

mNutrition is a global initiative that uses mobile phone technology and mobile phone based behaviour change messages to improve the health and nutritional status of children and adults in the developing world. mNutrition is supported by DFID, organised by GSMA, and implemented by in-country mobile network operators (MNOs) in many countries in Sub-Saharan Africa and South East Asia. The evaluation of the mNutrition initiative is being led by the Institute of Development Studies (IDS) together with GAMOS and the International Food Policy Research Institute (IFPRI) as part of the e-Pact consortium led by Oxford Policy Management (OPM), co-managed with Itad. The consortium is using a mixed-methods approach, which includes qualitative, quantitative and business analysis components to evaluate two programmes, Ghana mAgri and Tanzania mHealth. The aim of the impact evaluation is to estimate the impact of mNutrition on children and adults and to understand how the context and the components of the intervention shape its impact.

## Using a business model and cost-effectiveness analysis to evaluate mobile phone technology based nutrition and agriculture advisory services in Tanzania and Ghana

This methodological brief focuses on the business model and cost effectiveness analysis component of the evaluation, led by Gamos. In contrast to the other two components which primarily focus on user experience, this component looks at the organisations involved in the delivery of services, with a particular focus on the commercial sustainability of the services.

The mobile industry is rightly proud of its claim to be the first sector to commit to the Sustainable Development Goals (SDGs) and the positive impact it has on each of the SDGs. Core mobile services (voice and SMS) have been hugely beneficial for the poor, but so have value added services (VAS), most notably mobile payment systems. In contrast to core services, VAS are typically delivered through an alliance of different institutions, each with its own role to play, and each with its own institutional agenda. The concept of business models then becomes complex and can rarely be described in the language of profit and loss.

This component of the evaluation seeks to track the process through which stakeholders evolve sustainable commercial approaches. It will seek to document how private sector institutions form and shape alliances, how donors can interact with the private sector and which elements were responsible for key outcomes.

### Research Questions

This business model and cost effectiveness analysis component will address the following questions:

1. What are the impacts and cost-effectiveness of mobile phone-based nutrition and agriculture services on nutrition, health and livelihood outcomes, especially among women, children and the extreme poor?
2. How commercially viable are the different business models being employed at country level?
3. What lessons can be learned about best practices in the design and implementation of mobile phone-based nutrition services to ensure a) behaviour change and b) continued private-sector engagement in different countries?

## Evaluation design

Given the complexity of the partnerships involved in the mNutrition projects, it is proposed to use Osterwalder and Pigneur's (2010) inductive approach to business model generation as a framework for the research (the O&P canvas). For cost-effectiveness we will focus on matching data on the costs of the mNutrition project with data on outcomes from the quantitative analysis; we will also compare cost-effectiveness metrics from the mNutrition project with alternative approaches.

This component will consist of ongoing mixed data collection drawing on:

- qualitative interviews with stakeholders and MNOs
- commercial data provided by stakeholders and MNOs (or aggregated by GSMA if necessary)
- findings from qualitative research by IDS, and quantitative research by IFPRI
- monitoring data gathered by Aline and Altai
- cost and impact performance data available in published literature
- government stakeholders and alternative service providers as a source of additional, unpublished information on costs and impact.

The outputs of this component of the evaluation will include separate reports on business models and cost effectiveness in the two countries. The business model (BM) reporting will describe the value proposition and how services are provided, and how these change over the duration of the programme. The cost effectiveness analysis (CEA) will compare the costs and outcomes associated with mNutrition programmes with more conventional or traditional communication channels such as radio and extension agents.

## Data Collection

The process of enquiry and data collection needs to be flexible and responsive to events on the ground, given that the service offerings are constantly evolving. The team from Gamos will seek opportunities to meet key individuals, taking advantage, for example, of conferences and meetings or following the publication of the key evaluation outputs.

In order to collect the required information, the following activities will be carried out:

- Provisionally populate the modified O&P canvas with information from reports previously published under the mNutrition programmes (e.g. user experience testing, case studies, rapid feedback surveys, etc.), as well as grey literature.
- Contribute to the design of both qualitative and quantitative instruments (both baseline and endline) to incorporate indicators relating to non-financial attitudes of customers to services and to MNOs in particular, such as customer satisfaction and brand loyalty. These instruments also explore attitudes towards alternative services offered by other providers e.g. media, face-to-face extension.
- Field visits to establish relationships with key stakeholders. Interviews to gather additional data to populate the O&P framework. Ongoing communication and field visits to monitor developments in services and to track the commercial justification for changes.
- Interviews with alternative service providers to explore alternative business models (among alternative mobile services). Gather data on cost-effectiveness of more traditional behaviour change communication approaches, and how they compare with the mNutrition services.

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This project is being led by the Institute of Development Studies (IDS) as part of the e-Pact consortium led by Oxford Policy Management (OPM) co-managed with Itad. The IDS Project Manager is Jessica Gordon [j.gordon@ids.ac.uk]. For further information about the project please contact mnutrition@ids.ac.uk. The contact point for the client is Louise Horner [l-horner@dfid.gov.uk]. The client reference number for the project is PO6420.

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