



Empowering people. Changing lives.
Innovating for the world's poor.

Grameen Technology Center Mobile Technology Innovation



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Director, ICT Innovation
World Bank, Washington, DC
September 16, 2009





- ¶ **Brief Background: Grameen Foundation and our ICT Innovation Program**
- ¶ **How we think about services delivered on phones**
- ¶ **The Application Laboratory: Innovating for the poor**
- ¶ **The Community Knowledge Worker: ICT-enabled extension**
- ¶ **Conclusions and implications**

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Our Mission: To enable the poor, especially the poorest, to create a world without poverty

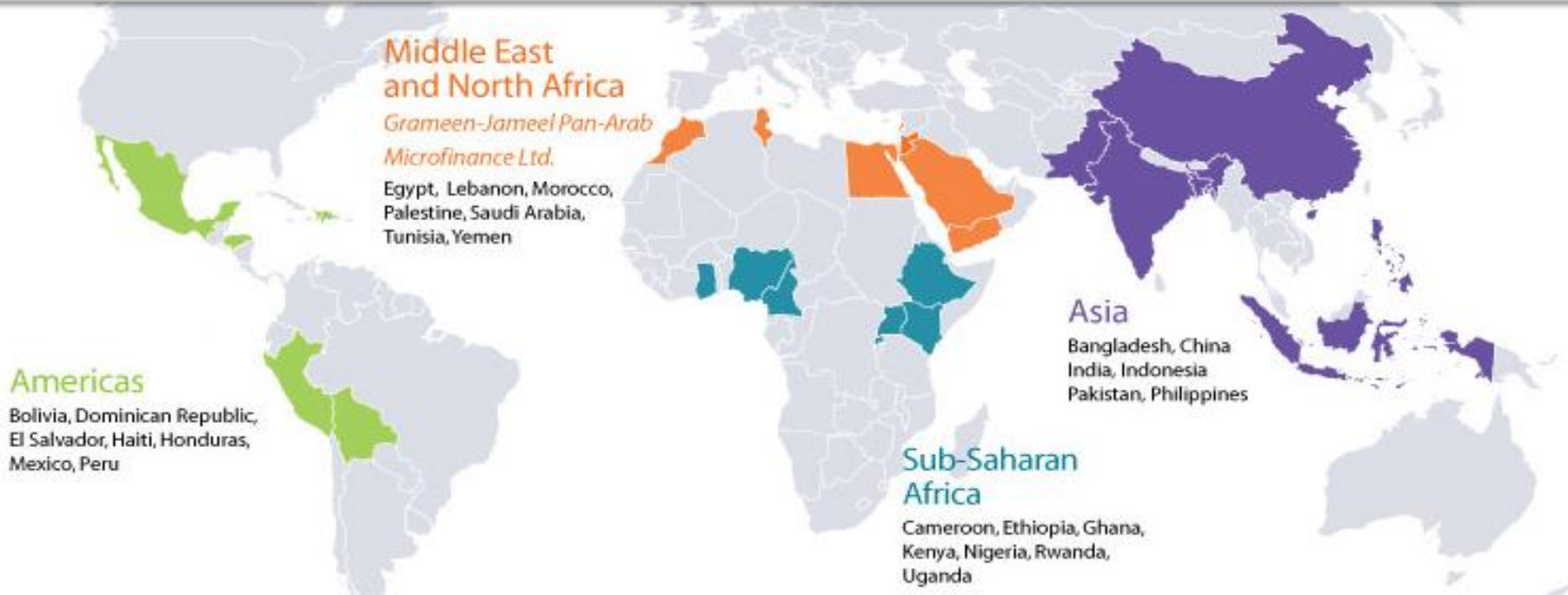
Microfinance

- Unleashed \$145 million to create 800,000 microloans
- Aided 45 million people in 30 countries

350,000 MF clients served on open MIS (Mifos)

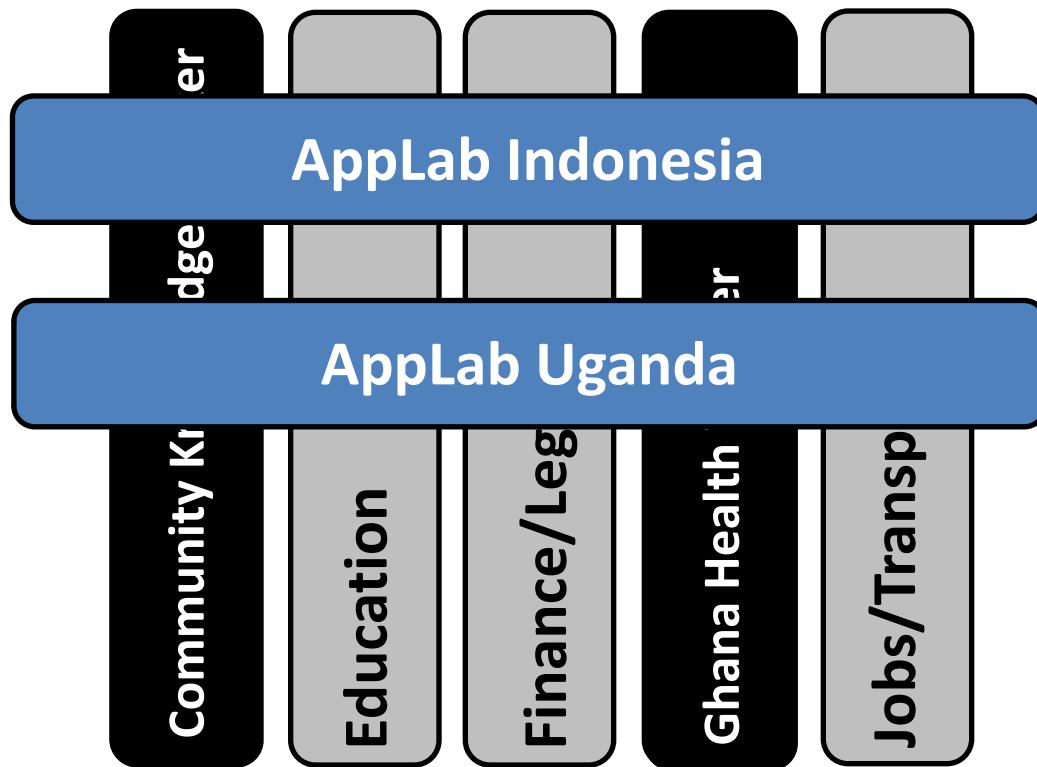
Technology

- Village Phone in 7 countries with over 25,000 businesses
- 5 applications with heavy usage



Headquarters: Washington, DC
Grameen Technology Center: Seattle, WA

Asia Offices: Hong Kong, Indonesia, Philippines
Africa Offices: Ghana



Mobile phones
used to collect
and disseminate
information --
providing
services that
improve lives
and livelihoods

How is our work unique?

- Sustainability and scaling
- Strategic partnerships (e.g., Google, Qualcomm and MTN)
- Innovative product development approach
- Focus on the poor

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- **Impacts lives and livelihoods of the poor** (provides a clear social good)
- **Technology (and exchange of information)** plays a primary role in the solution (not an operational challenge)
- **Innovation**, which may include enhancements to existing products to better meet needs of the poor
- Potential volume of unmet **user demand** (bridges gaps in current landscape)
- **Complexity** of business model/ technical solution low
- **Sustainable** business model (which often requires creativity)
- **Scalability** across the population of target users (operational feasibility to scale), and **portability** beyond pilot country

Assess information needs



Analyze economic and
information flows



Identify how information
is accessed



Define sources of
information



Rapid prototyping &
piloting



Scale the winners



- Conducted detailed ethnographic and needs assessment research
- Reviewed more than **50 application ideas and concepts**
- Designed and implemented **10 SMS application pilots** that **reached more than 8,000 people** which **generated more than 54,000 queries**
- Directed content generation and editing process yielding **more than 1,000 Tips**
- Seeded marketplace with **more than 5,000 posts** by enlisting partners in select agriculture verticals
- Formed a “trusted tester” base of **more than 250 intermediaries spread across 20 districts** in Uganda
- **Oriented and trained 12 NGOs and government entities** to contribute to building the ecosystem
- Collected and analyzed feedback about **product perception and willingness to pay**



**~18 months later – five services
successfully launched**

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[Videos](#)

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AppLab Videos



[About the Application Laboratory Uganda Launch Video](#)

[Interview with Eric F. ...
AppLab Uganda Manager,
Grameen Foundation](#)

[Interview with Richard Mwami,
Head of Public Access and
Mobile Money, MTN Uganda](#)

[Interview with Francis
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Google](#)

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[Interview with Hassan
Sekajoolo, Senior Radio
Programmer, Straight Talk
Foundation](#)

[Interview with Fiona Lee, Terry
van Belle, and Charles Warren](#)

[AppLab Field Device Trial
Equipment](#)

[Rapid Prototyping](#)

www.applab.org

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Sexual/ Reproductive Health Tips and Clinic Directory

Farmer's Friend



Health

Agriculture

Mobile
Applications

Weather

Marketplace

Weather

Google Trader

Agricultural Tips and Advice

Weather Forecast

Marketplace (Google Trader)

www.google.co.ug/sms

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**Paul Nkooka – a CKW
in Mbale, Uganda**

Who	Smallholder farmers
What	Self-sustaining model for information dissemination and collection
How	Mobile phones
Why	Able to provide granular and actionable information to smallholder farmers and to entities working to meet their needs – improving crop yields and expanding market opportunities

Nine month test of concept:

- **8 information services deployed and tested**
- **Range of mobile technologies assessed**
- **40 CKWs conducted over 6,000 surveys and delivered 8,000 pieces of information**
- **Initial partners engaged to build a self-sustaining model**

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Video Archive

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[AppLab High End Device Trial Segment](#)

[Prototyping](#)

[Community Knowledge Worker](#)

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Understanding Needs

- Users must be consulted early and often to build a useful service
- Creative approaches yield important insights
- Demand exists for information and knowledge – mobiles can effectively address “information poverty”

Developing Applications

- Sustainability and scaling must be part of product design
- Iterate rapidly and “fail fast” (role for local developers)
- Users must be integrally involved in the process

Building Sustainable Models

- Incentives for all elements of ecosystem must be considered
- Access to new market segments powerful carrot
- Creative business models must be employed

Achieving Scale

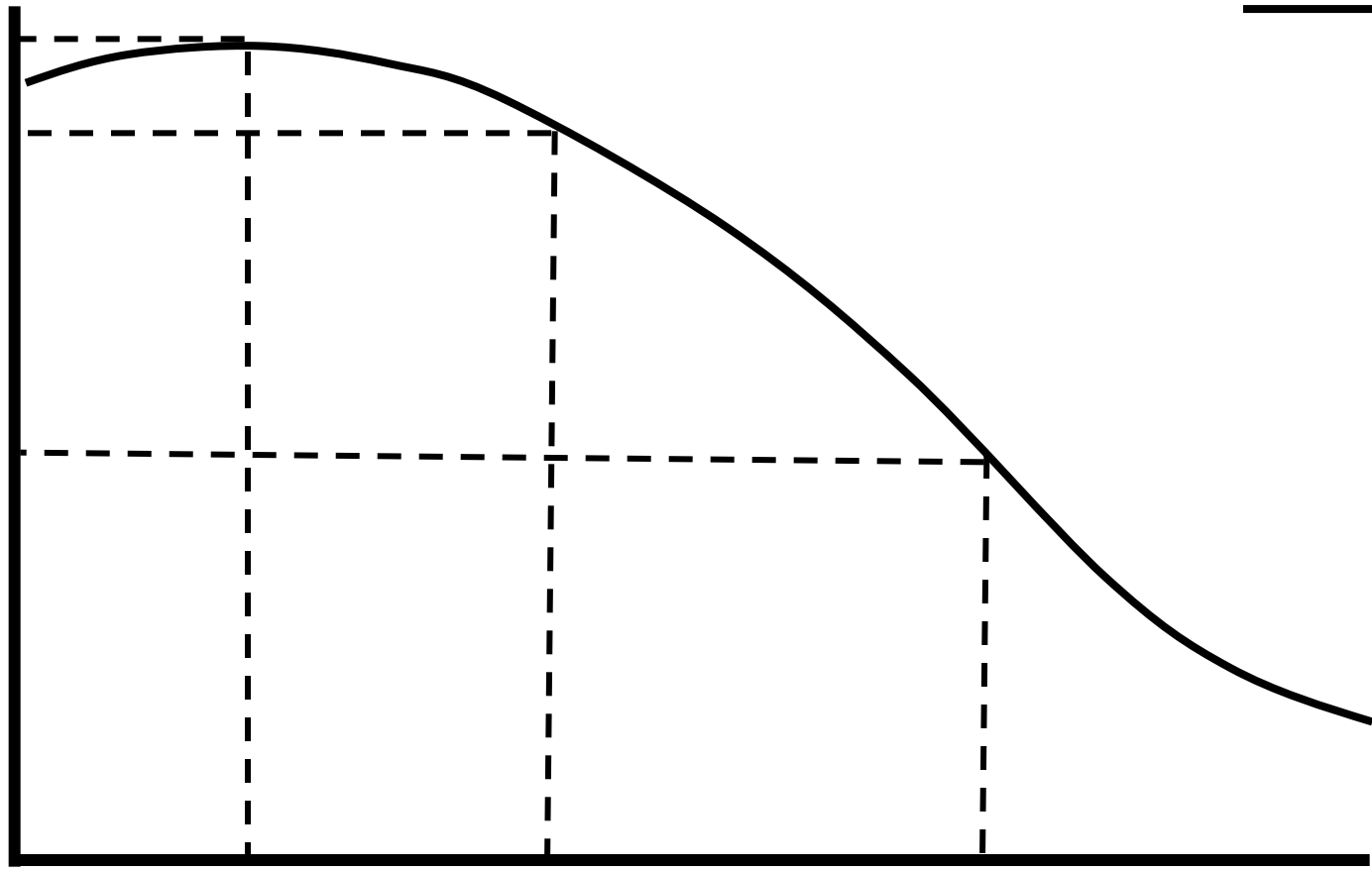
- Strategic relationships matter – especially mobile operator
- Services must meet clear need in actionable way
- “Discoverability and Usability” essential – trusted intermediary

Estimated demand curve for information services (over time)



***Theoretical
Estimate***

Quantity

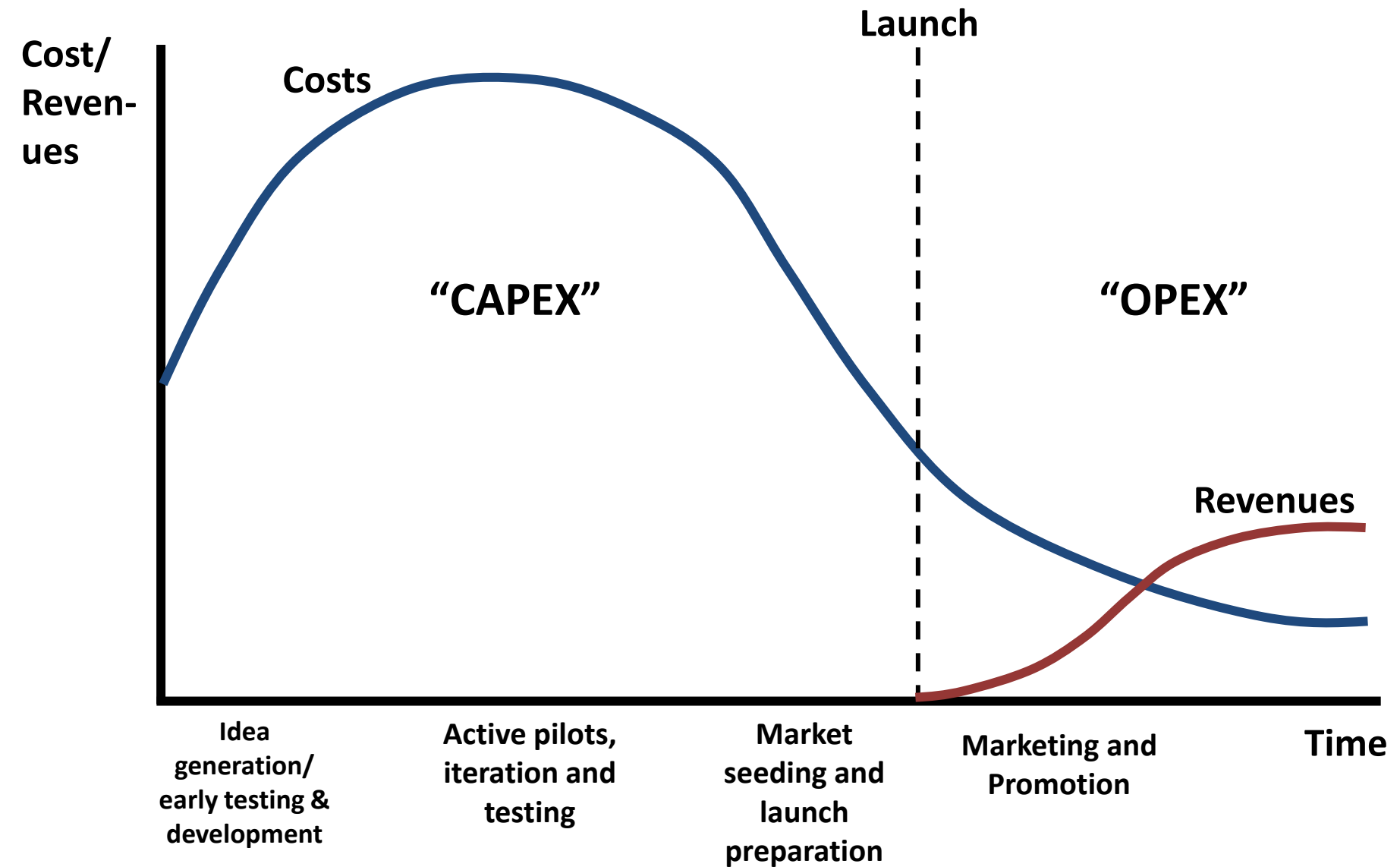


50 UGX

100 UGX

220 UGX

Price



- 1 Visit www.applab.org for additional details and to sign up for program updates
- 2 Work with AppLab Uganda to develop mobile applications/services
- 3 Gain local insights from Community Knowledge Workers (information collection)
- 4 Contact david.edelstein@grameenfoundation.org with any questions

Backups

Financial Services

- Financial literacy and education

Health

- Increasing efficiency and effectiveness

Education

- Mobile based learning

Jobs

- Connecting job seekers to opportunities

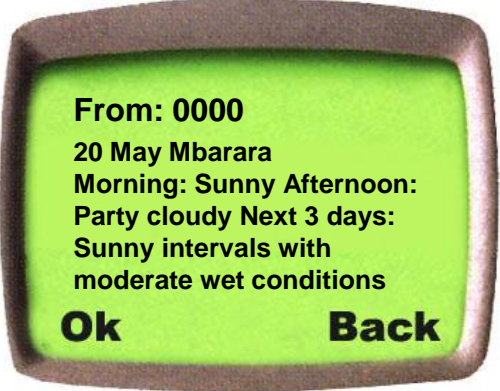
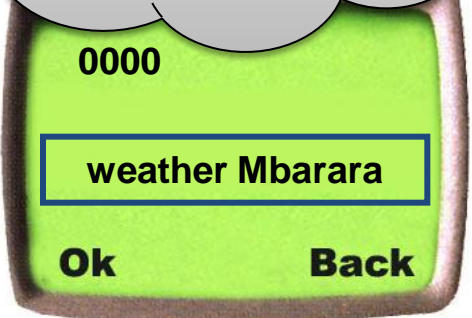
Transportation Coordination

- Linking people with transportation

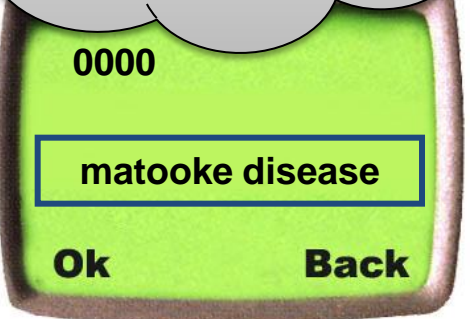
Governance and Rights

- Improved election & voting processes

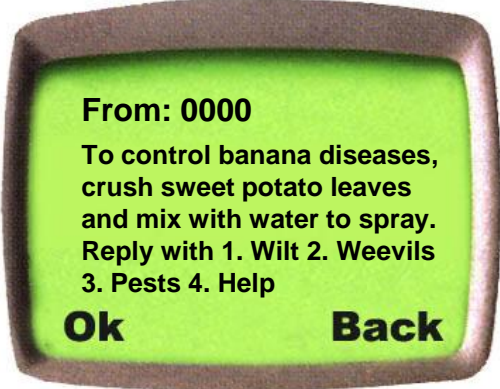
Should I harvest my pineapple for drying this week – or will it rain?



How do I control disease on my matooke?



“Information Hub” or “Community Knowledge Worker”



“Grameen Foundation, Google Partner to Provide Mobile Services for Uganda’s Poor”

Philanthropy News Digest, 7/1/09

"Grameen Foundation and Google create mobile apps for Africa"

The Seattle Times, 6/9/2009

“Grameen Foundation Launches Mobile Services Tailored to the Ugandan Poor “

Cellular News, 6/9/2009

“Google unveils SMS service for Africa”

Sydney Morning Herald, 6/30/09

“Google’s Africa Strategy: Search and Trade Via SMS”

The Washington Post’s tech blog: 6/29/09

"Google launches push to send Ugandans vital information through their mobiles"

guardian.co.uk, 6/29/09

“Google’s Values at Work in Africa”

Business Week, 6/29/09

**Over 50 unique articles
since June 29 launch**

“A banana farmer previously limited to waiting for a buyer truck to pass his farm to sell the week’s harvest can now use a mobile-phone marketplace to publicize the availability of his stock or to search for buyers who might be in the market or have truck transport available to a larger market,” said Cantor. “They can also compare going prices to gain more power in a negotiation. Teenagers too shy to ask parents about causes and symptoms of sexually transmitted diseases can research them privately and improve their own health outcomes. A farmer with no money who needs a remedy for the pest attacking her primary crop can find one that uses locally available materials, when they need it.”

- Thomas Friedman, *New York Times*, 8/15/2009

“That's the key feature of this approach to development: It takes advantage of the technology already in people's hands and extends it to the point where a simple device taps the power of the Internet.

-Bryan Wright, *NPR's All Tech Considered*, 6/29/2009

“The Grameen Foundation, Google, and the South African cell phone company MTN came together to launch a service that will provide farmers with local weather forecasts and farming tips, along with other useful information like health advice.”

“Innovations like these are a crucial piece of what must be a comprehensive approach to agriculture, one that connects the tools developed in labs like this to the fields where the farmers are every day, the markets where the crops are bought and sold, the financial institutions where farmers access credit to invest in new seeds, fertilizer, equipment, and the classrooms where they can learn to grow more food with less labor and less water.”

***-Secretary of State, Hillary Rodham Clinton, speaking at
the Kenya Agricultural Research Institute, 8/5/2009***

“One Ugandan woman told the BBC the service, which has been piloted in recent months, had helped her talk to her daughters about sex. ‘I used to get embarrassed every time I sat with my daughters to talk to them about pregnancy,’ said Amina Nantume. But now she sends any awkward questions to Google and passes the answers on.

- BBC World Service, 6/29/2009

“One of the most interesting and exciting phases of the AppLab work was the rapid prototyping - getting out into the field (or the matatu [bus] stations, to be precise) and offering people the opportunity to text in agriculture- or health-based questions. The data gathered over a few days gave the strongest indication yet of the need and perception of such a service to potential users. The value of this kind of work cannot be understated.”

**- Ken Banks, Founder of Frontline SMS on the Kwanja.net blog:
www.kiwanja.net/blog/2009/06/grameens-applab-comes-of-age/**