

# RadioMarché: AN INFORMATION SYSTEM FOR RURAL FARMERS

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## The Problem

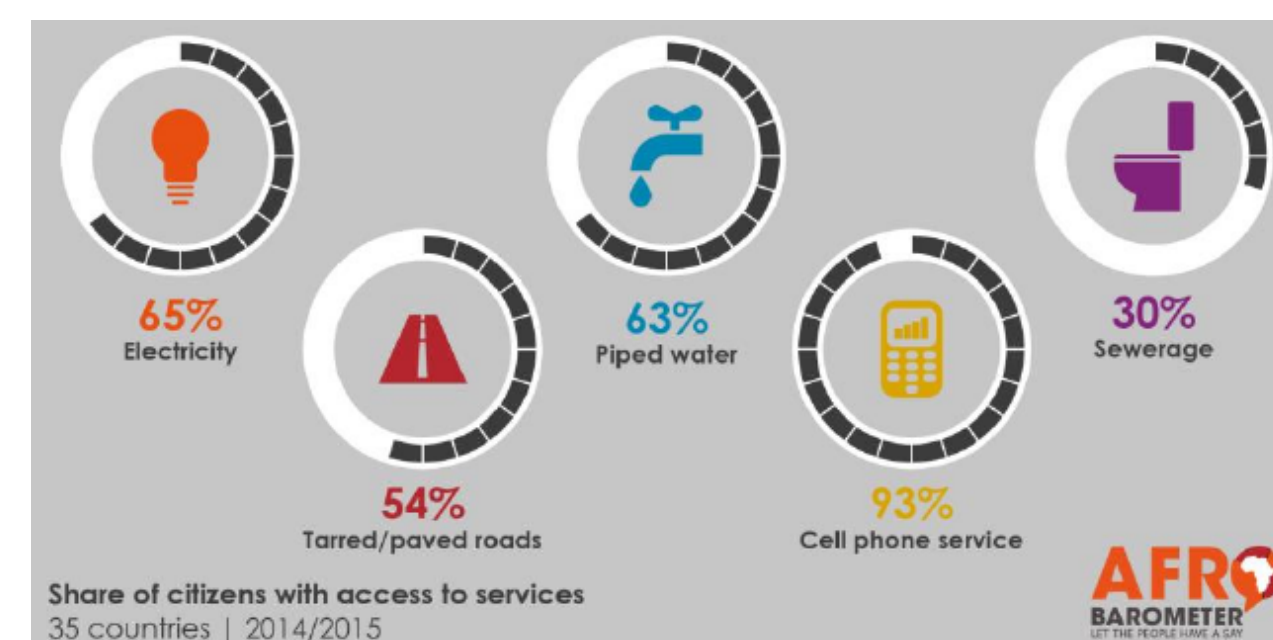
### Web Access today is NOT Universal



In much of rural Africa, a number of problems persist (Boyera, 2008):

- **Relevant content:** Not many content on the Web is in African languages.
- **Access barriers:** This includes
  - **Illiteracy:** Africa is the only continent where more than half of parents cannot help with homework! (a UNESCO report)
  - **Infrastructure:** A lack of it.
- **Global Digital Divide:** Between developed countries and their developing counterparts.

## The Opportunities



Feature & access	Comments	Comments
Radio	Broadcasting	Common way to connect radios and radio
Mobile phones	Commonly used	Channel for farmers to contribute news, views, opinions and feedback
Mobile phones	Commonly used	Sending SMS to farmers on upcoming programs, competitions or events
Mobile phones	Commonly used	Using SMS to transmit important information to be broadcasted via radio during emergencies, for search and rescue, alerts and early warnings etc.
Basic mobile phones	Voice	Voice conferencing
Basic mobile phones	SMS	Text up radio
Basic mobile phones	Voice to text	Data collection and monitoring
Basic mobile phones	Interactive voice response (IVR)	Logistics coordination
Basic mobile phones	Data transfer through GPRS	Mobile mapping
Basic mobile phones	Java (J2ME) enabled	Mobile community market
Basic mobile phones	Mobile WAP	Instant messaging
Smart mobile phones	Additional features such as camera, Bluetooth	
Smart mobile phones	Sensor Rich Application (AR)	Mobile sensing
Smart mobile phones	Purpose built	Community based monitoring
Smart mobile phones	Global Positioning System (GPS)	Social network applications
Smart mobile phones	Social network features	
Smart mobile phones	Mobile web	
Smart mobile phones	Video and audio recording and sharing	
Indirect access	For people who do not have direct access to mobile phones, computers or internet	Interpreted use of intermediary to access information
Indirect access	Village phone	Channel access
Indirect access	Village area networks	Overheadlines

- **Mobile Telephony:** There has been an explosion in mobile phone usage in Africa (see e.g. (Mitullah et al., 2016)).
- **Radio Technology:** Radio has been referred to as “Africa’s medium”.
- **Local Needs:** Use cases exist for possible research and technology innovation.

## A Suggested Approach

### One use case at a time



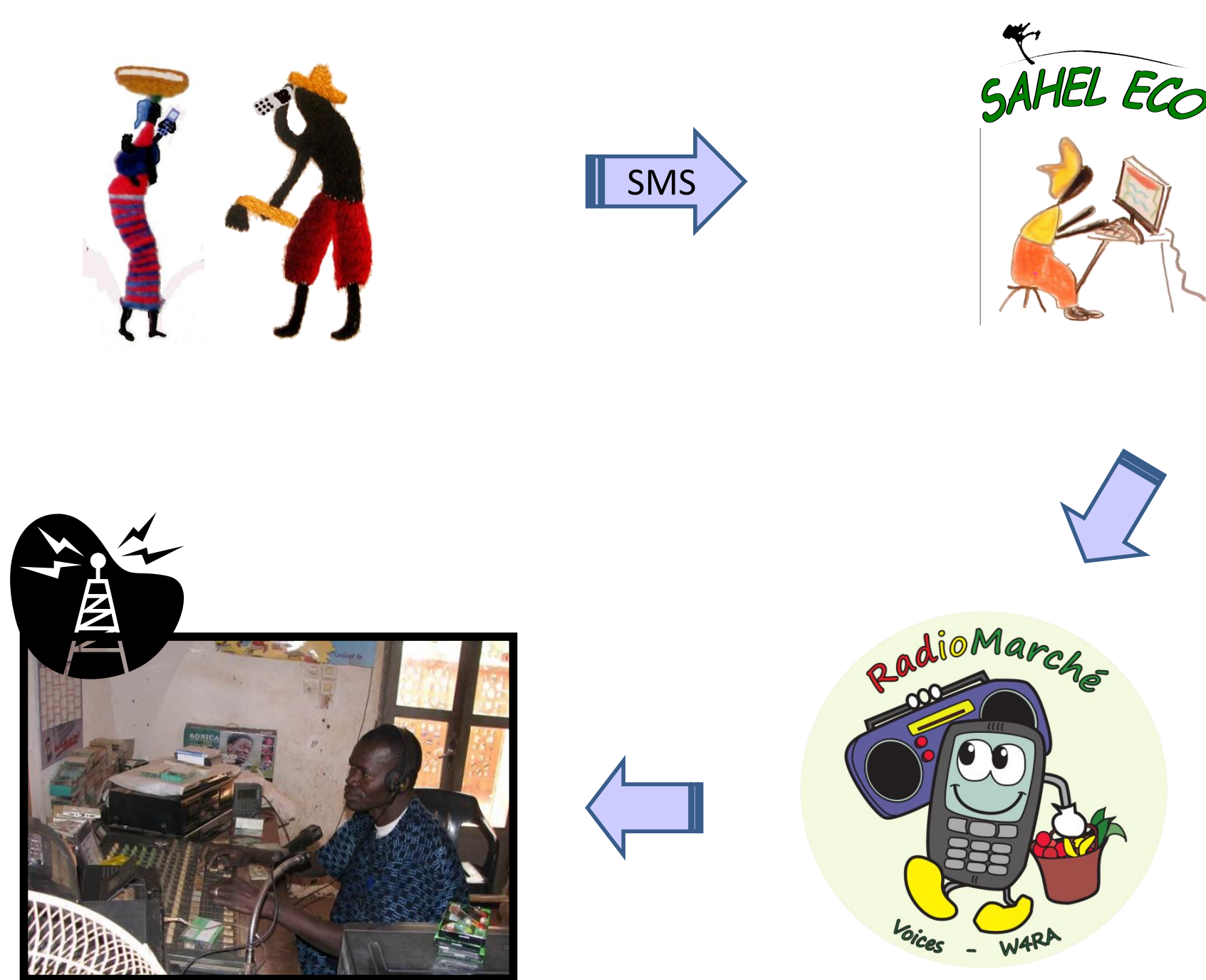
### Strategies (Gyan et al., 2013)

- **Bottom Up:** Technical solutions must meet local needs. To be contrasted with solutions that are *Top Down*, i.e. “brought in”, already developed and often do not fit in local contexts.
- **Stakeholder Involvement:** Involving as much community participation as possible. Builds trust and user acceptance. The *Living Labs* approach is helpful here (Akkermans et al., 2011).
- **Agile Requirements Gathering Process:** Involves technology demonstrations, group discussions, etc.
- **Quick Iterative Cycles:** Prototypes of systems need to go through quick cycles such that reported problems are immediately analysed and/or incorporated into existing system to meet end-user needs.
- **Technology Training:** Often the case that end users should be thoroughly trained to be able to use the technical solution. This may sometimes also mean finding buy-in from local developers and skilled entrepreneurs to build an ecosystem for a particular innovation.

**Note:** The strategies above were applied to the use case described below...

## A Solution: RadioMarché

### A Marketing Platform for Farmers



- **Motivation:** A use case in rural Mali which involved farmers, an NGO and community radio stations in marketing farm products (honey, shea nuts, almond) of a farmer cooperative.
- **Stakeholders:** Farmers cooperatives in the Tominian region of Mali, a local NGO (Sahel Eco), two community radio operators, Radio Ségou and Radio Tominian.
- **Implementation:** Local NGO reps collates farm products available for sale using the *RadioMarché* platform. The platform generates audio communiqué(s) of the same information and publishes it on local PSTN for public access via telephone. Community radios have an option to broadcast the communiqué(s) via a Web interface.
- **Impact:** Through interviews with participants a number of successes were recorded:
  - Records of increased sales of some products from farmers (see e.g. <http://vimeo.com/68218759>).
  - Efficient record keeping for the NGO on products and sales of participant farmers.
  - In some cases increased demands for products due to the use of the system resulted in farmers’ inability to meet those demands because of some other factors such as weak value chains.
- **Future Research:** How to scale this is currently an on-going research objective. The aim is to find ways of overcoming many of the challenges of *RadioMarché* such as building localized, “plug ’n play” and robust hardware for similar initiatives (Schlobach et al., 2014). Also includes discussions on research collaborations in future (e.g. between VU Amsterdam and UDS, Ghana.)

### Courtesy

w4ra.org



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### Thanks

