WEBINAR
mAgri services to promote better agriculture and nutrition

29th April - 14:00-15:30 (BST) hosted on Zoom

mNutrition EVALUATION

UKaid from the British people

ePact Strengthening evaluation effectiveness and impact

Oxford Policy Management

IDS Institute of Development Studies

Gamos

INTERNATIONAL FOOD POLICY RESEARCH INSTITUTE IFPRI

mAgri services to promote better agriculture and nutrition

Moderator: Jessica Gordon, Institute of Development Studies (IDS)

Speakers:

Dr Inka Barnett, Institute of Development Studies (IDS)

Dr Melissa Hidrobo, International Food Policy Research Institute (IFPRI)

Dr Simon Batchelor and Dr Nigel Scott GAMOS

Agenda

14:00 – 14:10	Welcome and introductions - Jessica Gordon (IDS) Overview of mNutrition services and the evaluation design - Dr Inka Barnett (IDS)
14:10 – 14:30	Designing and implementing mobile phone-based information services to change behaviours - Dr Inka Barnett (IDS) and Dr Melissa Hidrobo (IFPRI)
14:30 - 14:45	Building a commercially viable business model for mobile phone-based information services - Dr Nigel Scott / Dr Simon Batchelor (GAMOS)
14:45 - 15.25	Q&A from participants
15:25 - 15.30	Final remarks

Housekeeping

- The webinar is being recorded and we will be sharing the recording on the mNutrition project page here- http://bit.ly/mNutritionEv
- If you have a question, please post it in the chat box. We will be keeping a record of them and we will ask our panellists to respond during the Q and A section.
- Please keep your mic muted unless you are speaking to ensure we keep background noise to a minimum.
- Please join the call by audio only rather than video.
- If you have any technical issues please email s.marsden@ids.ac.uk

mNutrition: How does it work?

Content: GAIN developed Nutrition content for mNutrition

mHealth

Nutrition content is adapted to context and delivered by GSMA partners via existing m-Health platforms (e.g. Wazazi Nipendeni in Tanzania)

mAgri

Nutrition content is adapted to country context and delivered by GSMA partners via existing mAgri platforms (e.g. Vodafone Farmers Club in Ghana)

Aim:
Scale up the delivery of nutrition, health and agriculture information and promote behaviour change around key nutrition practices and farming decisions likely to result in improved nutritional health within a household

Vodafone Farmers Club (VFC) in Ghana: mAgri plus nutrition

1. Three recorded voice messages with farming tips per month (local language)

2. Three recorded voice messages with nutrition tips per month (local language)

3. Weekly SMS with market price information (English)

4. Daily SMS with weather information (in English)

5. Free-of-charge call centre to ask question about agriculture/ nutrition

6. Free calls to other VFC users.

External impact evaluation of mNutrition

Goal: Provide independent in-depth insights and a rigorous impact assessment of mNutrition in two countries to inform future programming

- **3 in-depth qualitative studies**
- 100 IDIs, 50 FGDs, 20 KI/country
- Reporting timelines
  - Baseline: 2016
  - Midline: 2018
  - Endline: 2019

Qualitative

- **Experimental designs (RCTs)**
- 2,800-4,000 households/ country
- Reporting timelines
  - Baseline: 2017
  - Endline: 2019

Quantitative

- **Multiple data collection rounds**
- Stakeholder interviews, user data reviews
- Reporting timelines
  - Baseline: 2017
  - Endline: 2019

Business model

Aim: How effective & commercially viable are mobile phone-based services in reaching poor households and improving their nutrition knowledge and behaviours

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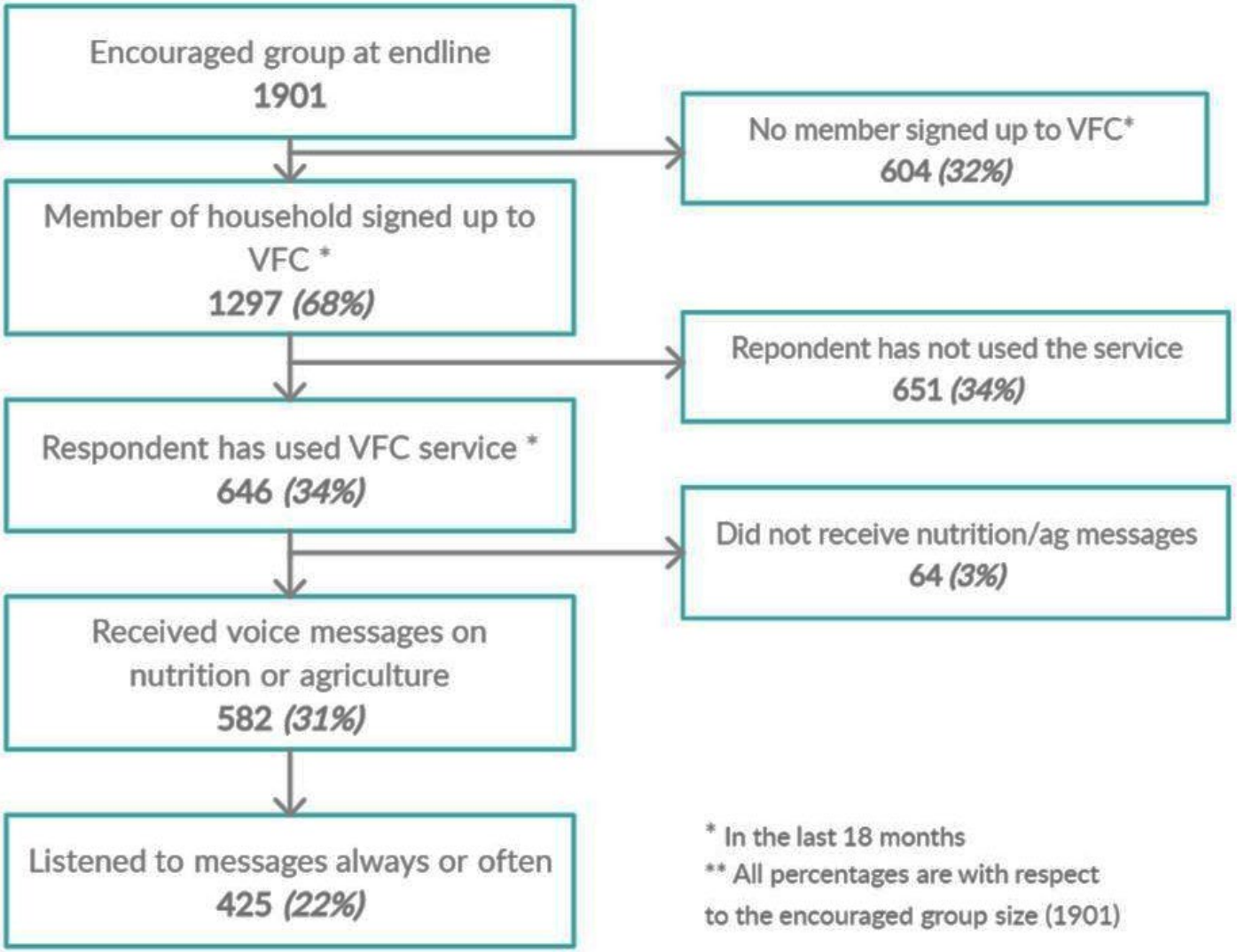
Designing and implementing mobile-based information services to change behaviours

- What factors affect the reach and up-take of mobile phone-based information services?
- What approaches increase the effectiveness of mobile phone-based services in changing behaviours?
- What strategies work best for designing engaging content?

What factors affect the reach and up-take of mobile phone-based information services? (I)



What factors affect the reach and up-take of mobile phone-based information services? (II)

- Especially poor households and women were often excluded from accessing and using the mobile service.
- **Common barriers to reach and sustained up-take were:**
  - A lack of available supportive infrastructure (e.g. multiple SIM card use, limited network coverage, limited access to a mobile phone, difficult electricity access)
  - Capacity of users (e.g. illiteracy, limited familiarity with voice messages)
  - Issues in implementation (e.g. fluctuations in service)
  - Issues in service design (e.g. difficult multi-step registration and profiling process).

How to optimise the reach and up-take?

- **Make sure there is supportive infrastructure in place**: If not met, alternative modes of content delivery (e.g. via radio or community outreach) or blended approaches (e.g. radio and community workers) may have a wider reach and be more inclusive.

- **Design the service to match the capacity of the target group:** Text-based information can be cost effective only in areas with high literacy. Voice-based information is better in areas with high illiteracy. Voice-based messages are considerably more expensive to administer and could increase the cost.

- **Design onboarding features to help increase reach and uptake:** Easy registration and profiling processes, preferably assisted by a trusted person (e.g. health worker/agriculture extension worker), a short time period from initial registration to receiving the first information, clear sender details so that messages are not mistaken for spam, should be considered when designing such services.

What approaches increase the effectiveness of mobile phone-based services in changing behaviours?

VFC had no impact on dietary diversity, agriculture production, or income, or on nutrition or farming knowledge.

	Comparison mean	ITT	LATE	N
HDDS (1–12)	5.878	0.052	0.154	3706
		(0.093)	(0.274)	
Women's Dietary Diversity Score (1–10)	4.338	-0.053	-0.160	3553
		(0.084)	(0.250)	
Met MDD-W	0.500	-0.020	-0.061	3553
		(0.027)	(0.080)	
Number of crops cultivated	2.774	0.057	0.168	3737
		(0.077)	(0.225)	
Total area cultivated (acres) (log)	1.718	-0.024	-0.069	3622
		(0.039)	(0.110)	
Total value of production (IHS)	7.544	-0.097	-0.278	3591
		(0.116)	(0.333)	
Total input costs (IHS)	6.616	0.023	0.067	3593
		(0.096)	(0.275)	
Total profit (IHS)	3.384	-0.101	-0.290	3562
		(0.334)	(0.954)	

What approaches increase the effectiveness of mobile phone-based services in changing behaviours?

- **Introduce interactive components** (e.g. call centres, active information search functions) to promote both sustained engagement and behaviour change. Do not rely on just pushing out information to passive audiences.

- **Combine mobile phone-based services with financial services** or ongoing interventions (e.g. livelihood improvement programmes or social protection programmes). Users of mobile phone-based services can only act upon information if they have the financial resources to do so.

- **Integrate a mobile phone-based information services into existing programmes or policies** (as was done in Tanzania), where such services can help to re-enforce and embed existing knowledge and ultimately change behaviours.

- **Intensive and interpersonal support is necessary to influence practices** and should be offered to complement mobile phone-based services (e.g. by encouraging users to seek interpersonal support from local services).

What strategies work best for designing engaging content?

- High levels of acceptance of the service among active users:
  - Perceived usefulness
  - Perceived ease of use
  - Trust
  - Social influences on use.

Lessons learned on developing engaging content

- **Provide practical, low-cost advice** that is actionable and achievable. Hands-on information is often missing from other services.
- **Users value a non-judgemental tone** in the messages
- **Introducing and/or strengthening existing two-way communication channels** (e.g. through a call centre or interactive dialogues). Information is dynamic; people are often looking for timely information to help them to tackle urgent problems. It's important to consider the cost-implications.
- **Ensure that content is carefully tailored** because poor targeting can quickly result in disengagement. This increases the costs significantly.
- **Consider alternative channels to engage male farmers with nutrition issues**. (e.g. nutrition education during antenatal care sessions).

mNutrition EVALUATION

Building a commercially viable business model for mobile phone-based information services

Dr Simon Batchelor, Dr Nigel Scott (Gamos)

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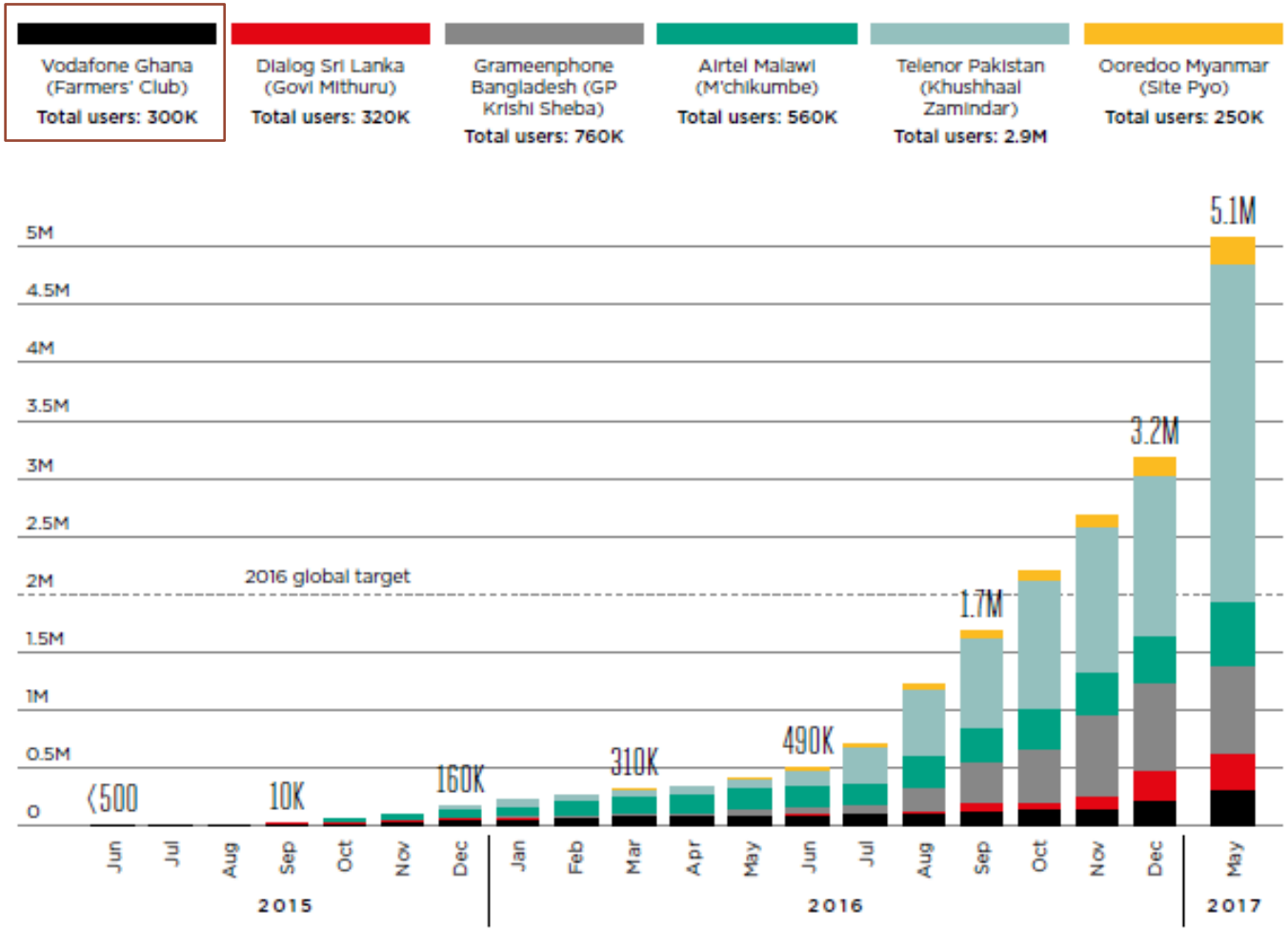
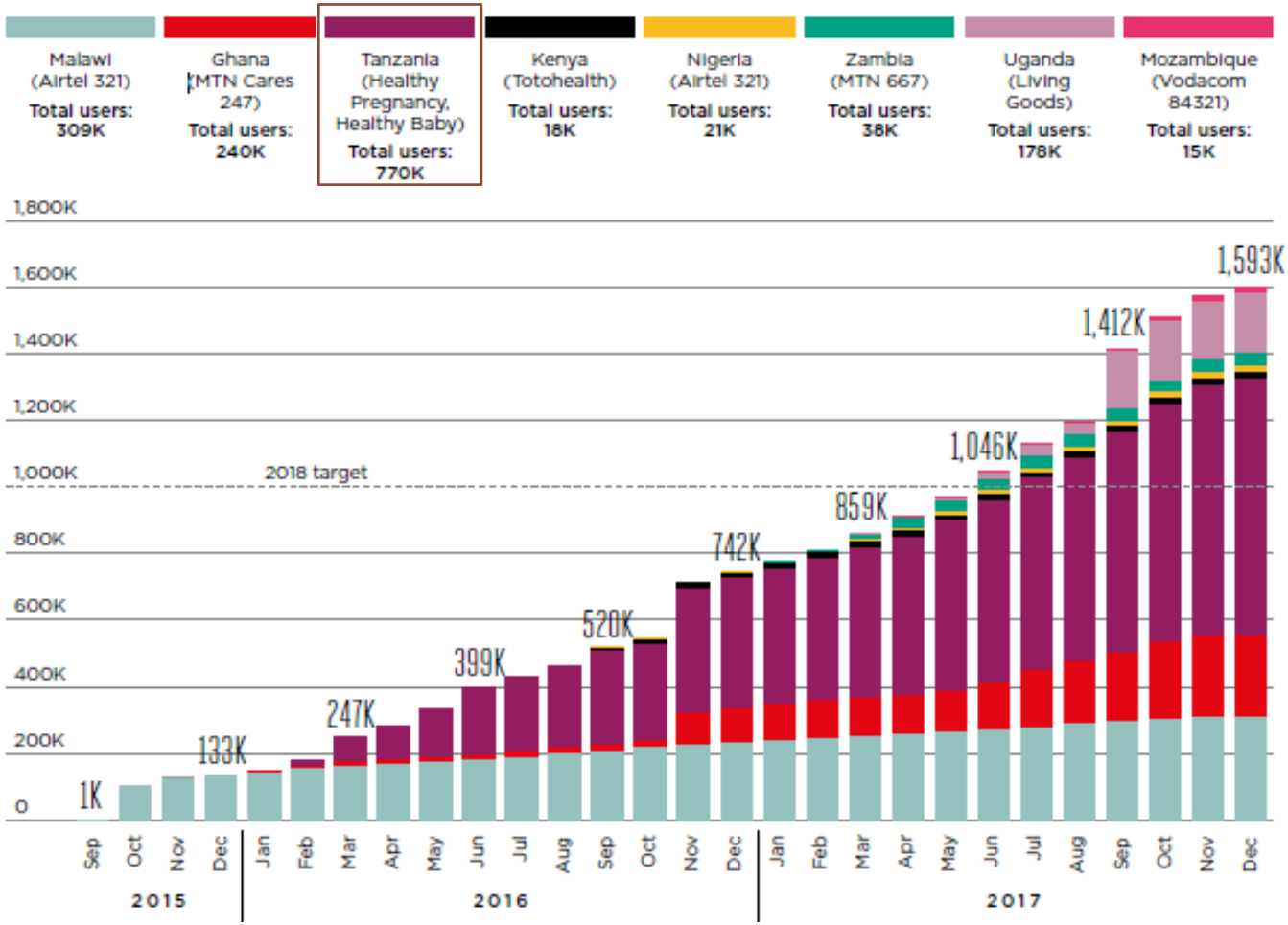
Case Studies in context of mNutrition services - mAgric



Palmer, T. and Darabian, N. (2017a) 'Creating scalable, engaging mobile solutions for agriculture. A study of six content services in the mNutrition Initiative portfolio'. GSMA.

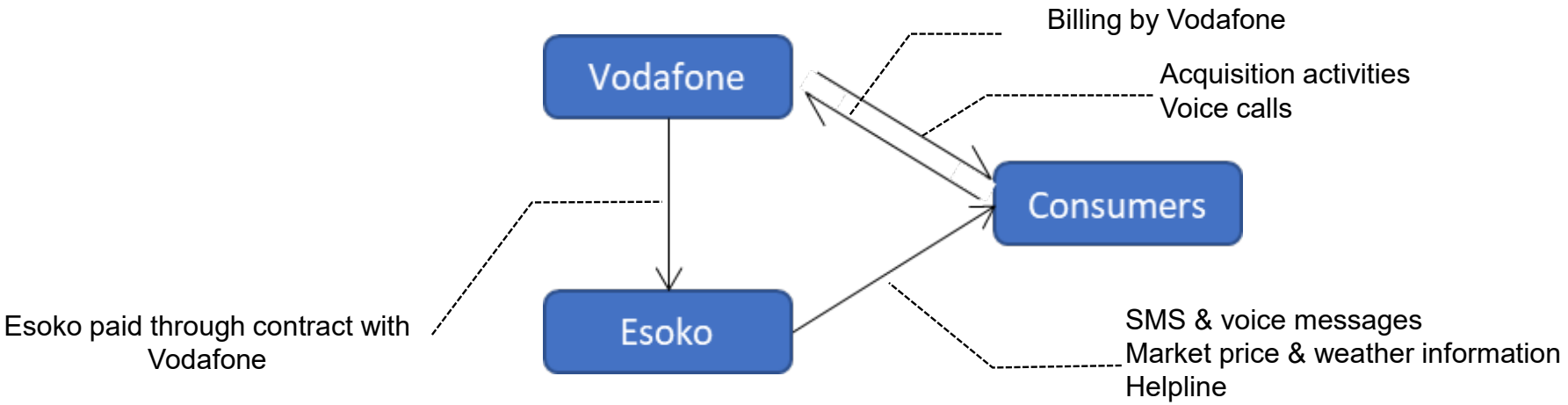
Case Studies in context of mNutrition services - mHealth



GSMA (2018) 'Creating mobile health solutions for behaviour change. A study of eight services in the mNutrition Initiative portfolio'.

Case Study Business Models - VFC

- Vodafone Farmers Club is a Partnership model:
  - Shared delivery of services (interaction with customers)
  - Complementary capability of each of the partners
  - Shared risk - revenue received by Esoko is determined by a contract with Vodafone, but it is tied to number of users.
  - Hybrid revenue generation – direct revenue from subscriptions, plus indirect benefits.

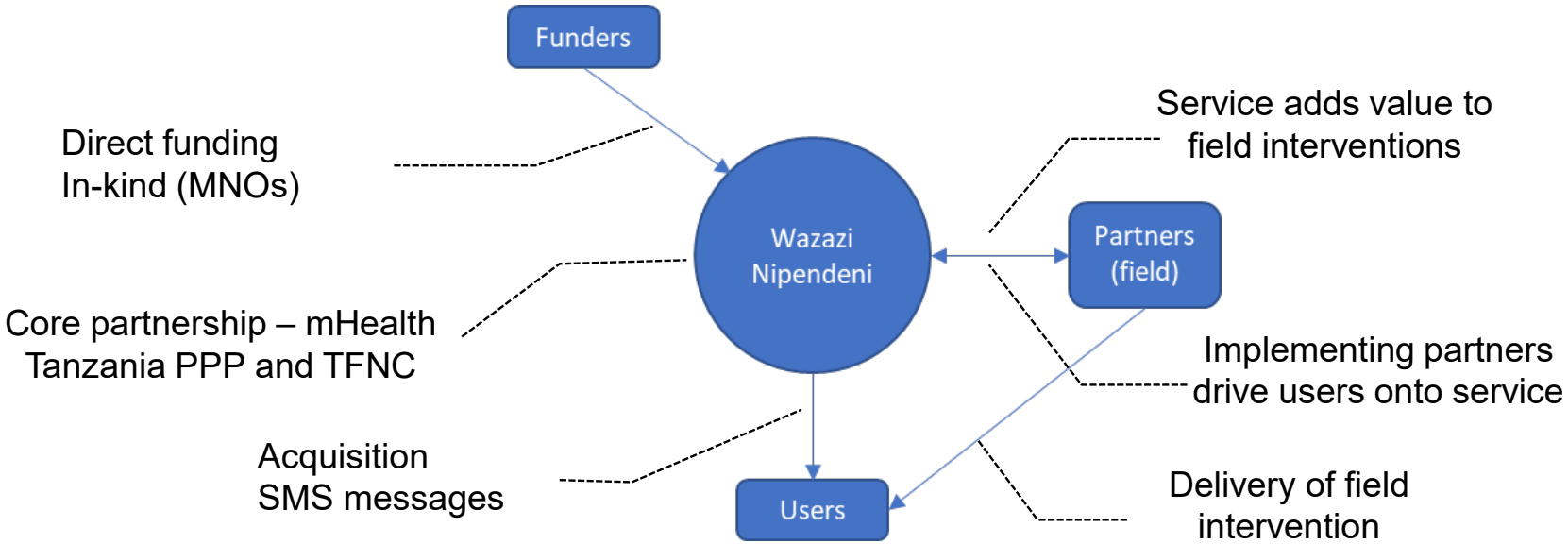


Case Study Business Models - WN

Wazazi Nipendeni is based on a multi-sided platform business model, commonly associated with IT businesses. This provides a means of making a product free to one group of customers, while another group pays.

"The HPHB service is owned by the Tanzania MoHCDGEC, managed by Cardno Tanzania, under the mHealth Tanzania PPP, and funded by the CDC. The mHealth Tanzania PPP is continuously expanding its partnership network. This network currently includes several government entities, NGOs and private sector companies, such as MNOs."

Healthy Pregnancy, Healthy Baby A mobile health service offered in partnership with leading mobile operators in Tanzania. 2018 GSM ASSOCIATION



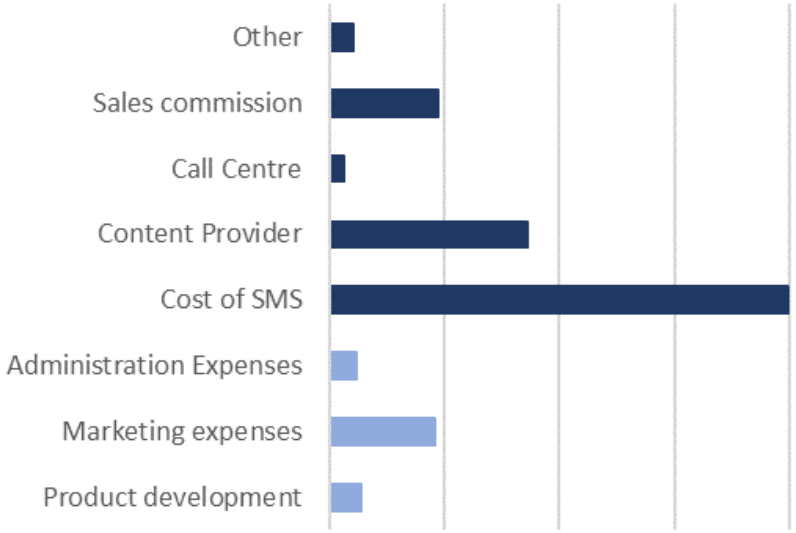
Case Study Business Models - Compared

Vodafone Farmers Club	Wazazi Nipendeni
Subscription (2.0 and 0.5 GHS/subs/month) Free	Free
Single MNO	Available via 4 MNOs
MNO led	PPP led (independent 3rd party)
Target new customers	VAS for existing customers
Complex product (SIM, airtime, CUG, SMS & OBD information, call centre	Simple – SMS information
Stand alone	Integrated with field programmes
Government verified content	Government as invested partner; health highly regulated
Agriculture as commercial activity	Health as public good
Competing services	mHealth Tanzania-PPP is the 'go to' institution for mHealth services.
Commercial (DFID grant)	Donor funded

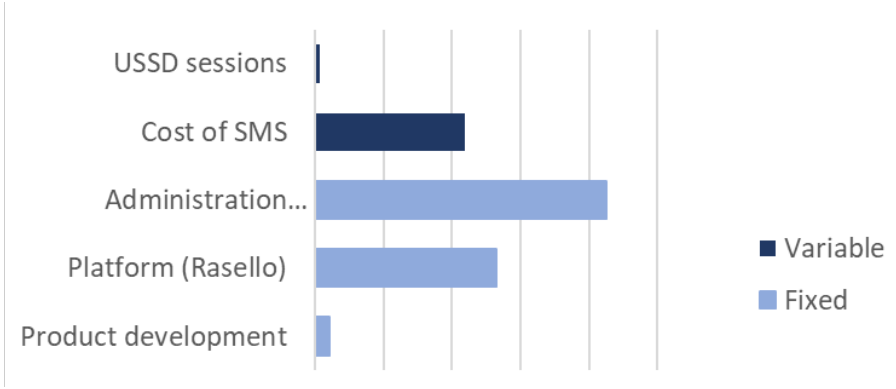
Indirect Benefits

- Ghana – no evidence of increase in APRU; usage did not increase in terms of making or receiving calls, sending or receiving text messages.
- Tanzania – the quantitative research found that ARPU was TZS 510 higher among treatment communities. Given an ARPU of TZS 5,300 per month (£1.90 /month) among the control sample, this indicates that the VAS stimulates at least a 10% increase in ARPU (higher still among individual users).
- Qualitative research that women became more comfortable and confident in using their phone when they received messages from Wazazi Nipendeni.
- No evidence that SIM turnover is lower among VFC or WN users.
- Rural consumers tend to be ‘trapped’ by poor network coverage (e.g. 77% of women and 89% of men in the VFC comparison group have had their SIM for over a year - rates were similar among the encouragement group)

Operating Cost structure



VFC Operational expenditures
(summed over four-year lifetime)



WN Operational expenditures
(summed over four-year lifetime)

Assumptions:

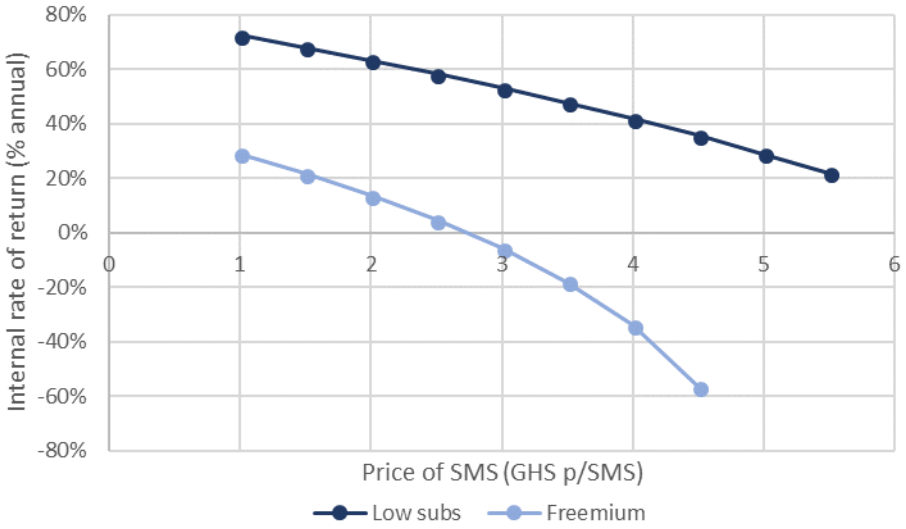
- Subscription fee 0.5 GHS/month/subs
- Revenue share VAS provider 100%
- GHS 0.055 per SMS (retail)
- VFC revenue – ARPU of all subscribers
- 250k subscribers (end yr 4)

Assumptions

- WM revenue – increased ARPU of users.
- 50% PPP costs allocated to WN
- TZS 25 per SMS (bulk purchase)
- 1m users (end yr 4)

Price of SMS (VFC)

- Messaging represents major cost component. Viability is sensitive to SMS price. If SMS prices can be discounted below bulk purchase price (e.g. 0.03 GHS/SMS), then even the Freemium model can be viable.



SMS services are not a good fit with low income consumers

- Each information delivery channel (e.g. SMS, OBD, IVR) has advantages in terms of cost, literacy, timing, permanent record etc.. Hybrid approaches would be ideal, but financial sustainability is highly sensitive to the price of messages, making it difficult to take advantage of expensive, voice-based technologies.
- Substantial parts of sub-Saharan Africa remain underserved in terms of mobile coverage.
- The process of onboarding is crucial;it needs to be simple and immediate. Providing a local presence to assist (e.g. through well informed agents) is expensive.Low income consumers are risk averse, making them reluctant to implement new practices, and making it more difficult to convince them to subscribe, especially without face to face support.
- Information alone is not enough to enable famers to make substantial changes to their agricultural practice, and techniques such as breastfeeding cannot be taught in 160 characters.
- People often lack the financial resources to improve their diet or implement changes to their agricultural practices.
- Financial sustainability is most challenging when serving customers with the lowest ARPU.

Building a commercially viable business model

- Financial modelling shows that achieving enough subscriber numbers (hundreds of thousands) is crucial.
- Face to face field presence is important for customer acquisition, accessing complex products, reinforcing and supplementing messages, and providing complementary services that can stimulate behaviour change.
- Customer acquisition is expensive, so value can be added by linking with additional services, either through MNO, or more complex services through field partners (e.g. financial and transaction services).
- The history of case study partners shows how delivering mobile phone-based information effectively at scale needs careful and sustained investment, partnership building, and political commitment.
- Where services depend on partnerships (content, platform provider, MNO), they should be agile to respond to changing customer needs and markets.
- New partnerships with WN and increasing user numbers show that, where information can be regarded as a public good (e.g. health), there is a case to be made for the sustainability of non-commercial services (donor funded model).

Recommendations for pro-poor business models

- Donor-led support initiatives should include some form of future-proofing.
  - MNO data and research confirm telecoms markets are shifting from voice and SMS to data services. Donor-led support initiatives must be agile.
  - Promote universal access to mobile communications. Commercial interest in data services risks diverting attention and investment away from extending network coverage to underserved communities.
  - Initiatives promoting digital literacy should be supported.
- Invest in exploring free-for-use business models.
- The donor community should engage in discussion on how commercial returns can be used to reimburse expenditure from public funds.
- VAS providers face a dilemma: to market a service themselves, often to institutions (B2B),or to enter into partnership with an MNO with national coverage, offering the potential to scale up by marketing the service to network subscribers (B2C).

Final remarks: Leveraging the power of mobile phones for agriculture and nutrition

- **Mobile phone-based services are not a magic bullet**, but they are valued by users who engage with the service and (if well implemented) might be a valuable addition to programmes aiming to improve knowledge and changing behaviours (especially if combined with interactive or in-person support).

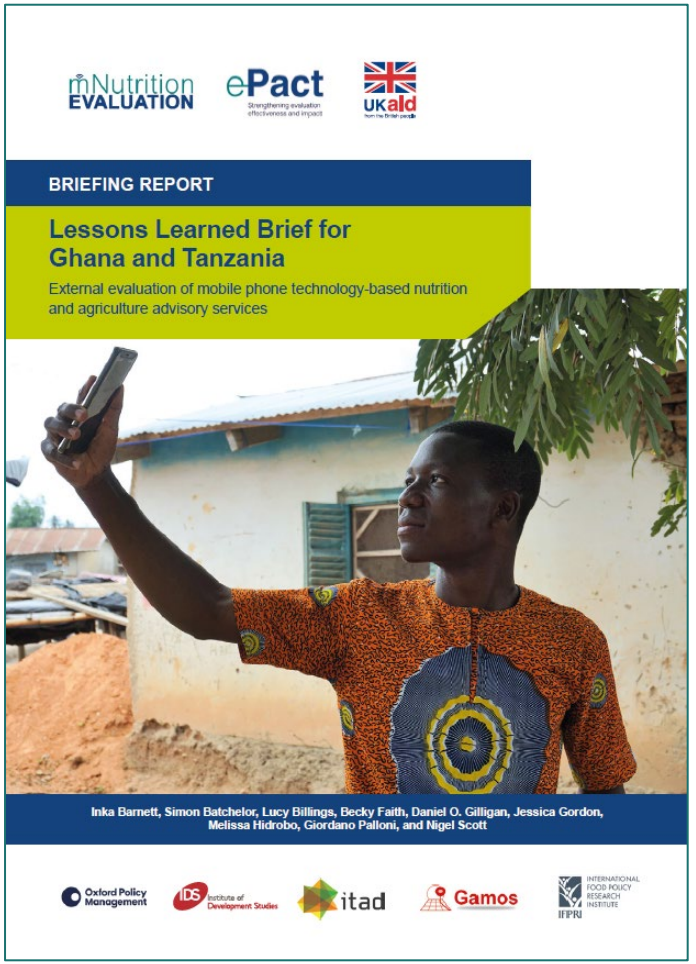
- **Several outstanding implementation and programmatic issues still hamper reach, up-take and sustained engagement** (some of which are already being considered by GSMA) and require sustained effort by implementing MNOs.

- **Mobile phone-based services to change behaviours are likely to be most effective if embedded in existing structures** (e.g. agriculture extension services), are linked up with other programmes (e.g. social protection programmes) and also include established low-tech approaches (e.g. radio) and intrapersonal support.

Find out more: http://bit.ly/mNutritionEvaluation

- Our latest Lessons Learned Brief for Ghana and Tanzania
- All of our scientific reports
- Methodology briefs from each team
- Mixed methods papers and summaries
- Blogs and commentary pieces

All available as downloadable, open access publications.



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Thank you

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