because these are dependent on up-to-date regional information. This added complexity is supported by the World Bank which states that dependency of local markets and traders is an added complexity for scaling up agro-economic projects.

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Added value of TTC Mobile

Bridging the gap

TTC Mobile has built relationships based on trust with local telecom providers. This gives it a distinct added value over NGOs that offer similar services. TTC Mobile bridges the gap between NGOs and providers, making mobile solutions attainable and effective for NGOs and their local partners.

"We provided Kenyan farmers with information on prices, weather or techniques. In Kenya, the revenues of these farmers increased greatly."

Reputation

By integrating mobile solutions in their work, clients build a reputation for innovation and are seen as early adaptors in the field and by donors. Clients indicate they receive special attention from local governments and other organizations because of their work with TTC Mobile. Two organizations even won innovation awards.

"It's become part of our strategy and brand. We now seem to bring something very new to the table for governments and donors."

"The tool has limits in terms of the complexity and numbers of questions possible. Our 'how' or 'why' questions are only partially answered."

Content development and technical support

The majority of clients indicate that they find the assistance of TTC Mobile in content development useful. Content development is important as the impact of mobile solutions is heavily dependent on the content of the SMS. However, some consider it too limited. And some clients indicate that increasing TTC Mobile's content support would be of added value.

Success multiplies

Nearly half of the interviewed clients who piloted with TTC Mobile made mobile solutions part of their organizational toolbox. Most clients indicate they will continue working with mobile solutions, while five clients already run new projects with mobile solutions. Even local governments adopted mobile solutions for their own outreach projects.

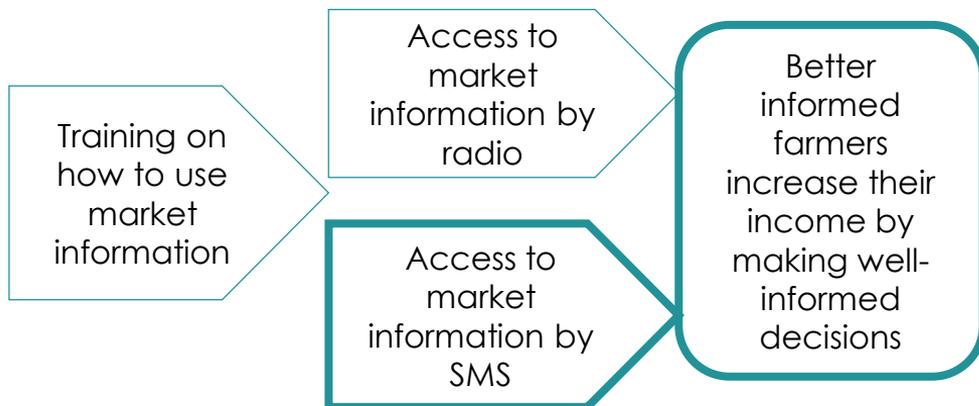**The vast majority of clients want to continue using mobile solutions**

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Research results

Impact on end-users:
cases in Bolivia & Tanzania

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The ACLO Project

It is a reoccurring phenomenon in Bolivia that small-scale famers get **underpaid for their products**. They often receive prices below market value. In the framework of Connect4Change, a partnership of five Dutch development organizations (Akvo, Cordaid, Edukans, ICCO, IICD) and TTC Mobile, a project was developed to improve the market position of small-scale farmers.

The project logic is shown in the image below. Farmers were trained to **use market information to better position themselves in the market**. They then received access to market information through radio and mobile devices.

Puede solicitar los precios de cualquiera de los productos que se encuentran en el listado del reverso y de los cinco mercados habilitados

SUCRE, POTOSÍ, TARIJA, MONTEAGUDO Y CAMARGO

ACLO: Registrarse
ACLOSALIR: Darse de Baja

Pasos para Registrarse
Enviar un **SMS** con la palabra **ACLO** al número **2229**

Training on how to use market information

→ Access to market information by radio

→ Access to market information by SMS

→ Better informed farmers increase their income by making well-informed decisions

720 farmers registered between 3-11-2013 and 31-12-2014 for the SMS market information service. Through this service they can request up-to-date market **information about 72 products for five local markets.**

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Core results case study Bolivia

The SMS service is **used regularly** by the registered farmers. 68% of the farmers indicate that they request product prices weekly or more often.

Almost all of the farmers who make use of the service (95.6%) mention they **are better informed** as a result.

92% of the farmers indicate they **adjust the prices** of their products based on the information they receive by SMS.

91% of the farmers claim their **market position has improved** due to the information they receive via SMS.

The improved market position can be seen in the farmers' **income.** 80% of the farmers indicate this **has improved** due to the SMS service.

"Thank you for this information via SMS, it helps us farmers a lot"

"Please enable an option to subscribe to this service"

Supported by literature

Mobile phones are a good way to provide information to smallholder farmers. A study on market information services in Uganda (Ferris et al., 2006) found that farmers have almost no access to computers. After radio, mobile phones are the most easily accessible devices. This is similar in Bolivia. Access to internet is still limited to 39.2% of the population (ITU, 2014), while access to mobile phones is ample (penetration of 102%, (budde.com.au, 2014)).

Accurate real time price information improves the livelihoods of farmers. This was one of the important conclusions of two studies of projects similar to the ACLO project (Ferris et al., 2006 & Lonakathan et al. in Grimshaw et al., 2011).

TTC Mobile was involved in another Connect4Change project (in Kenya) which included weather information and agricultural advice as well as market information. An evaluation of this project found that **the income of the farmers increased strongly.**

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Healthy Pregnancy, Healthy Baby

Over the last decade Tanzania has considerably improved its maternal and infant health. However the country is still far from reaching the Millennium Development Goals (unicef.com, 2015).

Maternal and infant health remains a cause for concern in Tanzania. Death rates for children under five, new-borns and mothers remain high.

- Under-five mortality 81/1,000 live births
- Neonatal mortality 26/1,000 live births
- Infant mortality 51/1,000 live births
- Maternal mortality 454/100,000 live births

unicef.org (2015)

In December 2012, TTC Mobile, together with the mHealth partnership, launched the nationwide Healthy Pregnancy, Healthy Baby text message project in Tanzania. The project falls under the framework of the multimedia nationwide healthy pregnancy campaign 'Wazazi Nipendeni'.

The SMS platform allows pregnant women, relatives and others interested in safe motherhood to receive information and reminders about a healthy pregnancy.

At set times users receive text messages that are relevant to their stage of pregnancy. The messages cover **a comprehensive range of safe pregnancy and early childcare information** and integrates key themes such as antenatal clinic attendance, malaria prevention and the use of iron folate tablets.

Since its launch, over 1 million people have signed up for the service.

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Core results case study Tanzania

The majority of subscribers to the HPHB service (93.2%) indicate they gained knowledge from the text messages they received. The service proved **especially helpful to first time parents**.

94% of the parents feel the information they received **increased their confidence** in their own and their babies' health.

85.6% of subscribers indicated that they **changed the way they took care of themselves during their pregnancy** due to the SMS service.

Reaching the right audience?
40% of the people reached by phone were men, registered as women.

The men interviewed indicated they signed up for the service to gather information on how to take care of their wife. They found the service useful. It helped them to better understand their wife's pregnancy and how to take care of her.

The men indicated that they also shared the information with their wife.

Example of changed behaviour
87.3% of those who received the HPHB SMS message were encouraged to go to the clinic more often. The message functioned as a reminder, but also led to extra checks for additional illnesses such as malaria.

It is important to note that in remote villages clinics are sparse. Therefore reminders for clinic appointments do not always lead to direct action.

Example of changed behaviour
The use of iron and folic acid supplements is highly recommended during pregnancy (WHO, 2015). 66.5% of the respondents indicate that due to the SMS service they increased their intake of iron folate tablets. This was especially important because some doctors had 'forgotten' to mention its importance.

Better than the clinic?
A limited number of respondents indicated the SMS gave them sufficient and better information than the clinic. They decided not to go the clinic anymore. A counter productive effect of the service.

For most respondents however the SMS proved an excellent reminder and at times the information was complementary to the doctor's advice.

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Core results case study Tanzania

Success of the project
A strong indicator of the popularity and usefulness of the project is the recurring **request by respondents to extend the SMS service** for the first year of the baby's life. There were also requests for an SMS service on subjects such as family planning, information on safe sex disease prevention.

Supported by literature
Previous research supports the effects found in the case study. For example, Kaewkungwal et al. (2010) assessed the application of mobile phone integration into the healthcare system concerning antenatal care. They found that the numbers of **on-time antenatal clinic and EPI visits significantly increased**. They also showed that appointment reminders had a positive effect on the number of women that made use of pregnancy check-ups.

Another study by Lund et al. (2014) also supports these positive findings. Their study focused on antenatal care attendance in Zanzibar. Their results indicate that the mobile phone intervention was associated with an **increase in antenatal care attendance**.

Beyond the phone
Some respondents indicated that they used the HPHB service to advise those who could not afford their own cell phones. The service thus reached more people then just cell phone owners. The exact spill-over effect cannot be specified on the basis of the collected information.

Khorshid et al. (2014) conducted research on the effects of SMS messages on the compliance with iron supplements during pregnancy in Iran. Women in the intervention group received several text messages during 12 weeks. They found that 94% of the women in the intervention group had high compliance with iron supplements compared to 66% in the control group. **This comparable study indicates SMS intervention clearly has a positive effect on the iron intake.**

Jaarethum et al. (2008) studied the effect of prenatal support through SMS in Thailand. The women who received the SMS support were found to be significantly more satisfied with the antenatal care during this period than women who did not. Their findings also **confirm the increase in confidence of mothers** who receive prenatal support through SMS.

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Conclusions & considerations

Impact value chain reviewed
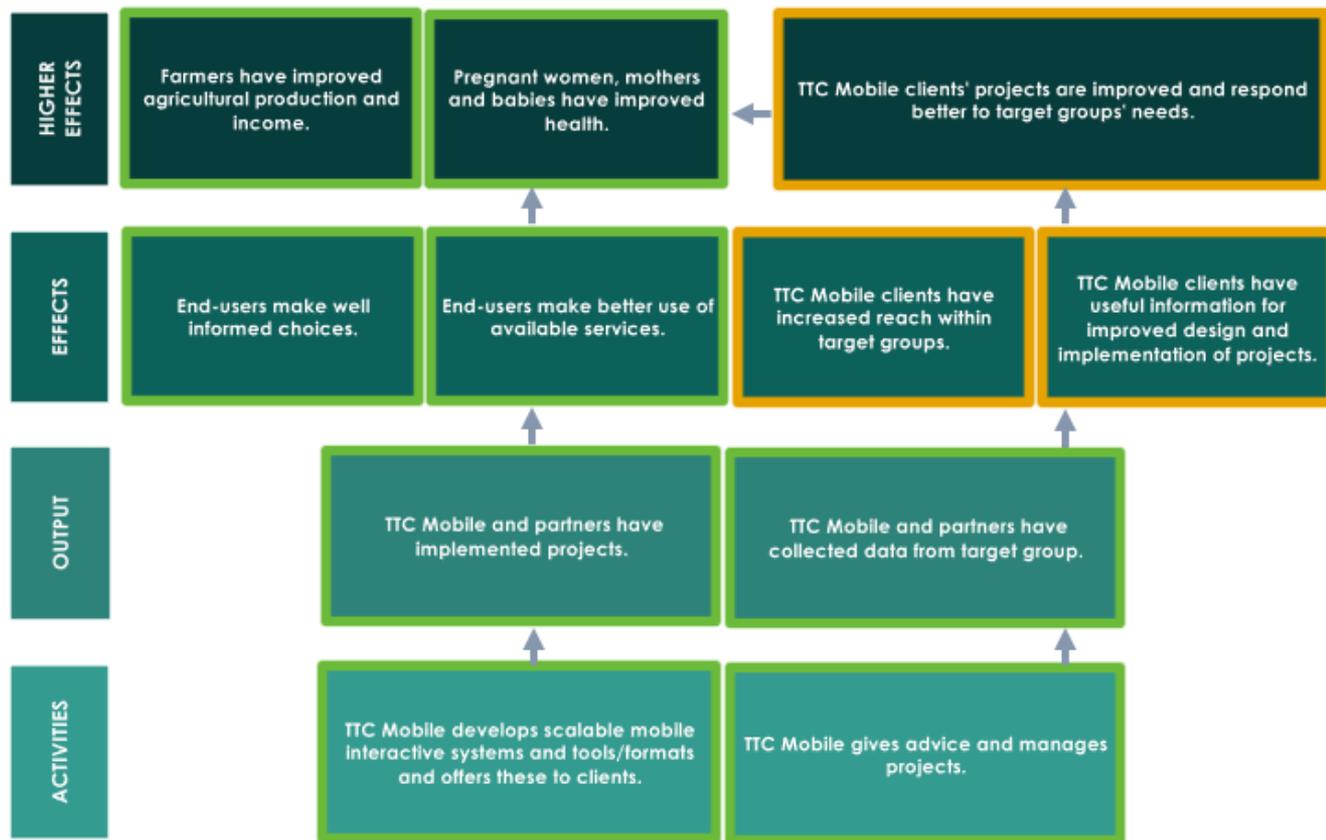
Reflecting on the value chain

The impact value chain opposite shows to what extent the research proves the effectiveness of TTC Mobile's pathways to change. The colour of the line around the boxes indicates the level of evidence for the described change. Green indicates strong evidence. Orange indicates more limited evidence.

There is a strong indication that the changes for TTC Mobile's clients described in the impact value chain take place. However these indications are based on the views and perceptions of the clients. Additional studies need to be done to further prove these effects.

Both literature and our own case studies show that the mobile interventions of TTC Mobile are effective. Note that these cases do have particular characteristics:
- The users had to sign up for the SMS service.
- The users had direct benefit (health/income) from changing their behaviour.
These two characteristics improve the likelihood of behavioural change. In this impact research the effects of other types of SMS interventions, that do not have these characteristics, have not been studied.

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Overall impact statements

1. Clients mention they reach more and hard-to-reach target groups through mobile solutions.
The number of people reached is most likely even larger than the number of phone owners reached since in many countries people share phones and information with the family. However, due to the 'anonymous' nature of an SMS message, the people reached may, at times, fall outside of the target group.

2. Mobile solutions are considered cost effective.
All clients participating in the survey confirm that the dissemination of information through SMS is more efficient and cost effective than other methods they use. The cost effectiveness of a TTC Mobile intervention is however limited if the intervention is not scalable.

3. Maternal health SMS interventions work.
Literature study and the case study show that end-users are better informed through the SMS service. This leads to health focused behavioural change. The maternal health SMS interventions can easily be scaled up.

4. Agro-economic SMS interventions work.
Farmers who are well informed by SMS make better decisions and improve their income. These are the findings of the case study and is confirmed by literature. Although effective, scaling up is complex since this type of intervention depends on continuously updated regional information.

5. Further research necessary on other stakeholders .
Possible effects on other stakeholders such as local governments, local providers of mobile services and healthcare providers were not included in the study. Further research should be done on the possible positive and negative effects on these stakeholders. A possible positive effect to explore is the extent to which local governments follow the example of TTC Mobile and use mobile interventions. A possible negative effect to research is the level of competition distortion experienced by local service providers.

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TTC Mobile's added value for clients

	Organizational experience in content development and/or mobile solutions	
	Low	**High**
Scalability of the project — **High**	Highest potential added value for TTC Mobile. Cost-effective and TTC Mobile brings specific technological and content advantages for organizations.	Added value is limited to technical advantages (stand-alone method). Local parties are cheaper.
Scalability of the project — **Low**	Pilots with higher start-up costs and content expertise are needed to maximize data utilisation. High impact on organizations (innovation).	No specific cost-effective advantage.

The **scalability** of projects strongly depends on the dependable region-specific information and/or information needs to be updated regularly. If this is the case, scaling up is more complex and thus the intervention less cost effective.

Distinguish yourself from other (local) providers: focus on content

Many clients indicate that the added value of TTC lies in the **expertise of mobile solutions.**

"There is a lot of DIY software available. However, TTC Mobile is on top of this and knows what we need. We are not coders, TTC Mobile's technical assistance was a big plus."

However, several clients also indicated that content-wise TTC Mobile is still limited. Their advice for TTC Mobile is to **develop and deliver content expertise.**

"Pick your fields and develop more content expertise or cooperate with experts or universities."

"Make the service more inclusive – focus more on content."

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Managing for more impact

Reach the right people

From several clients we heard that the target group can be contaminated when using mobile solutions. We also came across this in our own research. The anonymous nature of SMS leads to less control over the control group you actually reach. This can taint the reach of an intervention or research where a specific target group is required. Phones are often shared in developing countries and thus many people can be reached. This can be positive and negative. In the case of information on maternal health, husbands were inadvertently included in the intervention and found it very useful. The side effects can thus be limited and (mostly) positive. In other cases this might be different.

Ideas on how to prevent this:
- Require a photograph when registering for a service.
- Random phone calls to check to what extent a target group is contaminated.
- Require respondents/those who register to provide some personal information.

Give space for reflection

SMS interventions offer an opportunity for reflection by the target group.

In both case studies the end-users made use of the research to provide feedback, advice and ideas.

This ranged from requesting additional subjects that could benefit from SMS interventions, to possible extensions of the project and feedback on the information given.

This type of real time feedback can be quite helpful for TTC Mobile clients in terms of future projects and adjusting the existing project. The data can be quite easily collected and it could be an extra service to your client.

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