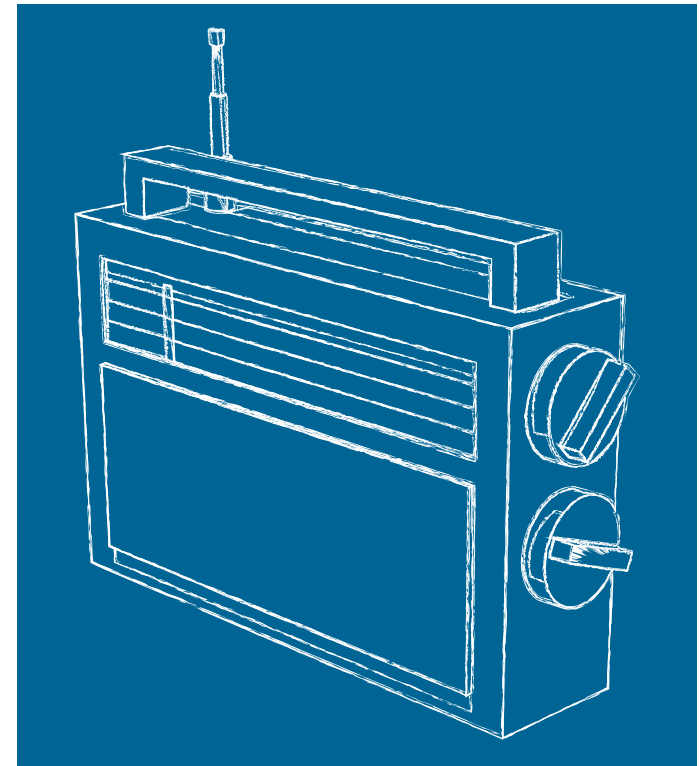


Interactive Radio for Development Projects

A Toolkit for Practitioners



Interactive Radio for Development Projects

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Acronyms

AFRRI African Farm Radio
Research Initiative

dB Decibel

FACET Fostering Agriculture
Competitiveness Employing
Information Communication
Technologies

FRI Farm Radio International

GRINS Grameen Radio
Inter-Networking System

GSM Global System for Mobile
communications

ICT Information and communication
technology

IRI Interactive radio listening

IVR Interactive voice response

KAP Knowledge, attitudes,
and practices

kHz Kilohertz

mAh Milliamps hour

M&E Monitoring and evaluation

NGO Nongovernmental organization

PSA Public service announcement

RRA Rapid rural appraisal

SFX sound effects

SMART Specific, measurable, achievable,
realistic, timebound

SMS Short message service

SNR signal to noise ratio

SWOT strengths, weaknesses,
opportunities, threats

UMTS Universal Mobile
Telecommunications System

UPS uninterruptible power supply

USAID United States Agency for
International Development

Acknowledgements

This *Interactive Radio Toolkit* is adapted from and expands on [Interactive Radio for Agricultural Development Projects: A Toolkit for Practitioners](#) written by Josh Woodard in December 2012 under USAID's FACET project. Though many examples used here highlight agriculture, this adaptation is for development projects more broadly and draws on the wisdom and experience of colleagues in many fields who believe in the power of radio, particularly in the developing world, to engage, teach, advocate, and inform.

The original version was developed by the U.S. Agency for International Development's (USAID) Fostering Agriculture Competitiveness Employing Information Communication Technologies (FACET) project, implemented by FHI 360 from 2009 to 2013 under award number EPP-A-00-09-00007, an associate award under the FIELD-Support LWA (EEM-A-00-06-00001-00). The concept for the original version was proposed and supported by Judy Payne, e-Business Advisor and ICT Advisor for Agriculture at USAID.

Dustin Andres, communications specialist at FHI 360, also deserves recognition for his substantive contributions to the original toolkit, including researching most of the organizations featured in Component 1, drafting significant portions of that component, and for his feedback on other toolkit components.

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About the Author

Josh Woodard is the Technical Manager for the Mobile Solutions Technical Assistance and Research (mSTAR) project at FHI 360. Prior to that, he managed USAID's Fostering Agriculture Competitiveness Employing Information and Communication Technologies (FACET) project. He is the author of numerous publications, including; [Integrating Low-cost Video into Development Projects: A Toolkit for Practitioners](#), [Social Media Handbook for Development Practitioners](#) (co-author) and [Integrating Mobiles into Development Projects](#) (co-author). He has been experimenting with using affordable ICT tools to improve communication and

enhance impact for more than a decade. He has experience working on the ground in Thailand, Indonesia, India, Macedonia, Mozambique, Ethiopia, Kenya, Ghana, Zambia, Senegal, Liberia, Malawi, Bangladesh and Papua New Guinea.



Integrating Low-Cost Video into Agricultural Development Projects



Integrating Mobiles into Development Projects

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About the Toolkit

For decades, radio has been a dominant source of information for most of the world's population. Although the reach of radio varies from country to country — in Africa, for example, it is estimated that between 80 and 90 percent of households have access to a functional radio — its power to engage listeners is undeniable. The liberalization of regulatory environments in a number of countries has further increased the number of independent and community radio stations broadcasting over the airwaves.¹ Given the fact that adult literacy rates in low income and lower middle income countries is around 60 and 70 percent, respectively, and that electricity in many rural communities is non-existent, battery-powered radios are often the most affordable and practical way for rural populations to access information.

For the most part, traditional radio promotes a one-way flow of information from the broadcaster to the listener. This can be

effective for the passive consumption of information, such as news or weather reports, but is not necessarily the best medium to foster active learning, such as promoting changes in behavior or practices. Radio as a primary conduit of information is also at risk from the growing prevalence of two-way communication channels, like mobile phones and the internet, not to mention the challenge it faces from the television, as increased access to television often correlates to a reduction in radio listenership.

That said, radio continues to be the best way to reach sizeable portions of the global population. Furthermore, advances in information and communication technologies (ICT) have made it significantly easier and more affordable to engage and interact with listeners over the radio. By using new technologies, we can enhance radio's potential as a powerful distribution channel beyond what was ever possible. Radio

Interactive radio refers to radio that leverages other ICT tools to create a two-way communication exchange between radio stations and listeners.

The term **radio programming** is used throughout the toolkit to refer to the entire interactive radio experience, not just radio content.

.....

stations and development organizations, working with their target listeners, now have a number of options for converting traditional broadcast-only radio into what has become known as interactive radio.

What is the purpose of this toolkit?

This toolkit is designed to help development practitioners use interactive radio to augment programs they are implementing. In addition,

¹Myers, M. "[Why Radio Matters: Making the case for radio as a medium for development.](#)" (Developing Radio Partners, 2010)

it aims to provide practitioners with a basic understanding of what is needed to create compelling radio programming. It is important to stress that this *toolkit* does not assume that radio is the most appropriate solution for disseminating information in every circumstance. Rather, given the ubiquity of radio in much of the world, this toolkit aims to help practitioners develop a systematic approach to using interactive radio as one effective way of sharing information with their target audience.

Why should you consider using interactive radio?

In response to the question “Why do you rob banks?” the infamous American bank robber Willie Sutton was purported to have replied, “Because that’s where the money is.” Although it is unlikely that Sutton actually uttered these words, the rationale for why you should consider using interactive radio is similar. Radio is likely where most of your audience is. It is still the most commonly accessible communication

medium for significant segments of the world’s population. In fact, in the majority of developing countries more than 75 percent of households own a radio, and at least 95 percent of the globe has access to a radio signal.² Moreover, effective radio programming has the capacity to present itself as an extension of the long and established practice of oral arts and spoken word in many traditional cultures. The potential impact of radio is further heightened through the incorporation of interactive elements, which have been shown to lead to positive increases in listenership, recall of information, and adoption rates. We know that radio can be extremely effective when used appropriately — the key is making sure you are using radio in a way that connects to listeners.

What is the intended audience of this toolkit?

The primary audience of this toolkit is anyone using or planning to use radio to enhance the impact of their development programs. It

does not assume any level of prior knowledge of interactive radio from the reader.

It will primarily appeal to practitioners who are planning to work through established radio stations or disseminate audio recordings independent of radio (for example, via MP3 players or mobile phones). It is not intended to be a guide to establishing a radio station from scratch, although you will likely find much of the content relevant if that is your main objective. If you are planning to start a radio station, UNESCO’s *Community Radio Handbook* is a good resource, despite being slightly dated.³

What will I find in this Toolkit?

There is no one-size-fits-all solution or approach to using interactive radio. What works well in one context or situation could fail to achieve its objectives elsewhere. Consequently, this toolkit will not provide you with a prescribed model. Instead, it aims to guide you through a series of questions that will help you and your team design

² [World Telecommunication/ICT Development Report \(WTDR 2010\), Target 8: Ensure that all of the world’s population have access to television and radio services \(ITU, 2010\)](#)

³ http://www.unesco.org/webworld/publications/community_radio_handbook.pdf



Each component can be viewed by clicking on the component names in the list below.

an interactive radio activity that best suits your own objectives, beneficiaries, and project realities.

To facilitate this process, each component of this toolkit begins with learning objectives and ends with critical success factors that you will need to consider when implementing your activity. By the time you finish using the toolkit, you will have developed an implementation plan for integrating interactive radio into your development work.

The toolkit is divided into the following six components:

- **[Component 1: How is interactive radio being used for development?](#)**

This component provides an overview of how interactive radio is being used in development projects. It includes illustrative examples from organizations that use interactive radio, along with contact information, websites, or other resources that you can use to follow up directly to learn more about a given approach.

- **[Component 2: Is interactive radio an appropriate way to achieve our objectives?](#)**

Before you begin using interactive radio, it is important to assess whether it is the best way to achieve your objectives or overcome specific challenges. It is also important to assess whether you have the capacity to work with interactive radio, and if not, what steps you can take to develop that capacity. This component will guide you through a process of assessing the appropriateness of a variety of ICT and traditional solutions to determine whether interactive radio is indeed a good fit based on your organizational, technical, and financial capacity.

- **[Component 3: How can we create our own radio programming?](#)**

This component will help you create your own radio programming, including developing compelling scripts for original content and adapting other types of content for radio that meet a baseline quality standard. In addition, it includes technical tips for effectively recording and editing your radio segments. Finally,

it suggests techniques for lowering barriers to entry so that your team is more likely to produce its own content for radio, including simple ways to provide incentives for them to do so.

- **[Component 4: What different approaches can be used to make our radio programming interactive?](#)**

This component highlights the most promising approaches for building interactivity into your radio programming, what is needed to integrate them into your programming, and how to effectively implement them. In addition, it suggests other ways you can disseminate your radio programming without relying on radio airwaves.

- **[Component 5: How can we track the impact of our radio programming?](#)**

This component highlights various ways that you can track listenership and measure impact. It also suggests how you can capture listener feedback to better inform the creation of new content.



■ **Component 6: What are the technical considerations we need to keep in mind?**

A number of technical choices need to be made before you can actually begin creating your own radio programming. This component provides overviews of different types of low-cost audio recording devices, their strengths, weaknesses, and examples of situations for which they may be most appropriate. It also covers devices that support interactivity, peripheral devices, audio editing software and other important technical choices. This section does not make recommendations for the

best devices. Instead, it aims to inform you of likely technical considerations, so you can assess what is most appropriate for your situation.

How should I use this toolkit?

At the end of each component, you will find worksheets and templates meant to help you tailor the design of your implementation plan to your specific situation. It is best if you read each component sequentially prior to implementing any interactive radio

activity. Doing so will enable you to develop a detailed plan that is more likely to address most of the issues you will encounter during implementation. That is not to say that your plan should remain static. Once you have begun to implement your activity, you may find that certain assumptions you made have changed or that the realities of implementation are different than you imagined. That is perfectly normal and to be expected. Make sure to revisit your plan along with relevant components throughout the implementation phase and revise it as necessary.

If you have started implementing a radio activity before reading this toolkit, begin by writing down the main challenges you are experiencing. Then, read through the toolkit (or relevant components) with these in mind and adjust your current activity as appropriate. Before making any significant changes to what you are doing, consider conducting a small pilot activity with your intended beneficiaries to ensure that the changes will actually address the challenges you face.

COMPONENT ONE

.....

How is interactive radio being used for development?

COMPONENT GOALS // By the time you have finished this component you will:

- Understand some of the ways that technology is being used to make radio interactive.



This component provides an overview of how interactive radio is being used in development projects. It includes illustrative examples from organizations using interactive radio, along with contact information, websites, or other resources that you can use to follow up directly to learn more about a given approach.

Because radio is the dominant medium in much of the world, it offers hope for overcoming the barriers that hinder other means of communication. Radio is also a decentralized medium, meaning that it is well-positioned to represent the voice of the community. With advances in technology and the explosion of mobile phones in even some of the most remote areas of the globe, the opportunities to take further advantage of radio's potential are now greater than ever.

Coupled with the growth in community radio stations in a number of countries around the globe over the past 20 years, these new technologies have the potential to completely

transform the relationship between listener and content provider. The medium is now changing in new and fascinating ways by adapting to local contexts, developing low-cost and increasingly low-maintenance systems, and capitalizing on the mobile revolution to reach new levels of engagement with audiences. Through more interactive radio, community members are being transformed into drivers of content rather than simply passive consumers.

What follows is an overview of development organizations that use interactive radio. This component is not intended to be comprehensive; rather it is a starting point



for further research. Much of the information was provided by the organizations highlighted and has not been independently verified. Consequently, we encourage you to confirm



Farm Radio International

Who are they?

Farm Radio International (FRI) is an international nongovernmental organization (NGO) registered in Canada that provides technology, training, and resources to local partners to meet the information needs of smallholder farmers and their families in rural communities. To date, FRI has reached tens of millions of farmers in participatory radio campaigns conducted by partners.

FRI has extensive expertise in a variety of radio and online technologies while focusing on a local ownership model, working in total with over 500 radio broadcasters in 38 African countries.

The organization is a major source of information and training for radio practitioners, in addition to providing



PHOTO CREDIT: FARM RADIO INTERNATIONAL

research on the impact of ICT-enabled radio in the developing world. FRI has developed competencies in a wide variety of technologies and approaches to support broadcasters, ranging from the most common computing and connectivity needs, scripting, and training to more complex solutions for interactive voice response (IVR) and mobile call-in connectivity. In addition, FRI conducts radio script writing competitions, and provides a weekly radio news service in English and French free of charge available online at <http://weekly.farmradio.org/>. Radio scripts are also sent out to partners three to

four times annually in hard and soft copies. They also launched a social network for African radio broadcasters where people can share scripts and resources with each other, among other things, at <http://www.barza.fm>.

What technologies are they currently using?

FRI has experimented with a variety of different technologies to enhance radio interactivity and to support radio stations' access to information. Through the African



PHOTO CREDIT: FARM RADIO INTERNATIONAL

Farm Radio Research Initiative (AFRRI), FRI tested a suite of different technologies for interactivity, including:

- low-cost MP3 players/recorders for field recording
- connecting mobile phones into mixers to facilitate call-ins or call-outs

- global systems for mobile communication (GSM) modems and short message service (SMS) management software
- IVR management systems
- rechargeable, recordable radios

Since AFRRI, Farm Radio has continued to push the boundaries on how technology can be used by radio stations, including using Google Earth to create radio coverage maps overlaid against rural population maps to estimate possible listenership, voice polling, and beep4services (described more in Component 4 under 'Missed Calls')

How are they measuring impact?

As part of the AFRRI, FRI partnered with 25 radio stations in five African countries to assess the impact of ICT on their work, with a significant focus on the potential of ICT to increase interactivity. Stations were provided with at least one of six different ICT packages. Over the course of an 18-week

period, FRI worked with partner radio stations to collect data on the effectiveness of each package. Stations used log sheets to capture information on how the stations and their listeners used the technology package. They also conducted periodic phone surveys with a select group of listeners from each station, and online surveys to collect information from radio station staff. Final evaluations were administered to both listeners — in the form of household surveys — and extension agents using Mobenzi Researcher, a mobile phone-based survey tool.

Where can I go to learn more about farm radio international?

Farm Radio International can be found online at <http://farmradio.org/>. Their website includes downloadable versions of their research reports, detailed overviews of all their programs, and resources for broadcasters. To learn more about FRI or how you can partner with them, contact them at info@farmradio.org.

UNESCO

Who are they?

The United Nations Educational, Scientific, and Cultural Organization launched a two-year project in 2012 with funding from the Swedish International Development Cooperation Agency (Sida) called 'Empowering Local Radio with ICTs'. The initiative is working to build the capacity of 32 radio stations in seven African countries: Democratic Republic of Congo, Kenya, Lesotho, Namibia, South Africa, Tanzania, and Zambia. Their goal is for stations to improve the quality of their programming, particularly as it relates to girls and women, and issues of local public concern. To accomplish this, they are providing capacity building to help their partner stations deploy different types of ICTs aimed at supporting "improved

programming, editorial work, communication and interaction, broadcasting and delivery, financial planning and management."

What technologies are they currently using?

Through this initiative, UNESCO is promoting the use of a number of different technology applications, many of which are free and open source. The full list of applications that they are promoting can be found on their website at: <http://en.unesco.org/radioict/icts>.

Where can I go to learn more about farm radio international?

More information about UNESCO's Empowering Local Radios with ICTs project can be found online at <http://en.unesco.org/radioict/home>. The project is anticipated to last through the end of 2014, although



the website will likely exist beyond then. Contact information for all of the key personnel involved in the project can be found on their website as well.



Freedom Fone

Who are they?

Freedom Fone is a project conceived and made possible by the Kubatana Trust of Zimbabwe, a civil society NGO committed to the accessibility of human rights and civic information. The core development team of Freedom Fone has been IT46, a Swedish consultancy company, although the Kubatana team is currently working



to bring its user interface design efforts in house. It is currently deployed by 23 partner organizations.

How is their work useful for interactive radio?

Freedom Fone is an interactive voice response system that makes it possible for anyone with a phone to access or contribute information on a specific topic at any time. Using interactive voice menus, it enables broadcasters to liberate their audio content from the constraints of a specific radio broadcast timetable, to organize polls, and for the audience to provide their perspectives for future review and playback. This includes functionality for creating multiple-language menus and callback capability to reach populations hardest to reach due to cost barriers.

Although the system also includes functionality to send and receive SMS, its main advantage is its use of audio, thus removing any literacy barriers that may exist. No internet access is required for the system

to function, although Freedom Fone is laying the groundwork for a cloud-based system in the future.

What technologies are they using?

The core of the system is a GSM gateway device that accommodates up to 4 SIM cards called the 2N OfficeRoute. It costs about US\$1,500, and enables a station to receive multiple voice calls and SMS messages at once. In addition, to run Freedom Fone it is also highly recommended that users have a dedicated computer to use as a server and an uninterruptible power supply (UPS) backup device.

How is it being used?

Freedom Fone has been built and deployed as both a standalone system and one that is connected to the internet. In conjunction with FRI's AFRRRI project, two radio stations — Volta Star in Ghana and Radio Maria in Tanzania — have used Freedom Fone's IVR

to make broadcast information available at any time. Market prices, previous broadcasts, news bulletins, and weather reports are also made available. This service was set up to be on demand, via calling in to the system. The voicemail box feature of the IVR can be used to gather feedback from listeners.

FRI reports that Freedom Fone IVR experiments showed that farmers are willing to spend their mobile phone airtime accessing relevant information as long as it is concise. They have found that the average length of a call is 120 seconds, so callers need to be able to find what they want in less than two minutes.

Where can I go to learn more about freedom fone?

Learn more about Freedom Fone at <http://www.freedomfone.org/>. The site includes detailed information on how their system works, and also features a demo of the software. You can contact them at info@freedomfone.org.



Frontline SMS:Radio

Who are they?

FrontlineSMS is an initiative of Kiwanja.net, an organization founded by technologist Ken Banks. It is an open source software platform that enables users to send and receive text messages with large groups of people without internet access. Originally conceived as a means of engaging communities that surround Kruger National Park in South Africa in conservation efforts in 2004, it has since expanded for dozens of purposes in at least 80 countries.

FrontlineSMS:Radio is a tailored version of the core technology of FrontlineSMS, and enables radio stations to use a laptop, mobile phone, or GSM modem to manage SMS communications with their audience. Although the first version of the program was

standalone, the latest version is browser based, and is the foundation of a cloud-based model. It has been deployed to over 20 radio stations thus far.

How is their work useful for interactive radio?

The platform essentially creates a robust email interface for text messages, enabling radio stations to quickly receive and synthesize feedback, engage listener perspectives, gauge interest in broadcast topics, and conduct extensive research over time that can inform programming decisions.

At Rite FM in Kenya, a commercial station for agriculture and social development, FrontlineSMS:Radio is used to give listeners another option to connect with radio hosts and to deliver information the audience requests. The station reports that for shorter shows and for particular audiences, SMS provides another way to sound out on the topic of



the day. On a good day, the station expects 10 responses via SMS from listeners.

Other stations — like FADECO Radio in the Karagwe district of Tanzania — report that the service helps them overcome geographic isolation and provides the means to connect with their audience. The station created a local SMS subscription service providing information on programming and the weather, attracting 200 users. One FADECO radio program is even

based on questions received from farmers via SMS, which the station researches and reports back to the audience on the following broadcast.

Where can I go to learn more about FrontlineSMS:Radio?

To learn specifically about FrontlineSMS's work with radio, visit <http://radio.frontlinesms.com/>.

The site includes stories from community radio stations sharing how they have used FrontlineSMS. To download a copy of FrontlineSMS, visit the main page at <http://www.frontlinesms.com/>. You can contact them at info@frontlinesms.com.



Gram Vaani

Who are they?

Gram Vaani is a technology company and social enterprise based at the Indian Institute of Technology in Delhi. The company focuses on building open-source technologies for community media in rural areas. It works with communities to design accessible technology solutions using primarily existing



infrastructure with an aim of making information flows more efficient, and more egalitarian. Most of their products are voice based, so that they can be used by illiterate and partially literate users. The organization partners with development agencies, NGOs, and government agencies to deploy these tools.

How is their work useful for interactive radio?

One of the tools developed by Gram Vaani, the Grameen Radio Inter-Networking System (GRINS), is a low-cost radio management system. It allows users to automate many of a radio station's most complex tasks. It enables radio station operators to schedule broadcasts, preview programs, make and receive phone calls, record live transmissions, stream over the internet, view analytics, and maintain a searchable library, all through a single user interface. To date, its greatest utilization has occurred in India, but in total it has been used by stations with 2.5 million

listeners in six countries with more than 25 NGO clients. Future versions of the device aim to enable internet-connected community radio stations to share content with others and will include additional IVR functions to further engage listeners.

What technologies are they using?

The GRINS box is a plug-n-play server that community radio stations use in place of their computers. The device can interface with multiple devices, such as microphones, telephone lines, GSM gateway devices, and the station's mixer.

Where can I go to learn more about gram vaani?

To learn more about Gram Vaani and GRINS, go to <http://www.gramvaani.org/>. For more information, you can also contact them at contact@gramvaani.org.



Lifeline Energy

Who are they?

Lifeline Energy is a nonprofit, humanitarian organization based in London and registered in the United States that develops wind-up and solar powered radios and lights. It has been working as a provider of off-the-grid radios and lights for low-resource environments since 1999, with particular focus on sub-Saharan Africa.

How is their work useful for interactive radio?

In 2010, Lifeline Energy released the Lifeplayer MP3, a rechargeable and

recordable rugged media player and radio. Its ability to recharge off-the-grid and record live radio broadcasts makes it a potentially useful tool for radio listening groups or radio agents. It includes monitoring and evaluation software that can track listening patterns and usage. In Rwanda, SC Johnson has distributed 225 Lifeplayer MP3s to farming communities that produce pyrethrum with pre-loaded content on best farming practices and health information.

What technologies are they using?

The Lifeplayer MP3 uses both solar and wind-up power, and comes with an optional 12V external DC input for use with car batteries or mains electricity. One hour of solar exposure or one minute of wind up can generate enough energy for 30 to 40 minutes of radio play at normal volume. It also includes two SD memory card slots — one



internal and one user accessible — that can take up to 32GB of memory each, meaning that content can be pre-loaded or added later.

Where can I go to learn more about lifeline energy?

Learn more about the Lifeplayer MP3 on Lifeline Energy's website at <http://www.lifelineenergy.org> or contact Kristine Pearson, Lifeline Energy's CEO, at kpearson@lifelineenergy.org.

Notes

A series of horizontal dotted lines for writing notes.

COMPONENT TWO

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Is interactive radio an appropriate way to achieve our objectives?¹

COMPONENT GOALS // By the time you have finished this component you will:

- Decided whether interactive radio is an appropriate option to achieve your objectives.
- Determined how to identify the right radio station partner(s).
- Developed a draft implementation plan for your interactive radio activity.

¹This component is a modified and augmented version of Component 2 in the *Integrating Low-Cost Video into Agricultural Development Projects: A Toolkit for Practitioners*, by Josh Woodard, published in April 2012 by USAID's FACET project.



Before you begin using interactive radio, assess whether it is the best way to achieve your objectives or overcome specific challenges. Also assess whether or not you have the capacity to work with interactive radio, and if not, what steps you can take to develop that capacity.

This component guides you through a process of assessing the appropriateness of a variety of ICT and traditional solutions to determine whether interactive radio is indeed a good fit based on your own organizational, technical, and financial capacity.



Setting SMART Objectives

An objective that follows the SMART model is more likely to succeed because it is clear (specific) so you know exactly what needs to be achieved. You can tell whether it has been achieved (measurable) because you have a way to measure completion. Before setting a SMART objective, take into account factors such as resources and time to ensure that it is realistic.

SPECIFIC

Is there a description of a precise or specific behavior/outcome that is linked to a rate, number, percentage, or frequency?

MEASURABLE

Is there a reliable way to measure progress toward achieving the objective?

ACHIEVABLE

Are we attempting too much? With a reasonable amount of effort, can we do what we set out to do?

REALISTIC

Do we have the resources — staff, money, materials — to make a real impact?

TIME-BOUND

Is there a finish and/or a start date clearly stated or defined?

Sample SMART objective: Increase the income of [Y number of] female-headed households in X province by [year], through improved livestock breeding and raising practices and better marketing.

Not Very SMART objective: Change animal husbandry practices. (not specific, measurable, or time-bound).

How do we assess the appropriateness of different ICT options?



To start, write down your objective. In addition, discuss the objective with your project staff to ensure that there is a shared understanding of what you are trying to achieve. Depending on how broadly you defined your objective, certain options may be more or less appropriate for different

purposes or types of information. For example, information about certain sanitation or agronomic practices may be best communicated through visual means (such as demo plots, video, face-to-face exchanges), whereas, awareness messaging and certain types of information may be better provided

using radio, mobile phones, or bulletin boards. Similarly, a public awareness campaign may be best done through mass media, whereas training may be best accomplished through facilitated exchanges with your target audience.

It is best, therefore, to make sure that your objective includes the specific type of information you plan to provide and the purpose of providing that information. Rather than saying, *Improve literacy of women in Nepal*, which could include dozens of specific activities, define the specific behavior or outcome. For example: *In the next year, increase by 25 percent women's enrollment and participation in literacy programs in the Himalayan region of Nepal through expanded access to resources and information at local markets.*



The FAO has developed a good overview of rapid rural appraisals if you would like to learn more about how to conduct one. It is available online at: <http://www.fao.org/docrep/W3241E/w3241e09.htm>

Once you have agreed upon your objective, lay out the context in which you are working. Although you have probably mapped the context as part of your broader project design, it is helpful to do so again, with a particular focus on the profile of your target beneficiaries — this is your target audience — and the current ICT infrastructure in the area where you will be working. This information will be helpful when completing the ICT Option Assessment Tool found later in this component.

Determining the profile of your target audience will help you assess the ICT solution(s) most appropriate to their needs and capacity. For example, if your target audience is illiterate, then using SMS text messages to disseminate information to them may have limited impact, even if there is high mobile phone penetration in the area where you are working. Below is a list of questions to consider asking about your beneficiaries.

SAMPLE QUESTIONS

- What is the average age of a typical person in your target audience?
- What is the average level of education?
- What is the average level of literacy?
- What is the average socioeconomic status?
- Are there any cultural considerations or local beliefs that should be kept in mind?
- How do people tend to share information?
- What times of the day are people normally available?
- Where do people tend to congregate?
- What types of ICT do people generally have access to?
- What is their level of knowledge of and comfort with each of these ICTs?

Truly understanding your target audience and its needs is essential to designing your work with interactive radio. Ideally, to create a profile of the target audience, consider conducting a survey or rapid rural appraisal (RRA) in the communities where you are working. You can also use parts of the [ICT Infrastructure Questionnaire](#) found in the component worksheet section to help gauge your beneficiaries' access to and knowledge of ICTs. Not all of the questions on the questionnaire may apply to your situation,

so select only those that are the most relevant or add your own. This questionnaire might also come in handy later when you are assessing the ICT capacity of potential partner radio stations.

If you do not have the resources or time to conduct a survey, bring together a diverse selection of staff and partners to help you create the audience profile. Pose each of the survey's questions to the entire group then write down the answers on flipchart paper.

Once you have a broad profile of your target audience, you may want to break it up into smaller groups or segments of beneficiaries who have common characteristics, attitudes, needs, or priorities. In some cases, you may find that most of your target audience fits a similar profile, while in others, there may be recognizable differences that cluster around common characteristics. For example, you might cluster them based on attitudes, such as openness to new ideas (such as, regarding using technology — some may be early adopters, others on the fence, while others are resisters). A typical way to segment a target audience is by demographic characteristics (for example, rural, female,

farmer). The segments may not apply to all of the people you are targeting, but they should generally apply to most of them.

Once you have finished answering these questions from the list on the previous page, you can synthesize your answers into a more concise profile like the one that follows.

Segment	On the fence
Age	35 – 55
Education level	6th grade
Literacy level	Functional literacy. Limited time spent reading.
Socioeconomic status	Subsistence, smallholder farmer
Local beliefs	Significant esteem placed in elders
Information sharing	Mostly word-of-mouth. Storytelling by elders.
Availability	Mostly in the evenings after sundown. Some also have radio access during the day when working on their farm.
Main points of congregation	Local market, village leader's house
Group participation	Occasional participation in farmer association meetings. May be part of community health group focused on promoting exercise.
ICT profile	Access to a basic mobile phone; may own radio or listen to radio with neighbors; limited access to electricity

EFFECTIVE AUDIENCE SEGMENTATION

For a more detailed explanation of audience segmentation, as well as tools for doing it right, check out Module 2, Session 2 of C-Change's [A Learning Package for Social and Behavior Change Communication](#). It

includes audience segmentation tables, checklists, and maps to help you effectively target your audience.



Once you have defined your objective and profiled your target audience, the next step is to use the ICT Option Assessment Tool to determine the most appropriate means

of achieving your objective given your local context. This tool — a modified strengths–weaknesses–opportunities–threats (SWOT) analysis — will help you to consider the

potential benefits, costs, and staff capacity for each option. A completed assessment might look something like this:

Example of a Completed ICT Option Assessment Tool

OBJECTIVE: Reduce rates of sexually transmitted infections among MSMs and sex workers along major transit corridors through expanded access to information on safe sex, access points for prophylactics, and clinics for treatment.

ASSESSMENT CRITERIA	ICT OPTION					
	Low-cost video	Mobile phones	Radio	Broadcast television	Web	Other: Flyers/print material
Strengths of each option	Most of our target audience have access to at least basic mobile phones	High penetration, used by most target audience	Can be recorded and distributed without access to radio stations	Most target audience enjoy TV and videos when they have access	Provides an opportunity to broadcast information fairly easily	Relatively easy to produce and distribute
Weaknesses of each option	Limited literacy levels	Depends on partnership with local radio stations	Limited access to mobile data means that distribution would need to be done physically	Dissemination channels do not really exist	Though internet access does exist, most of our target audience does not use it frequently	This has been tried before with limited impact
Current team capacity	Intermediate	Limited	Limited	None	Intermediate	Advanced
Potential types of costs	Costs associated with establishing a short code, and messaging rates	May need to pay for air time and some equipment for interactivity	Production and distribution costs. May need to purchase SD memory cards to pre-load and share content	Production costs, airtime costs, distribution costs (for non-broadcast options, such as community-based dissemination)	Web development and maintenance	Cost of billboard rental and materials
Could this be an appropriate option? Why?	Yes – particularly voice messaging, given low literacy rates	Yes – target audience is already listening to radio in large numbers	Maybe – could be offered through clinics that we are already partnering with	Maybe – could help broaden outreach beyond traditional methods	Not yet – currently internet access is too low	No – have already tried this option with limited results

Adapted from a table originally developed by Mark Bell and Judith Payne for the USAID-funded MEAS project (2011), which can be found online at <http://measict.weebly.com/extension-and-ict-options.html>.

When considering strengths and weaknesses, keep your beneficiary (target audience) profile at the forefront when making your determinations. Often what may appear to be a strength when considered through our own lens of experience may have either limited impact or be a weakness given the local context. For staff capacity, make sure to consider both local and home office capacity. This should include both technical capacity and time available. You might find it helpful to divide technical capacity into four classifications, as follows:

None	No current capacity
Limited/basic capacity	Can use basic features
Intermediate capacity	Able to use most features, but limited ability to train others
Advanced capacity	Able to create/manage content and train others

Identifying your local and home office capacity in advance of starting your activity will help determine whether it is possible for you to proceed with a given ICT option even if all other signs point to yes. The fact that members of your team may have only limited

capacity does not, in and of itself, mean that you should not proceed. You may be able to hire external support or pay for technical training to bring your team to a level where they are able to implement the proposed activity.

You can use these capacity building costs, along with equipment, material, and other potential costs, to help you determine whether the likely total costs of a given option fit within your available budget.

A blank copy of the ICT Option Assessment Tool is included at the end of this component. Before you write anything on the template, you may find it helpful to brainstorm ideas with your project staff. After you have made your final determination, consider sharing it with colleagues or other stakeholders who were not involved in the process to ensure that it makes sense to them. Ask them to evaluate your assessment by double checking assumptions you have made and providing their own recommendations for improvements. Use their input to strengthen your assessment.



Based on your responses to the assessment, you should be able to determine which option is most appropriate. You may find that more than one option appears appropriate for achieving your objective. If this is the case, you may want to consider piloting activities using each appropriate option to determine which one actually achieves the greatest impact. Alternatively, complementary strategies can be used to further enhance outcomes. For instance, if you determined that both video and radio were appropriate options, it may be that using both media to reinforce messaging is the most effective option of all—assuming that you have the capacity and budget to do so. Regardless of which option you choose, you should build in a way to evaluate your methods to refine them over time.

How should we identify appropriate radio station partners?

After you determine which options seem to be most appropriate, you will need to collect some additional information before coming to a final conclusion. If radio made it to the top of the list, you will now need to consider what your broadcast options are. On the face of things, radio might be the best way to reach your audience based on local availability, learning objectives, and cost. Local broadcast restrictions or lack of

interest from radio stations, however, could make radio less feasible than it may seem. Therefore, also survey potential radio station partners in advance of starting your activities to determine if they may be willing to work with you to achieve your objectives.

At a minimum, ask the following questions of each of the potential radio station partners:

- What is your broadcast range?
- How many hours per day are you on the air?
- How many estimated listeners do you have? What is their demographic profile?
- What radio formats do you use (news, music, skits, etc.)? In what percentages?
- What percentage of your programming is agriculture focused?
- What is the average length of your agricultural programs you air?
- Where do your programs come from (produced in-house, from parent station, etc.)?
- Would we need to pay for airtime to broadcast our program?


You can use the [Radio Station Survey Worksheet](#) to help you collect this information. Ideally, pursue radio stations whose listeners closely resemble your target audience and are interested in broadcasting the type of programming you plan to create. Although not every station will have a complete profile of its audience, it should have a general sense of who its primary listeners are. If not, you may need to visit the communities within its broadcast range to find out who tends to listen to the station.

It is also extremely important to examine the relationship between each station and your target audience. Since your ultimate objective is likely to include some level of behavior change, you will want to work with radio stations that are known and trusted by listeners. Choosing the wrong partners — such as a radio station with limited credibility — can severely affect the potential impact of your messaging, even if the information

is accurate. You will want to ask individuals in your target audience about how they view each station you are thinking of working with. This can be as simple as asking them which radio stations and announcers they view as trusted sources of information. Your completed survey might look something like this:



Example of a Completed Radio Station Survey Worksheet

OVERVIEW	
Station name:	Community Radio Chipata
Address:	Great East Road, close to the police station
Phone number:	062 458 9201
Contact person:	Damian Choolwe
Broadcast range:	Chipata, Chikomene, Mshawa, and Kalume
AUDIENCE PROFILE	
Gender ratio:	Probably 60% men, 40% women
Average age:	Hard to say, but mostly over 40
Profession:	Predominantly farmers, some traders
Socioeconomic Status:	Mostly smallholder farmers
PROGRAMMING PROFILE	
Broadcast hours:	6 a.m. until 8 p.m.
Radio formats used:	News, music, call-in and talk shows, radio dramas
Most popular program:	Sunday evening radio drama and Thursday morning Ask an Expert
[Target sector] programs: (As a % of all programs)	Most of their call-in and talk shows cover health and agricultural topics. Some of their radio dramas are about farmers and others cover health themes. Hard to provide an exact percentage of programming.
Average length of [target sector] programs:	Most call-in shows are 1 hour long. Their radio dramas vary between 15 and 30 minutes.
Source of programs:	Radio dramas are predominantly shared by larger national broadcasters.
Cost of airtime:	Free if it fits within their programming interests, otherwise we would need to negotiate a fee.
REPORTED BY	<div style="display: flex; justify-content: space-between;"> <div>Name </div> <div>Date 12/7/14</div> </div>

The process of finding partners is not just one way. When you meet with local radio stations, explain what your interests are, why you would like to work with them, and what support you are able to offer, whether it is financial or technical assistance. Some stations may already broadcast programs focused on your target sector (for example, agriculture, health, civil society, education) or be interested in adding that type of programming; others may not see the value in such programming. It is up to you to sell the station on why your plan for interactive radio fits within its own business model. Each station will have its reasons why it may or may not want to work with you. In the end, if the station sees value in what you are proposing, it is likely to consider working with you.



RADIO STATION'S CONSIDERATIONS

- Your interests
- Your reasons for wanting to work with radio station
- Support you are able to offer
- How your content fits within their business model

YOUR CONSIDERATIONS

- Audience closely resembles your target audience
- Broadcasts type of information you plan to create
- Trusted by listeners



WHAT DO WE MEAN BY TEAM?

Throughout this toolkit you will notice the use of the term 'team' often. We use 'team' to represent all members of your interactive radio activity team, including staff from local radio stations, local NGOs, government extension offices, and your project staff. When we use the pronoun 'you' or 'your team' we are referring to whoever among that mix of partners will be responsible for that task.



If a prospective local partner is not a perfect match, you will need to decide whether there is another, better option or if you are willing to work with a partner who is less than ideal.

Once you have decided on radio station partners, develop a written partnership agreement with each partner to define the work activities, deliverables, and timeline. The nature of this agreement will depend on the relationship you plan to have with each

station. At a minimum, it should include the following information:

- Contact information for representatives from all parties
- The roles and responsibilities of all parties
- Additional expectations about the nature of the partnership

Under roles and responsibilities, clearly indicate who is responsible for what and on what timeline. You may also want to consider including targets for each task included, such as the number of listener interactions per month or frequency of radio program broadcasts. In addition, if you plan to offer stations technical support or capacity development, make sure to clearly outline what that will entail. Work with each radio station in advance to identify the gaps in its capacity so that you can determine what support it needs. It might not be possible for your project to address all of the station's needs, but you can play a significant role in helping it improve its capacity.

If you are working with a local NGO partner or government agency as well, consider including them in the same agreement so that all parties have a common understanding of what work will be done.

The following is an example of what an agreement might look like. All of the parties in this example are fictitious.

PARTNERSHIP AGREEMENT

Background:

Radio Furaha is a community radio station located in Lodwar, Kenya. It broadcasts daily from 6 a.m. until 10 p.m., and has a mix of radio programming. Turkana Livestock Development is a locally based NGO working with over 7,000 livestock herders throughout Turkana district to improve livestock breeding and rearing practices. Livestock Partners International is an international development organization based in Washington, DC. It is currently working on the five-year Livestock Improvement project in Kenya.

Responsibilities:

Radio Furaha	<ul style="list-style-type: none"> » Assign one radio producer to develop radio content with support from Turkana Livestock Development. » Develop at least four programs monthly of a minimum of five minutes each. » Broadcast a call-in radio program weekly focused on livestock issues. » Track interactions with listeners, including name, content of question/comment, and contact information.
Turkana Livestock Development	<ul style="list-style-type: none"> » Provide technical content to Radio Furaha for at least four programs monthly. » Participate in weekly call-in radio program as a content expert. » Provide follow up technical support to herders who have called-in, as necessary.
Livestock Partners International	<ul style="list-style-type: none"> » Provide capacity development training to Radio Furaha and Turkana Livestock Development on creating engaging programs. » Provide capacity development training to Radio Furaha on managing an interactive radio program. » Provide ongoing technical support as requested by either party.

Agreed to by:

All parties agree to adhere to the responsibilities as outlined above. Should any changes be required, the party that desires the change will inform the other parties immediately. All parties agree to meet once a quarter to discuss progress and challenges.

PARTNER ORGANIZATION
Radio Furaha
415 Lodwar-Lokichogio Rd, Lodwar, Kenya
P: 054-40000

CONTACT PERSON:
James Muriuki, *Station manager*

PARTNER ORGANIZATION
Livestock Partners International
Valley Road, Nairobi, Kenya
P: 020-3512800

CONTACT PERSON:
George Odumbe, *Technical lead*

PARTNER ORGANIZATION
Turkana Livestock Development
85 Lodwar-Lokichogio Rd, Lodwar, Kenya
P: 054-50100

CONTACT PERSON:
Johari Ekuwam, *Activity director*

How can we plan to implement our activity?

Before implementing the activity, create a detailed plan for carrying it out. One way to do this is by using the [Implementation Plan Framework](#) included in the worksheet section at the end of this component. It will contain much of the same information you already compiled, but it is designed to help create a roadmap that can be used as a common point of reference for all of your staff and partners. Unlike some planning tools, this one starts with the desired consequences, or the “Why?”

This framework helps you develop an implementation plan for your interactive radio activity that focuses on outcomes, context, and beliefs, in addition to the mechanics of what, who, and how. It also builds in consideration for measuring impact directly from the start of your activity.

Before you read the rest of this toolkit, work with your project staff to draft an initial implementation plan. Its purpose is to describe how you will carry out your proposed activity, and how it fits within your broader project objectives. If you have identified local partners, consider inviting them to participate in the planning process so they are clear about what you are trying to achieve and how they can contribute to the project's success.

Allot at least two hours for this activity to provide enough time for brainstorming and discussion. Make sure to use the framework from left to right. This will help ensure that all of your decisions related to the mechanics and measurement of your activity are derived from your desired outcomes. As with the other exercises, you are encouraged to use flipchart paper

during this process so that you have enough space to write out everyone's ideas.

As you work your way through the rest of the toolkit, you are encouraged to improve and expand upon your initial implementation plan. By the time you finish using the toolkit, you should have a final implementation plan that you can use to guide your interactive radio activity.

The plan on the following page is illustrative and, therefore, not too detailed. Your final plan will likely be more thorough than the sample. Remember, that this is not meant to be a step-by-step process for how you will implement your activity, but rather an overarching framework for you and your project staff to use. Take some time to review the sample and try drafting your own plan before continuing to the next component.

IMPLEMENTATION PLAN

<p>1. WHY? Desired Consequences: Immediate, Mid-term and Long-term Outcomes & Results</p>	<p>What changes do we want to achieve by the time the project is over? Immediate changes/results? Individuals in our target audience will have improved knowledge of best practices.</p> <p>Mid-term changes/results? They will have experimented with adopting improved practices.</p> <p>Long-term changes/results? They will experience improved state of being through better health and financial outcomes.</p>
<p>2. CONTEXT? Situation & Challenges; Barriers to Overcome; Assets & Opportunities</p>	<p>Characteristics of the situation in which we work? Barriers to overcome? Many of the local radio stations are not accustomed to working with development organizations. A couple of them are skeptical of our intentions. Our staff also has limited experience working with radio as a communication medium.</p> <p>Characteristics of the target audience that we seek to help? They are generally open to learning about new things, but some are skeptical given misinformation they have been provided in the past.</p> <p>ICT assets already present in the community? Most of our target audience listens to the radio at least weekly. Although not everyone owns their own radio, they have access through neighbors and community groups.</p> <p>Opportunities that exist within the environment and system that we can leverage? Community radio stations already exist in the majority of communities that we are targeting. Assuming that most of them agree to work with us, it would be a great point of leverage.</p>
<p>3. BELIEFS? Core Principles Governing our Decisions & Actions</p>	<p>What development principles and non-negotiable values do we have to consider in our approach? Any learning products must be locally driven and created with input from the communities themselves.</p>
<p>4. WHAT? Technical Approach</p>	<p>Given our responses to sections 1–3, what approach will we take to best achieve our desired consequences? We plan to work with radio stations in two ways. First, we will help them to create scripts and radio programs for them to use on specific agricultural subjects. Second, we will help them to integrate interactivity into their programming so that listeners have an opportunity to engage with them and learn.</p>

IMPLEMENTATION PLAN

<p>5. HOW? Critical Structural Elements, Required Equipment</p>	<p>How will it be implemented?</p> <p><i>Training and technical support</i> Regional technical leads and local partner NGO staff counterparts will provide technical content training to radio stations to help them develop agricultural programming. One of our technical staff members also has experience in some of the interactive options, so he can help us to support training radio stations. We may require some additional outside training for more advanced elements.</p> <p><i>Dissemination</i> We will primarily work with local radio stations for dissemination, although we will also explore creating a lending library of audio programs that can be stored on MP3 players at some of our local partner offices in the field.</p> <p><i>Required equipment</i> Since we plan to have our field staff create some of the programming, or at least collect interviews for inclusion in radio programs, we will need digital voice recorders. We may also need to help our partner radio stations install and configure IVR systems and phone recording devices.</p>
<p>6. WHO? Essential Actors</p>	<p>Who will be responsible for implementing this?</p> <p>Our communications team will be responsible for coordinating with local radio stations on programming, with our contracts associate responsible for managing any prerequisite agreements that we need to enter into with each station. Our technical team will work with our communications team to support stations to develop scripts and programs, with input from field staff and local partners. Justice, our technical officer with experience in using ICT tools, will be responsible for providing technical support to radio stations on interactivity and will provide them with feedback on ways that they can improve their interaction with listeners.</p>
<p>7. ARE WE THERE YET? Indicators and Measures of Success; Assessment Methods</p>	<p>Our primary output indicators will be the number of scripts and programs produced and aired by local radio station partners. For outcome, we will be primarily measuring change in knowledge and practice. Within three years we also expect to see an improvement in income of farmers who listened to our programs frequently as compared to those who did not.</p> <p>We will conduct baseline knowledge, attitudes, and practices (KAP) surveys of farmers that we are targeting through our broader work. We will repeat these surveys annually to compare any changes. Since not all of the individuals we are working with live in range of radio stations we are working with, they presumably will not have listened to our programs. All other services being equal, we will use these individuals as a control group. We will also survey people within broadcast range as to their listening habits to determine if there is any correlation between habits and outcomes.</p>

Developing and implementing an interactive radio activity is going to take a lot of work. Before you get started, envision what you want to achieve and determine the best way to get there. Creating an implementation plan is one tool for accomplishing this, but it will only be as good as what you put into it.

You may find it helpful to create a draft implementation plan before exploring local partnerships. If so, and if no one on your project staff has experience working with radio or developing effective programming, consider asking someone who has relevant experience to provide input and feedback on your plan. Although this toolkit aims to provide all of the necessary elements for implementing an interactive radio activity, it cannot replace hands-on experience.

The scope of your plans will determine how much support you may need to actualize them. If you only plan to help radio stations



increase their interactivity by using ICT tools, it will require much less input and fewer resources than developing a widespread participatory radio campaign from scratch.



COMPONENT TWO

Critical success factors

- *Select the most appropriate ICT option.*
- *Know your target audience.*
- *Develop a well-thought-out plan.*

COMPONENT TWO

Worksheets

- ICT Infrastructure Questionnaire
- ICT Option Assessment Tool
- Implementation Plan Framework
- Radio Station Survey Worksheet



ICT Infrastructure Questionnaire

QUESTIONS	OPTIONS	ADDITIONAL DETAILS/INFORMATION
<p>What types of computers are being used?</p> <ul style="list-style-type: none"> » How many computers do you have? » How many are currently operating? » How old are they? » How do you primarily use this device? (play games, word processing, accounting, etc.) 	<ul style="list-style-type: none"> » Desktop » Laptop » Netbook » Thin client » Low-cost PC – Classmate, XO, etc. » Tablet – iPad, Samsung Galaxy, etc. » PDA » eReader – Kindle, Nook, etc. 	
<p>What operating system is being used?</p>	<ul style="list-style-type: none"> » Windows XP, ME, Vista, 7, etc. » Mac OS » Linux – Ubuntu, Red Hat, CentOS, SUSE, etc. 	
<p>What type of internet connection is being used?</p> <ul style="list-style-type: none"> » How fast is your connection? » Do you have any bandwidth restrictions? » Is your connection set up for a single user or multiple users? » How many computers are connected to the internet? » How do you primarily use the internet (social media, news, educational resources, etc.)? 	<ul style="list-style-type: none"> » Dial-up » ISDN » DSL/ADSL » Cable » WiFi/WiMax » Cellular (GPRS, EDGE, EVDO, G3, etc.) » Satellite – VSAT 	
<p>What type of mobile phone do you use/have access to?</p> <ul style="list-style-type: none"> » When did you buy it? » Is it pre-paid or post-paid? » If it is pre-paid, how frequently do you change SIM cards? » Does it cost you to receive SMS messages? » How do you primarily use this device (inbound/outbound calls, SMS, etc.)? » Do you receive agricultural information on this device? If so, explain: 	<ul style="list-style-type: none"> » Basic phone » Feature phone » Smart phone 	

ICT Infrastructure Questionnaire (Continued)

QUESTIONS	OPTIONS	ADDITIONAL DETAILS/INFORMATION
<p>If you have a smart phone, what operating system does it have?</p> <p><i>(Note: the user may not know the answer to this question, so the enumerator will need to know how to check)</i></p>	<ul style="list-style-type: none"> » iPhone » Android » BlackBerry » Windows Mobile » Symbian » Other 	
<p>What is your primary source of electricity?</p> <ul style="list-style-type: none"> » How reliable is your electricity source? (i.e., How frequent are blackouts? How many hours can you use it before power runs out?) 	<ul style="list-style-type: none"> » Public utility » Generator » Solar » Other 	
<p>If you own a radio, what type is it?</p> <ul style="list-style-type: none"> » How it is normally powered? (battery, solar, crank) » How do you primarily use this device (news, entertainment, educational shows, etc.)? » Do you receive agricultural information on this device? If so, explain: » If not, do you have access to a radio? Where? How often? 	<ul style="list-style-type: none"> » AM/FM » Shortwave » Satellit 	
<p>If you own a TV, what type of connection do you have?</p> <ul style="list-style-type: none"> » How do you primarily use this device (news, entertainment, educational shows, etc.)? » Do you receive agricultural information on this device? If so, explain: 	<ul style="list-style-type: none"> » Broadcast » Cable » Satellite » None (used only with video player) 	
<p>If you own a video player, what format can it play?</p> <ul style="list-style-type: none"> » How do you primarily use this device (watch movies, educational videos, etc.)? » Do you receive agricultural information on this device? If so, explain: 	<ul style="list-style-type: none"> » DVD » VCD » VHS 	

ICT Infrastructure Questionnaire (Continued)

QUESTIONS	OPTIONS	ADDITIONAL DETAILS/INFORMATION
<p>If you own an MP3 player, what type of display does it have?</p> <ul style="list-style-type: none"> » How do you primarily use this device (listen to music, educational programs, etc.)? » Do you receive agricultural information on this device? If so, explain: 	<ul style="list-style-type: none"> » Screenless » Small screen (1-2 lines of text) » Standard screen (monochrome or color?) 	
<p>Do you own/use a gaming system? If so, what type?</p> <ul style="list-style-type: none"> » How often do you use it? 	<ul style="list-style-type: none"> » Playstation (1, 2, or 3) » Xbox or Xbox 360 » Nintendo (Wii, GameCube, N64, SNES, NES) » Handheld (Nintendo DS, Sony PSP, etc.) » Other 	
<p>Other:</p> <p><i>(This is for additional information that you may want to collect specific to your project.)</i></p>		

ICT Option Assessment Tool

Assessment Criteria	ICT OPTION					
	Basic cell phone (voice + text)	Radio /Podcasts	Smart phones/ tablets	Video	Web	Other:
Strengths of each option						
Weaknesses of each option						
Current staff capacity						
Potential costs						
Is this an appropriate option? Why?						

Adapted from a table originally developed by Mark Bell and Judith Payne for the USAID-funded MEAS project (2011), which can be found online at: <http://measict.weebly.com/extension-and-ict-options.html>

Implementation Plan Framework

IMPLEMENTATION PLAN	
1. WHY? Desired Consequences: Immediate, Mid-term and Long-term Outcomes & Results	<i>What changes do we want to achieve by the time the project is over? Immediate changes/results?</i> <i>Mid-term changes/results?</i> <i>Long-term changes/results?</i>
2. CONTEXT? Situation & Challenges; Barriers to Overcome; Assets & Opportunities	<i>Characteristics of the situation in which we work? Barriers to overcome?</i> <i>Characteristics of the target audience that we seek to help?</i> <i>ICT assets already present in the community?</i> <i>Opportunities that exist within the environment and system that we can leverage?</i>
3. BELIEFS? Core Principles Governing our Decisions & Actions	<i>What development principles and non-negotiable values do we have to consider in our approach?</i>
4. WHAT? Technical Approach	<i>Given our responses to sections 1–3, what approach will we take to best achieve our desired consequences?</i>
5. HOW? Critical Structural Elements, Required Equipment	<i>How will it be implemented?</i> <i>Training and technical support</i> <i>Dissemination</i> <i>Required equipment</i>
6. WHO? Essential Actors	<i>Who will be responsible for implementing this?</i>
7. ARE WE THERE YET? Indicators and Measures of Success; Assessment Methods	

Adapted from a framework originally developed by Eric Rusten at FHI 360

Radio Station Survey Worksheet

OVERVIEW

Station name:	Community Radio Chipata
Address:	Great East Road, close to the police station
Phone number:	062 458 9201
Contact person:	Damian Choolwe
Broadcast range:	Chipata, Chikomene, Mshawa, and Kalume

AUDIENCE PROFILE

Gender ratio:	Probably 60% men, 40% women
Average age:	Hard to say, but mostly over 40
Profession:	Predominantly farmers, some traders
Socioeconomic Status:	Mostly smallholder farmers

PROGRAMMING PROFILE

Broadcast hours:	6 a.m. until 8 p.m.
Radio formats used:	News, music, call-in and talk shows, radio dramas
Most popular program:	Sunday evening radio drama and Thursday morning Ask an Expert
[Target sector] programs: (As a % of all programs)	Most of their call-in and talk shows cover health and agricultural topics. Some of their radio dramas are about farmers and others cover health themes. Hard to provide an exact percentage of programming.
Average length of [target sector] programs:	Most call-in shows are 1 hour long. Their radio dramas vary between 15 and 30 minutes.
Source of programs:	Radio dramas are predominantly shared by larger national broadcasters.
Cost of airtime:	Free if it fits within their programming interests, otherwise we would need to negotiate a fee.

REPORTED BY

Name

Date

COMPONENT THREE

.....

How can we create our own radio programming?

COMPONENT GOALS // By the time you have finished this component you will:

- Identified baseline quality standards for your radio programs.
- Thought about who will be involved producing your radio programs.
- Understood the basics of every step of the radio program production process.



This component is designed to help you create compelling scripts for original content and adapt other types of content for the radio that meet a baseline quality standard. In addition, it includes technical tips for effectively recording and editing radio segments. Finally, it suggests techniques for lowering barriers to entry, including simple ways to provide incentives, to encourage your team to produce its own content for radio.

There is a reason why radio often loses out to television in the battle for audience. Radio relies on only one of our senses to communicate its message, whereas television and video target both our auditory and visual senses. Since both the eyes and ears are engaged, it is often easier to convey a message — or at least provide for two different types of sensory distraction. You can convey the emotion of an actor on video using both visual cues (such as facial expressions) and audio cues (such as tone of voice). If the audience does not pick up on one of the cues, they may still pick up on the other, thereby understanding the emotion being portrayed. Because radio does not have this luxury, it makes it more difficult to develop programming that engages and

captivates your audience. This is because your audio alone must convey your message and also help your audience imagine the corresponding visuals in their minds.

It takes patience and practice to create compelling radio programming. Wherever possible, it is preferable that your local radio station partners develop their own programming. This may be with the support of a local NGO partner or your project staff. Although your project staff may help develop content, it is essential for long-term sustainability for your partner radio stations and local NGO partners to develop the capacity to create effective programming on their own.



Before you begin developing radio-ready scripts or recording programming, your team — including staff from partners who will be involved in content development — must define and agree on baseline quality standards that must be met. Well-defined standards will help ensure that everyone on your team is clear about what is expected in the final product. A good starting point is to define what your radio programming should

sound like to achieve your objectives. This is best done keeping in mind the following specific criteria for creating effective radio content.



With your team, determine which criteria are most appropriate. You may decide to use the above criteria or adjust it. To get the team thinking, consider identifying and playing a couple of good and bad examples of the type of programming (content) you aim to produce. Each team member will likely have different levels of experience with the desired criteria. For instance, staff from your radio station partners will have a better idea about the audio quality, whereas they may be

less familiar with criteria for effective learning outcomes.

Use the [Baseline Quality Standard Worksheet](#), found in the worksheets section of this component, to write down each of your criteria. Alternatively, recreate the worksheet directly on flipchart paper. Discuss what the team members' expectations are

for achieving a baseline in each area. In other words, what is the minimum quality threshold a program would need to meet in order for you to share it with your target audience? A sample, completed worksheet is included below as a reference.

It is possible that once your team begins creating the content, some of your baseline

SAMPLE BASELINE QUALITY WORKSHEET

Criteria	Baseline standard
Audio Quality <i>(How clear was the audio? How are sound effects and music used? How is the vocal clarity of the subjects?)</i>	All of the audio is completely audible with no distracting background noise. Sound effects and music are used in moderation and when appropriate. All of the subjects speak clearly, and in tones appropriate to the emotions being conveyed.
Story Structure <i>(Does the audio flow? Does it have a beginning, middle, and end?)</i>	Video has a beginning, middle, and end. The flow between different cuts is natural and not abrupt. The pace of the program is not too rushed, nor too drawn out.
Message Clarity <i>(Is it clear what message the program is trying to convey?)</i>	It is clear what the objectives of the program are. Message is not abstract or confusing.
Engagement <i>(Did the program capture your attention? Did it engage your thinking?)</i>	If the program was listened to by a group of 10 people, at least 8 of them would be visibly engaged in actively listening to it. It effectively enables the listener to visualize what is taking place.
Learning Outcome <i>(How well does the program achieve its desired learning objectives?)</i>	The program provides enough information to enable a listener to reasonably understand your intended learning objectives. This may be demonstrated either by action taken or knowledge gained after listening to your program.

standards will change. For example, you may find that certain assumptions about what message would motivate your audience no longer apply. It is better to recognize this and make adjustments, than to continue using baseline standards that will not enable you to achieve your objectives. Revisit your standards and update as necessary.

Agreeing on baseline quality standards will help you to determine what your team can do, who will be responsible for what, and whether outside support might be necessary. During this process, also try to identify any barriers that may prevent your local radio station partners from meeting the baseline quality standards on their own. Although your partners may be very qualified in some areas, they may be less so in others. Identifying those weakness will help you to determine what training and technical support you will need to provide them. In some cases, you may have the capacity in-house or through a local NGO partner to provide the support your radio station partners need. If not, you will need to find appropriate external support to bolster specific skills.



Who should be responsible for developing our radio programs?



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In most cases, your staff's radio experience will primarily have been as a consumer, and not a producer. Producing content for radio is different from writing print material or

storyboarding a video. It may come easier to some than others, but regardless, it will take dedication and hard work. Ideally, your local radio station partners will take the lead in the development of all radio programs with subject matter input from your project or local NGO partners. If you have someone on your project staff with prior experience writing radio scripts, recording for radio, or editing, they will likely be a valuable asset. Even if they are not available to be directly involved, make sure they can serve as a mentor to your day-to-day radio team.

The size of the team you need will depend on your plans for radio and the capacity of your radio station partners. What may be required from your project staff will depend on the capacity of staff at your partner radio stations. At a minimum, assign at least one staff person who can contribute technical content and provide feedback on program

ideas. The staff at your partner radio stations may not have a background in agriculture, so you will want to support them to ensure that they are producing accurate content. The person(s) who provides this support could be part of your project team or a staff member from one of your local partners.

Since your radio station partners might not have the capacity to collect audio from the field, project staff or local partners may have to assist with this. Whoever is responsible for recording audio in the field should know how to use the equipment to record good quality audio and be skilled at conducting interviews for radio. The number of people needed to help record audio will depend on the geographic scope of your work. If you are planning to capture audio in a limited geographic area or only when your team is out on pre-arranged field visits, then you may only need one or two people for this. If, on the



other hand, you would like to capture audio from a broader geographic area, you will need to train a larger number of individuals to help. The exact number will depend on the scope of your plans, how frequently you will need content, and how much area can be realistically covered by one person. Ideally, any individuals you train to collect audio from the field should work for local partners that would be likely to continue contributing to your radio station partner even after your project ends.

In some instances, you may decide to produce the final products and give them directly to

radio stations or other media. Although this may sometimes be necessary, consider the sustainability of such an approach. If your project staff is solely responsible for program production, then once the project ends your radio station partners will no longer have content. Also, since it is likely that your project staff are not trained in radio, programs they produce may end up sounding less engaging than those produced by partners' staff. That said, if you plan to contribute edited audio segments or programs to your partners, you will need to have at least one or two people who are trained in audio editing.

If you are working with more than one radio station, someone on your project team should be responsible for facilitating those relationships. This person should be aware of all of the programs that are being developed by each station so that possible areas of collaboration can be identified. This can be a sensitive issue, since stations may want to have complete control over their content. In cases where stations are interested in collaborating with each other and sharing content, however, this staff person can play a crucial role in facilitating those interactions.

At least one staff person should understand each step of the radio program production process. This way, your staff person will be able to accurately communicate with partners about technical elements of the process and also provide any technical assistance that may be necessary.

Encourage your radio station partners to make at least two staff responsible for developing your programs. Having more than one person who is familiar with developing radio programming for your target audience is beneficial for three reasons:

1. Staff will be able to test ideas on each other, which will likely result in a better end product.
2. They can split time worked on each radio program so that they can continue to fulfill their other duties.
3. If one leaves the radio station, the station will not need to worry about all of its capacity in this area disappearing.

In the event that your staff or local partners plan to create content to share

with radio stations, you may want to ask them to start small, creating 15- or 30-second radio spots, for example. As they get better, challenge them to create longer spots or to experiment with additional techniques. It is advisable that they work with your radio station partners on this so they are able to tap into their technical expertise, as well as ensure that whatever they are producing is consistent with the station's needs. You may also consider looking for local radio associations or international organizations with expertise in radio that may be able to provide your team with any additional technical assistance and training required.

Content accuracy

Choose members of your interactive radio team to verify the accuracy of the content in each script. Although your project and local NGO partner staff will likely have a background in subject matter you are promoting, they will not be experts on every topic you plan to feature. Moreover, it is likely that partner radio station staff have no background in that subject matter.

Identify experts who can help confirm the content's accuracy. Begin with your staff; if there are no subject matter experts on staff, find external experts or resources. An easy way to organize your search is to draw up a list that records each name, topic of expertise, and contact information. The list of experts may include local-, regional-, and national-level experts. See the template entitled [Expert Contact List](#) included at the end of this component. The contact list template also has a section for "additional information" where you can enter helpful notes, such as "needs at least two weeks to respond to requests," "requires payment," or "not available more than once a month."

Define how you will work with the topic experts, including what you expect in terms of information validation and response time

and how you will contact them. For external experts, determine whether they will be compensated for their time. Also, decide who will be responsible for contacting these experts. In most cases, it is preferable to have whatever party will ultimately be responsible for creating the content contact the experts directly. Also consider introducing a two-tier system where stations contact your project staff or local NGO partner staff first for fact checking. If there are still questions at that point, the issue should be sent to an external expert for review. Whatever system you establish, make sure that it can be sustained beyond the life of your project.

Consider developing a checklist to facilitate confirming the accuracy of each of your scripts. A sample follows.

Task	Who is responsible	Completion date	Notes
Research proposed topic of radio script.			
Consult with topical area expert to confirm the accuracy of the content/ process you plan to highlight.			
Develop script based on expert input			
Share script for feedback with <input type="checkbox"/> topic expert <input type="checkbox"/> field officers <input type="checkbox"/> local partners			
Revise script as necessary based on expert feedback.			
Test/audition script with representatives of target audience.			

Who should be featured in our radio programs?



After determining what staff will be responsible for producing the programming, the team needs to decide who will be featured. This will depend on the content and radio format of each program you will create. Your programs may include your staff or topic area experts who conduct interviews or share their own experiences.

It is critical to engage individuals from your target audience in all stages of the content production process. Often, target audiences are more likely to trust others like themselves who have similar experiences. They may have already heard about a practice or technology that your program is promoting, but often will want to hear from someone like them who is already having positive experiences. Your programs could include stories from people in your target audience, including challenges they faced beforehand, how the change in practice

or technology helped, and what downsides others should be aware of.

Involving target audience members in your programming can both empower the individuals profiled and increase local engagement in your activity. It may also increase the chances of sustaining your activity beyond your project, since individuals who participated in the process will likely feel a sense of ownership over the content and its validity. In fact, research conducted by Farm Radio International under the African Farm Radio Research Initiative found that farmers who were “engaged in the design and development of farm radio programming were almost 50 percent more likely to take up agricultural practices deemed to improve their food security than passive listeners.”¹

¹Perkins, K., Ward, D., & Leclair, M. “Participatory Radio Campaigns and food security: How radio can help farmers make informed decisions.” (Farm Radio International, 2011) [Accessed on 6/26/12 at:<http://www.farmradio.org/pubs/farmradio-prcreport2011.pdf>]

Although the focus of their research was on farmers and agricultural practices, it is not a stretch to think that the same may apply to other types of information as well.

In many countries, radio programs — especially those produced at the national level — traditionally provided more of a voice to experts, government officials, and other white collar professionals. The power of radio, and in particular interactive radio, is that it allows farmers to be heard. By including average citizens at the center of your programs, you are helping to give them this voice, while at the same time achieving your objectives.

When selecting participants, make sure that you tap a diverse cast of subjects across your different programs, looking at gender, background, expertise, social status, and so on. Over time, this will help ensure that your pool of programs appeals to a more diverse audience. Be sure to check the local reputations of anyone you plan to include in your programs. If an individual you feature in your program has a poor reputation

Likelihood of taking up agricultural practices deemed to improve their food security



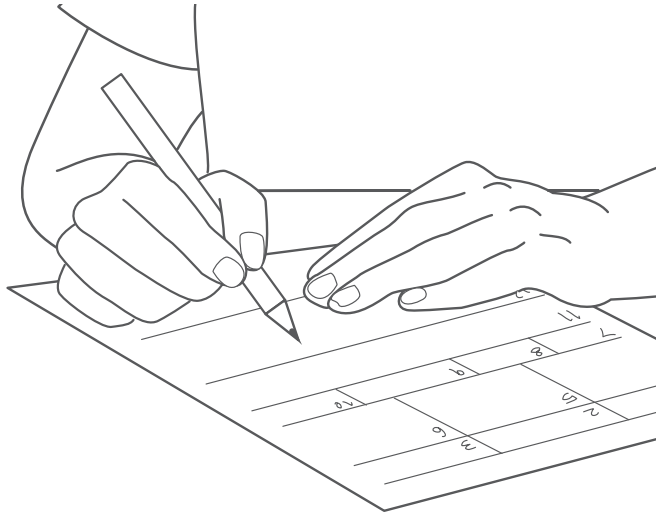
among your target audience, the message may not be trusted and followed even if it could be useful.

Since radio relies entirely on audio, it is crucial that whoever is selected to speak has a good voice for radio. You may find a very knowledgeable expert or successful community member who just is not the right fit for radio. Expressing one's emotions without relying on facial expressions or hand gestures can be difficult for many. Someone who has difficulty conveying emotion vocally, speaks in a monotone voice, or has a speech pattern or accent that is difficult to follow should not be used for radio unless you have time to effectively coach them. One way of getting around this, especially if their perspective would add to the value of your

program, is to consider having someone else paraphrase what was said so you can still use the essence of the content.

Consent forms

When asking individuals for their permission to be recorded for your program, explain why you want them to participate, exactly how the audio recording will be used, and how widely you expect it to be broadcast. The purpose of securing their informed consent is to build trust and understanding as well as avoid doing harm, damaging reputations, invading personal privacy and incurring libel and copyright problems. This is particularly important when approaching anyone who has never been recorded.



Create a basic consent form all individuals — or their parents, in the case of minors — who are being recorded can sign. An example consent form follows:

Another approach, is to record consent via audio instead of using written release forms. You can do this by recording a member of your staff explaining why you are recording the individual and how it will be used. If you use audio consent, make sure that you save all of the audio consent clips both on your computer and backed up on an external device or online.

Audio Recording Consent Form

Project Name: _____

By signing this form, I agree to allow [your name] of [your institution] (the Producer) and/or its designees to record my voice and use the audio recording for radio broadcast. I have been informed and understand that the Producer is creating a program(s) to be aired on radio and other formats, and that my name, voice or story is being recorded as part of the production.

I understand that this audio recording may be used without restriction. This includes, without limitation, the right to edit, mix, or duplicate, and to use or reuse this recording in whole or in part, as the Producer may desire.

I understand that I will not receive payment or other compensation for use of this material. I understand that the Producer will own the recording.

I certify this form has been fully explained to me. I have read it or have had it read to me, and I understand its contents.

(Print/Name of Person Recorded) Child Under 18

(Signature) Parent/Guardian Literate Witness (Date)

What is required to create effective radio programming?

Although this toolkit aims to provide you with the basic knowledge needed to create effective radio programming, it is not a comprehensive guide to radio production. This section is divided into the technical elements of pre-produced programs, which includes developing content, recording audio, and editing a final product.

Perhaps the most important prerequisite to creating compelling programming, is working effectively with quality radio station partners. If your objectives are aligned and you collaborate well, your programs will likely see the benefit. If, on the other hand, you have different objectives and difficulty cooperating, the programs produced will likely fall short of their goal.

To learn more about radio production, quality technical training manuals, and curricula on radio content creation, consult the following resources.

Farm Radio International



(<http://www.farmradio.org/english/partners/resources/creating-content.asp>)

B-Side Radio



(<http://www.bsideradio.org/?cat=47>)

FAO Rural Radio



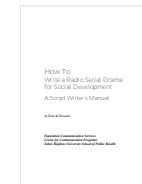
(<http://www.fao.org/sd/ruralradio/en/24519/index.html>)

The Association of Independents in Radio's Radio College



(<http://airmedia.org/PageInfo.php?PageID=3>)

How to Write a Radio Serial Drama for Social Development: A Script Writer's Manual



(<http://airmedia.org/PageInfo.php?PageID=3>)

Spot on Malaria: Facilitator's Manual for Workshops on Adapting, Developing and Productin Effective Radio Spots



(http://pdf.usaid.gov/pdf_docs/PNADH342.pdf)

Content

Before you begin creating radio programming, your team needs to decide what type of content it aims to broadcast.

The following will be most useful for projects that are planning to develop programs with an informational or awareness-raising focus. Beyond the creation of the content itself, you should develop a communication protocol through which scheduling and production information will be shared with the station. Stations need to be able to know that they will receive content on a reliable schedule so that they can plan their broadcasts accordingly.



Getting Started: Creative Brief

A script is the backbone of any radio program. A well-written script will make it much easier for your team to record an engaging radio program. Before you start writing, your team should develop the general messaging for each program you plan to produce. This will enable you to create a basic blueprint for each program that you can share with your team, partners, and any other stakeholders in advance of creating your script. It is important to capture these ideas in writing so that they can be shared.



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One such way to do so is by using what is called a creative brief, such as the one below. A creative brief is a tool that guides you through several questions about your proposed radio program to help outline your messaging and objectives. It can be used to propose completely new content or to help outline your plans for adapting content.

A creative brief helps:

1. Connect objectives with creative strategies
2. Build consensus
3. Align expectations
4. Define clear, measurable goals
5. Enforce structured thinking and discipline.

It helps you clarify who your target audience is, what your learning objectives are, and what your general program idea is before

you begin writing a word of your script. The upfront investment saves time in the long run, since you will likely be more focused on the end goal of each program before you start your script, as opposed to figuring this out along the way. You can use the Creative Brief Template in the worksheet section of this component to help with this process.

Once you finish a creative brief, share it and get feedback from relevant stakeholders or partners. In some cases, your radio station partners might develop creative briefs on their own to share with your project team for technical input, although in most cases this is unlikely unless you first introduce the practice to them. A creative brief may also be used to pitch ideas to radio stations. The brief is a rough sketch of the proposed program. Do not get bogged down in the minutia of your creative brief or you will never begin writing a script. Adjust the creative brief based on feedback, but once there is agreement on the overall messaging and objectives, start writing and save the thorough editing for the script.

Creative Brief

Proposed topic:	Promoting local livelihoods through ecotourism
Proposed duration:	Three minutes
Prepared by:	Carlos Belaunde
1. Target audience(s). Who are we talking to? (The more precise and detailed the better.) What should we keep in mind about this audience?	Men ages 15–35 who live on the outskirts of the national park, many of whom are engaged in illegal logging Female relatives of target male audience engaged in subsistence agriculture
2. What are we trying to achieve? (Learning Objective[s])	<ul style="list-style-type: none"> » Increase awareness of the negative consequences, that is the harm done by illegal logging (deforestation, flooding, food sources — animal and plant — disappear) » Build awareness of alternative livelihoods to illegal logging, especially ecotourism » Increase awareness of alternative fuel(s) to wood » Reassure target audience that ecotourism is real, supported by regional and national efforts
3. What are we trying to say? (Key message[s]) What's in it for the target audience if we achieve our objective(s)? (Benefits) What are the barriers—the target audience's beliefs, cultural practices, misinformation, perceptions — to achieving our objectives? (Obstacles) Why do the benefits outweigh the obstacles? How can we support these statements? (Reasons)	<p>Benefits: Alternative fuel is better for health. Ecotourism is a more long-term solution to earning a living than logging.</p> <p>Obstacles: Traditional practices. Need for immediate income and fuel for cooking.</p> <p>Reasons to change: Preserve way of life, including forest as a source of food.</p>
4. Program summary. What will the program be about? What type of format will it use? Who will be featured? What will the general tone be?	We will tell a real success story of a man who was able to improve his income by engaging with the ecotourism industry instead of participating in illegal logging. It will include interviews with him, a re-enactment of how he used to earn his livelihood, along with expert commentary about why conservation is important to long-term livelihood opportunities. The tone will be serious, although it will be positive and optimistic, rather than judgmental.
5. Rationale. How will this program help achieve our learning objectives?	We are already providing training to community members around the importance of conservation and ways they can earn a livelihood through the ecotourism industry. This radio program will reinforce that messaging in a way that they can relate to by sharing a real success story of someone like them.
6. Creative considerations. What about language, format, literacy levels? Anything required?	The target audience speaks a local dialect of Luganda. Literacy level is low in this rural area, so vocabulary should be very basic. Men take radios to the forest with them during the day. If we want to reach women as well, we should consider broadcasting in the evening when they have access to the radio. Program should be broadcast through our local radio partners in the areas surrounding the national park. It can also be played during community visits via MP3.
7. What resources are needed?	<p>Tasks:</p> <p>Personnel:</p> <p>Budget:</p> <p>Deadline:</p>

Adapted from *Spot On Malaria: A Guide to Adapting, Creating and Producing Effective Radio Spots*, written by Cate Cowan and Lonna Shafritz, (Washington, DC: CHANGE Project, 2005)

Script writing






While writing your script, periodically read it aloud to make sure that the dialogue sounds natural.

Use the creative brief to begin the process of developing a complete script. As stated earlier, writing for radio is unlike other types of writing because the words are meant to be read aloud. That is, we are writing for the ear and not for the eye, our dominant sense. This applies whether you are writing your script from scratch or adapting other material for radio.

When developing scripts, consider following the “Seven Cs of Effective Communication.” This tool is used by radio broadcasters and other communication professionals to ensure they engage their target audiences. Below is an adaptation of the Seven Cs as used by Farm Radio International.

	<p>Command attention: Your program should command the attention of your listeners by using formats, topics, and information that will appeal to them. It should also be fresh and relevant to your audience so that it piques their interest. It should also enable listeners to imagine the scenes, so that they feel as if they have been transported into the program.</p>
	<p>Cater to the heart and head: Connect to your audience on both an intellectual and emotional levels. Your listeners should understand why the content you are presenting is important, but also feel something after they listen. By emotionally connecting with your listeners, you will likely increase their ability to remember the intellectual pitch you are making.</p>
	<p>Clarify your message: Unlike written content, which can be read and re-read to understand, your audience will likely not have a chance to immediately replay your program — although there are some tools for doing this that we will talk about later. For this reason it is very important that your message is clear enough to be understood from just one listen. There are a few different ways that you can do this:</p> <ul style="list-style-type: none"> » Be natural - Write in the same way that you would speak. Avoid being overly formal. » Repeat key messages - You should repeat your key messages at least twice, if not three times, during your radio program to ensure they are picked up on by your listeners. » Be direct and concise - Use the active voice and clearly link your subject to your verb.
<p> Bad: Broad beans and maize are the main crops grown by farmers in this village.</p>	<p> Bad: Maria Lon, who is a nurse at the Chimoio health clinic, says that cholera is on the rise.</p>
<p> Good: Farmers in this village mainly grow broad beans and maize.</p>	<p> Good: Chimoio health clinic nurse Maria Lon says that cholera is on the rise this year.</p>
<p>» Help the listener visualize - Your audience cannot see what is happening, so make sure to help them visualize each scene. You can do this by adding sound effects (such as birds chirping to represent being outdoors) or mentioning actions in your dialogue (such as having one character say “Emanuel, why did you run here?” to let us know he ran).</p>	
	<p>Communicate a benefit: Given that many people that we work with in development are of limited financial means, they can sometimes be risk averse to trying new things that require some degree of investment unless they see clear benefit of change. Make sure that your script demonstrates tangible benefit from whatever you are trying to promote either through real-life testimonials or realistic dramatizations.</p>

	<p>Create trust: Try to use individuals who are already known and trusted — or hold known and trusted positions — by your target audience. Communicating an accurate message that leads to concrete benefits is another way to build audience trust over time. Conversely, it is very easy to lose the trust of your audience by providing them with inaccurate information. Make sure that you always fact check your script for accuracy before finalizing it.</p>
	<p>Call to action: Your program should not only make people want to listen, but it should also encourage them to take some action consistent with your learning objective. By the end of the program they should know where to go for additional information or how to try something on their own.</p>
	<p>Convey a consistent message: This refers to your messaging over time. Make sure that you are not presenting confusing or contradictory messages in your different scripts. In other words, do not promote the use of chemical pesticides in one script and then praise the benefits of organic farming in other. Also make sure that your messaging is consistent with the mandate of your local radio station partners.</p>

In addition to these general rules, consider several other factors when writing your script, most of which will depend on the channels you plan to use. On radio, your program will either be announced or produced. Announced refers to content that is read live on the air by the station's DJ or announcer, while produced refers to pre-recorded programs that are played by the radio station. Each radio station will have its own protocol for how they prefer to present content.

Contributing your own scripts

It is preferable to have staff at each station be responsible for developing scripts to ensure long-term sustainability. In some instances — particularly early on in your partnership — your project staff may play a larger role in developing scripts.

If your project staff plan to develop script ideas to share with local radio stations, you

should make sure to use whatever script format the station uses to eliminate any potential confusion. This could entail simply providing a brief printed page to be read on-air by the announcer, or it could include directions for including actualities (or sound bites), which are recorded audio clips that should be played at a specific point in the program.

Consider how long your proposed program will be. This will depend on the amount of air time available at each radio station. The shortest option is often referred to as a spot. These are most commonly used for public service announcements (PSAs) and other types of awareness messages. Radio spots typically run from 15 seconds to one minute. A micro-program, slightly longer than a radio spot, tends to last from one to three minutes. Then, there are standard length radio programs that can run anywhere from 3 to 15 minutes.

A NOTE ON TIMING



Most people speak about three words per second, so keep that in mind when writing your scripts. Counting out your words can be a good way to assess the likely duration of your script

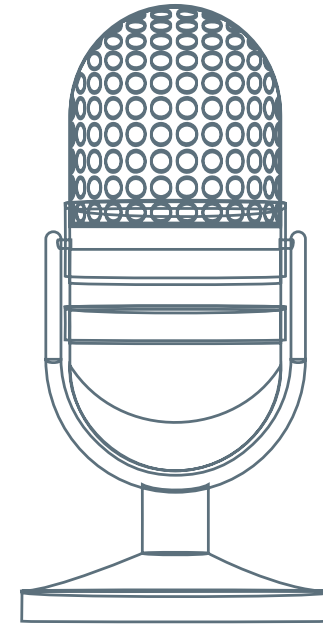
Formats

Below are nine of the most common radio formats:

1. **SPOTS** are programs of 15 to 60 seconds in length. They are the simplest and most economical type of radio content to develop, produce and place/distribute.
2. **SKITS** include the use of a variety of different storytelling genres to convey a message, such as drama, soap operas, comedy, mystery, and so on. They can be either a reenactment of an actual event or a fictional representation. This type of format is often extremely popular, although writing a script for an engaging skit is generally more difficult than other formats. Skits can be micro-programs that is from one minute to three minutes in length or longer from five minutes to an hour.
3. **INTERVIEWS** are a question-and-answer format used between a radio announcer and guest. These can be done either

live at the radio station, remotely via phone, or pre-recorded at another location. Questions for the announcer should be scripted in advance, including potential follow-up questions, depending on the responses of the guest.

4. **PANELS** are facilitated discussions led by an announcer and a panel of guests. These can be done live at the radio station or pre-recorded elsewhere. It is not advisable to conduct a panel remotely via phone since panelists will not be able to read visual cues from each other, which can lead to awkward pauses and people speaking over each other. Scripting for a panel is similar to that for interviews.
5. **DOCUMENTARIES** provide a nonfictional, real-life account of a topic. These can often be powerful devices for communicating the real impact of something, especially on topics to which your audience can relate. Documentaries cannot be fully scripted in advance,



although you can prepare scripts for narration and guiding questions to be used by your interviewer.

6. **INFOTAINMENT** presents factual information in a way that aims to be entertaining. It is best understood as incorporating the entertaining elements of skits together with the factual — and often more serious — content of a documentary or news show. Infotainment programs can be fully scripted in advance, although striking the right balance between information and entertainment requires some practice.

7. GAME SHOWS provide listeners with the chance to compete to win prizes. On radio, they are normally built around a quiz or puzzle. They can be done live at the radio station or remotely via phone, either live or on delay — such as asking listeners to SMS their responses to a question on one day and then announcing the winner the following day. Like interviews and panels, announcer portions of the program can be scripted.

8. REALITY SHOWS are fairly new to radio, despite their presence on television. One example is Farm Radio International's pilot program called FarmQuest, which will showcase six to eight young people competing to win 'best new farm'. Their stories will be recorded and broadcast as a serial radio program, and listeners will vote by mobile phone to select the show's winner. These cannot really be scripted in advance, but you will still want to weave the content you record into a cohesive story.

9. STRAIGHT TALK entails an announcer — it is generally just one person, but can be more than one announcer — speaking directly to the audience, often in freeform on a topic or series of topics. It is very difficult to script straight talk, although you can provide announcers with general themes or points that you would like to be made.

Choosing the best format to achieve your objectives will depend on three things: your partner radio station, your target audience and your rationale. Different learning objectives may lend themselves to one format over another. Foremost, consider what formats are compatible with the radio stations you are working with, along with what has the best likelihood of engaging your audience and communicating your message.

Each of the formats may be used to produce a one-off, self-contained program or it may be part of a series. A series includes multiple programs that are linked across a common



theme and broadcast over multiple days, weeks, or months. A number of stations also use a magazine format to package their programming. This format includes several different programs centered on a general theme within an established time slot. Although lengths of magazine shows vary, they tend to be between 15 minutes and one hour.

If you are working with multiple radio stations it is possible that some of them will have distinct preferences as to what type of format and length of program interests them. Keep this in mind as your project staff plans to develop scripts. You may split a single program into a series or create two versions of the same program with different lengths to meet the needs of different partner stations.



A radio script is a map that makes sense of the information you have gathered and guides the listener to a specific destination (your message). A radio script usually uses standard layout and is characterized by three basic elements: actions, dialogue, and speakers' names. It typically also contains the program title, duration, writer, and cues or instructions for the actors or presenters and audio editors. Cues are written inside of parentheses and in capital letters to distinguish them from dialogue. A radio script is double spaced to make it easier to read.

A [Radio Script Template](#), included in the worksheet section, is provided as an illustrative example. Although your team's scripts will probably end up following the format used by each radio station partner.

Sometimes less is more when it comes to scripts. Often people who are reading a script word for word end up sounding stilted, especially for certain types of formats, especially if presented live — panels, interviews, talk. Rather than writing a detailed script for these formats, you may prefer to develop a storyboard with specific message



For a helpful guide to writing a radio script, check out this [presentation](#).

points, or script the opening and closing to guide the participants and foster a more natural conversation.

For formats such as drama, comedy, and spots that rely on a detailed script, the dialogue provided can and should be modified by the voice actors/presenters to ensure the delivery sounds natural. To facilitate broadcast of a recorded program, provide an introduction — or lead in — for the radio announcer to read before playing.

Do not write scripts according to an exact formula. If all of your programs follow the same format, the same story structure, the same pace and sound, your audience will lose interest over time. Most people find it difficult to listen to radio content that is completely interchangeable. Variety can help engage the audience and increase the likelihood that you achieve your learning objectives.

A sample script might look something like this:

Sample Script

Title:	Isabel's brush with tragedy
Learning objective:	Listeners will know how to properly apply pesticides using personal protective equipment
Duration:	3'30"
Written by/date:	Enrique Massa/ 05.05.2014
Suggested announcer/DJ introduction:	
Up next is the latest segment from True Farm Stories. You won't want to miss this one. Poor Isabel has had a rough life, but finally things are about to get better. Or are they? Remember to send us your thoughts and questions by SMS to 39555 while you listen. We will be reading out and responding to questions after the story is over.	
Sfx:	AMBIENT SOUNDS FROM A FARM, FOLLOWED BY SOUND OF SPRAYING PESTICIDE
Music:	TRADITIONAL SONG (10 SECONDS THEN FADE UNDER SFX)
Narrator:	The following is a true story about a woman named Isabel. For many years she has struggled to make enough money on her small plot to support her family. In recent years her crops have been plagued by beetles. This year is going to be different though. This was the first year she has been able to purchase pesticides for her crops and she is excited about what will surely be a good year.
Isabel:	I'm glad that I bought pesticide this year. This year should be a good harvest.
Tommy:	(FROM AFAR) Mom, I'm back from school. Can I have a snack?
Isabel:	Of course, Tommy. Come over here, you can have some of this bread. Let me tear you off a piece.
Sfx:	SOUND OF ISABEL SETTING DOWN SPRAYER. TEARING BREAD.
Tommy:	Thanks, Mom. When will dinner be ready?
Isabel:	Let me finish up spraying our field first. Then I will come set dinner.
Tommy:	Okay, mom. I will wait for you at home. Bye!
Sfx:	SOUND OF SPRAYING PESTICIDE
Narrator:	What started out as a happy moment for Isabel will soon turn scary as she returns home to find Tommy lying on the bed clutching his stomach.
Isabel	(FRANTIC) Tommy! Are you okay? What is wrong?
Tommy:	(WEAKENED VOICE) I'm not sure mom. I have a terrible pain in my stomach
Isabel:	(SHOUTING) Maria! Tommy is sick. Please get help! Hurry!!
Narrator:	Poor little Tommy. Things did not need to turn out this way, if only Isabel had correctly applied her pesticides. Dr. Festus Mitchell from Extension University has seen it all too often, but he tells us the solution is easier than you may think.
The following section should be used when you are inserting pre-recorded audio.	
Audio Insert Name:	EXPERT INTERVIEW
IN WORDS:	What most people do not...
OUT WORDS:	... it's that simple.

Pre-Testing

Consider writing several different scripts that convey the same message but in different formats and lengths. Record them simply to play back as demonstrations or demos. Share these demos with a small, but representative, sample of your target audience to gauge their impressions. You can also use a pre-test to check whether or not your message is connecting with your audience. Pre-tests are a great way to check the potential effectiveness of your ideas before you spend too much time and money fully developing them. They can be conducted through a structured focus group or less formally during visits or events by sharing them with the communities with whom you work. Determine who will be responsible for pre-testing if your radio station partners do not have the capacity to carry out pre-tests on their own.



The [Spot On Malaria Guide to Adapting, Developing and Producing Effective Radio Spots](#) has an entire section dedicated to pre-testing and is a great resource. Some of the questions included in this toolkit have been adapted from that guide.

Sample Pre-Test Questions

FOR COMPARING RADIO FORMATS

- What type of radio programming do you normally listen to?
- Of the formats presented, which do you think you would enjoy most? Why?
- Of the formats presented, which are you least likely to listen to? Why?
- Are there any formats that you would definitely not listen to? Why?

FOR CHECKING MESSAGE EFFECTIVENESS, ASK ABOUT THESE FIVE AREAS:

- **Acceptability:** Is anything in the message offensive? Is there anything that people perceive to be false and unrealistic? Which spot is the most acceptable and believable?
- **Comprehension:** Do people understand the main message? If there is a call to action, do people understand what it is? Is the language appropriate? What words can make the message clearer? Which brief/script is most clearly understood?
- **Personal relevance:** Does your target audience perceive that this brief/script is talking to them or to others? If there is a call to action, is it something they can do? Which brief/script is perceived to be the most relevant?
- **Attraction:** Is the brief/script interesting enough to attract and hold their attention? Do people like it? Which brief/script attracts the most attention and is best liked?
- **Persuasion:** Does the message persuade the audience to act differently? Does the audience hear the advantage or benefit to trying whatever you are promoting? Which brief/script might best convince them?

Even informal pre-testing will help you gauge what the target audience likes and the effectiveness of your messaging. Pre-testing will save you from completing a program only to find out that it does not connect with or is not understood by your audience. Based on their feedback, you can revise the creative brief and script so they align with your audience's needs. Of course, a pre-test is no guarantee that your target audience will like your final product, but it will certainly increase the odds.



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Suggestions for lowering the barriers to entry

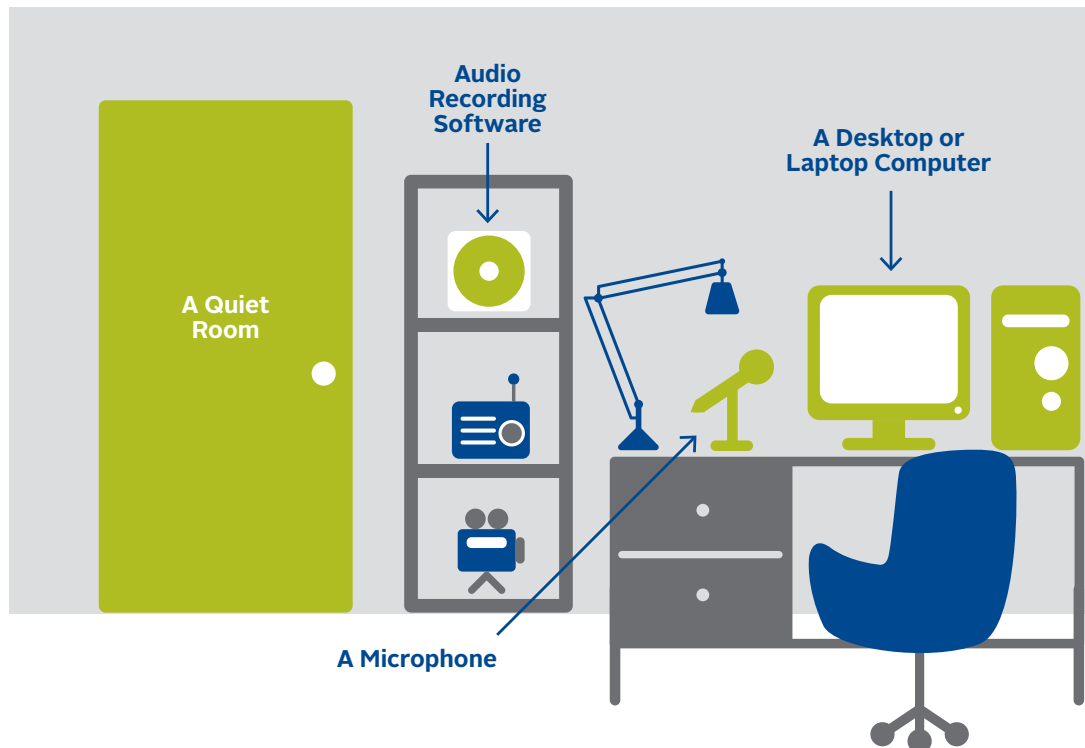
Some of your partner radio stations may not have experience developing agricultural programming, while your project staff may have no experience in script writing at all. You may consider introducing small incentives, such as a monthly 'most popular script' or 'best peer-reviewed script' award to recognize the work of staff at your partner stations or any project staff who have contributed to script development. This could be as simple as providing winners with a certificate or small prize.



Recording

Recording audio for your radio program can be broken out into two types of recordings: studio and field. Studio recordings are audio that you record directly into a computer in either a studio or a quiet office.

Field recordings are those that you record while you are out in the field using an audio recording device. The process for recording either in the studio or in the field is different, although they both rely on similar principles.



Studio recording

In most cases, audio to be recorded in the studio should be done by your radio station partners at their facilities. If you need to record audio elsewhere, such as in your office or that of a local NGO partner, you will need an appropriate setup. Do not worry if you do not have access to professional equipment, because on a modest budget you can set up a do-it-yourself recording studio. To get started, you will need the following:

- a quiet room
- a desktop or laptop computer
- a microphone
- audio recording software

A quiet room may be the most difficult to locate. You probably work in an office with colleagues and also hear sounds that find their way from the street into your office.

First, try to identify a room you can use that is least exposed to outside sound. This could be an internal room without windows



TIPS FOR REDUCING NOISE

- Stuff cloth under the door to create a seal.
- Apply weather stripping to your window and door frames.
- Hang up heavy curtains over the windows.
- Seal any cracks or holes in your walls.
- Place a carpet on the floor.
- Turn off other appliances (such as air conditioning).
- Place your microphone away from your computer so it does not pick up noise from the computer.

or a room that is located on a quieter side of the building. Last, but not least, make sure that your colleagues are aware you plan to record so they can make a concerted effort to be quieter than normal and to try to avoid doing anything in the space around your recording room.

Since audio recording is not particularly resource heavy, you should be able to use most types of desktop or laptop computers available in your office. Many computers have an embedded sound card on their motherboard. Although this type of on-board sound can be sufficient, you may want to invest in installing a separate, higher quality sound card. When purchasing a sound card, look for a sound card with a 192kHz sampling rate, 24-bit resolution, and a signal-to-noise ratio (SNR) of at least 95dB. If you are unsure if your computer's sound card can offer sufficient quality, record a sample and share it with your radio station partners. They will be able to tell you if your recording meets their minimum sound quality standards.



If you do decide to purchase a sound card, TopTenREVIEWS provides a good breakdown of the top ten rated consumer sound cards on their [website](#).



Invest in a good quality microphone for your recording. Since you will be recording the voice of your subjects, you will most likely want to purchase a unidirectional microphone. Unidirectional microphones primarily record sound directly in front of them, thus reducing the level of background noise picked up. If you plan to record more than one person at a time, consider buying a desktop microphone. This type of microphone sits on your desk and can be shared more easily than a headset microphone, which is worn on one's head. Also consider purchasing a pop filter (or pop shield). This device is placed in front of your microphone to help reduce the popping noise that often occurs when recording spoken sound. If you cannot find an affordable pop filter locally, you can create your own using an embroidery hoop and nylon stockings.

In addition, you will also need audio recording software. Adobe Precision is a high-quality audio recording and editing program that retails for around USD \$325. If you want to test it before purchasing, Adobe offers free trial versions on its [website](#). An alternative to Adobe Precision is a free, open-source program called Audacity. It has all of the functionality that you will need to record and edit audio and is fairly intuitive to use. It can be downloaded at <http://audacity.sourceforge.net/>. You can download a guide covering the basics of audio recording and editing in Audacity [here](#). The website wikiHow also offers a guide on [How to Get Higher Audio Quality when Using Audacity](#), which is worth checking out before you get started.

Recording Interviews over the Phone

There are several options for recording phone conversations using a smartphone, a landline, or a computer, which will provide radio or podcast-quality audio. All require use of an app, adaptor, and/or other device to facilitate recording. Keep in mind that

legal requirements for recording telephone conversations and the consent required vary between countries, so make sure you are

aware of any local laws governing this before recording any interviews on the phone.

NINE TIPS FOR BETTER PHONE INTERVIEWS

1. Before calling, research the subject and jot down a few key questions as a script to prompt you.
2. State clearly who you are and why you are calling.
3. Ask whether it is a convenient time to talk. If the interviewee says “no,” inquire about a better time.
4. Always remind the interviewee you are recording the conversation and ask for permission.
5. Establish a rapport by chitchatting a little with your interviewee. Comment on the weather or some neutral subject. Do not abruptly launch into your questions.
6. Listen carefully. Be open and alert to the unexpected or surprising.
7. Do not try to be clever. The interview is not about making you look and sound good.
8. Be polite. Thank the interviewee for his or her time.
9. Take notes, even though you are recording the interview. Don't try to write every word said. Just write down the highlights.

Three low-cost ways to record over the phone involve:

- Using a telephone-to-PC adapter that connects both your landline headset and your computer to record the conversation.
- Using an earbud and microphone that plug directly into your digital recording device or computer and pick up both your audio and that of the person on the phone.
- Using a smartphone app for recording directly onto your phone.



When using a telephone recording device, always do a test call first to make sure that all is functioning properly. The last thing you want is to have completed an interview only to find that none of it was recorded.

The Science Writer's Handbook's article [Six essentials for recording phone interviews](#) has some additional tips for recording telephone interviews that might also be helpful for you.

Field Recording

Recording in the field is a great way to collect stories from communities and other practitioners with which you work. These recordings will often sound more authentic than studio recordings, because they include actual ambient sounds from wherever you are recording. For field recordings, you will need an audio recording device. Since you will be editing the audio on your computer, we recommend using a digital recording device. These can be found as standalone devices or integrated into other devices (such as MP3 players or mobile phones). If you plan to do a lot of recording

outside, you should also consider purchasing a windscreen for your microphone or audio recorder (if the microphone is built into the device) to help reduce wind sound.

When recording in the field, it is always a good idea to fully charge your device's batteries beforehand. If your device has removable batteries, consider purchasing a backup set of batteries to take with you.

INTERVIEWING

A good interview is like a conversation. If you are planning to interview someone in the field, remember to take the following steps to ensure that your subject is prepared and that you are able to capture useful content:

- Let the interviewee know in advance when you will be arriving and what to expect.
- Prepare your questions in advance and share them with at least one colleague to ensure that they are clear.
- Structure your questions in a way that allows for an open-ended, but guided response.

The most important thing is to listen and have your questions come naturally. If your questions are rehearsed and hollow, the answers will be too. If you are curious and your questions are spontaneous and honest, you will get a good interview.

For example, if you want to learn what someone thinks about the impact of family planning, phrase the question in a way that guides the individual to respond on that point. Rather than asking “What are your feelings about family planning?” ask, “What impact do you think family planning will have on society?” The second question guides the individual to respond to the specific topic you are interested in, whereas the first question could result in their responding to any number of issues associated with family planning. It is also important to avoid asking leading questions, such as “Family planning has the potential to transform our society, don’t you agree?” If there is a chance that the individual might not be familiar with what you are asking about, ask them beforehand, “What does ___ (term) mean to you?” This is important because if they do not fully understand the question you pose, they will not be able to

respond honestly and openly and in a way that captures their actual feelings.

Also, identify a location for the interview that is comfortable and has limited amounts of background noise. There is no problem recording some background noise, but if

there is too much noise it can distract from what is being said. By selecting a comfortable location for the interview, you can also increase the likelihood that the person you are interviewing is focused on the questions you are asking. Do not be surprised if at the beginning of an interview people are stiff and



INTERVIEW TIPS

The following text is quoted from Chip Scanlan’s article on Poynter.org [*How journalists can become better interviewers*](#):

The best questions are open-ended. They begin with “How?” “What?” “Where?” “When?” “Why?” They’re conversation starters and encourage expansive answers that produce an abundance of information needed to produce a complete and accurate story.

Closed-ended questions are more limited but they have an important purpose. Ask them when you need a direct answer: Did you embezzle the company’s money? Closed-ended questions put people on the record.

The worst are conversation stoppers, such as double-barreled (even tripled-barreled) questions. “Why did the campus police use pepper spray on student protesters? Did you give the order?” Double-barreled questions give the subject a choice that allows them to avoid the question they want to ignore and choose the less difficult one.

Craft questions in advance to ensure you ask ones that start conversations rather than halt them in their tracks. Stick to the script, and always ask one question at a time. Don’t be afraid to edit yourself. More than once, I’ve stopped myself in the middle of a double-barreled question and said, “That’s a terrible question. Let me put it another way.”

self-conscious. After a while, when they feel more at ease, they usually relax and forget about being recorded and start to be themselves.

You will not be able to plan all of the interviews you conduct. For instance, you may be in the field for other purposes and discover an interesting story you would like to record. Then, try your best to develop specific questions on the spot. Try using follow-up questions to illicit responses that are particularly relevant to the topic you are covering. You may also tell the individual what you are interested in learning more about and encourage him or her to address it.

Being in the field provides a great opportunity to collect sound effects and other ambient noises you may use for your final programs. Always make sure to record for longer than you think you will need. It is better to have too much than to have too little and be forced to loop your sounds. Keep a database of all of your sound effects and ambient noises using an easy-to-understand naming convention so that you do not have to record new versions of the same sound each time. There are also a number of online databases that offer free or cheap sound effects and ambient noises. Just search around.



KEEPING TRACK

When you record in the field, you may find it easier to create new audio clips for each question and answer. You can then use a notepad to write out a few words about each audio clip. This will make it easier for you to manage your audio clips once you are back in the office.

Suggestions for lowering the barriers to entry

Your radio station partners will already have sufficient experience recording audio. If your project or local NGO partner staff will be recording audio segments on behalf of your partner stations, however, they will likely need some support. Provide staff with appropriate training on how to use the equipment and engage with interviewees. The more experience your team has with recording audio both in the studio and in the field, the more comfortable they will become—and the better quality they will be able to produce. You may also consider creating video tutorials on the different elements of the recording process that your team can use as an illustrative guide. Finally, as with script writing, consider exploring ways to promote positive competition and recognition for high-quality work.

Editing

Editing audio can be a time-consuming process, but digital recordings and computer editing software make the process much easier than it was in the days of the tape. These advances have made it possible to produce audio recordings without weeks or months of training. Rather than discussing any particular editing software, this section will focus on demystifying the process. For the most part, the production team at your partner stations should be responsible for any



final editing. That said, there may be instances where your project or local NGO partner staff will want to edit audio segments that they record, such as field-based interviews.

Logging clips

The first step to editing is logging your recordings. Because you have likely recorded much more audio than you will end up using, logging all of your clips will make it much easier to edit a final product. The benefit of working with digital recordings is that you can rename each file based on a logical system. In radio parlance, each of these clips

or sound bites is called an 'actuality'. You should be familiar with this term, although for this toolkit we will use the term 'clip' to refer to individual digital audio files. Logging your clips will make it much easier for whoever will be editing the final product to navigate your raw material.

To begin logging your recordings, listen to each of your clips. This can be a tedious and boring activity, but it is a crucial part of the process. You can use the [Audio Logging Worksheet](#) to keep track of which clips you think you will use. There is no need to log clips that you know you will not use. Below is a short example of what a log might look like:

Clip Name	Description	Time Code (start/end)
Narration1.wav	Intro narration	00:15 – 00:38
ExpertInterview1.wav	Interview with Dr. Mitchell explaining dangers of improperly applied pesticides	02:22 – 02:41
FarmNoises1.wav	Background sounds of plowing, chickens	00:19 – 00:35

This worksheet has three columns. In the left column input the file name of each clip. The next column, type a description of the clip that includes enough information so that you are able to easily identify the content of the clip later when editing. The right column is where you note the length of the clip from start to end in minutes and seconds. If the person logging the audio is different from the one who will be editing it, also include 'in words' and 'out words' here. These are the first few words at the start and the end portion of the clip you plan to use.

Try not to use any clip that is longer than 30 seconds, unless it is extraordinarily engaging. Otherwise, if you plan to use more than 30 seconds from a given clip, break up the audio using narration or sound effects to keep your audience engaged. It is important to be mindful of the tone of the dialogue in each clip you are selecting. Do not select clips based on content alone. If the speaker's voice is monotone and boring or the audio is unclear, it is better to discard it and find a better clip — or re-record it, if possible.

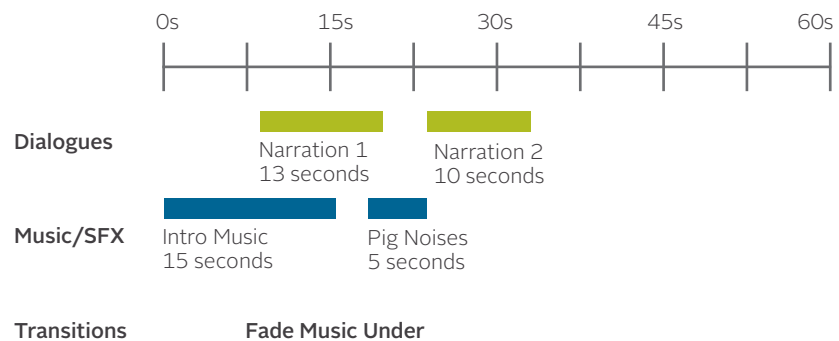
Rough edit

Once you finish logging and identifying the clips you will use, you can begin to lay out your selected clips onto a timeline. This process, known as the rough edit, can be done in two ways: 1) writing out the order of each clip and transition instructions on paper (doing a paper edit) or 2) using your editing program to manipulate and edit your clips directly.

The benefits of doing a paper edit first are that it can be done in a group so that your entire team is able to provide input. The

best way to do this is to write the name and length of each clip on index cards so that you can tape them to flipchart paper. You may also find it helpful to be able to manipulate and move clips around with your hands rather than moving everything around on the computer. That said, you can also do your rough edit directly on your computer if you are working alone or if you find it easier.

If you decide to do a paper edit, the easiest way is to lay out flipchart paper or use a whiteboard to write out your timeline. A basic paper edit might look something like this:





A NOTE ON AUDIO

You may be tempted to use popular music in your radio program. If you plan to use any music, first make sure that you have the rights to use it or that the music is freely available for use without a copyright. For more information on legal sources of music visit [Creative Commons](#).

Once you have laid out your timeline, lay out the index cards for each of your audio clips directly onto the timeline. You will find that this process is very similar to what editing looks like in your editing software. At this point, also make note of any audio you are missing that you would like to add so that you can record the extra material.

Tight edit

After you finish the rough edit, you can begin the process of tightening up your edit by making additional adjustments to your audio and transitions. The tight edit should be done directly in your audio editing program, so you must transfer the results of your paper edit into your editing program before starting. This is also an opportunity to alter the volume levels of your clips to ensure that the volume is even throughout the program. Like all computer programs, make sure that you save your project often while you are working on it. This allows you to go back to your radio program at a later point to make additional edits. It will also save you the frustration of losing all of your work if your computer freezes or crashes.

In addition to the basic tutorial on using Audacity provided [here](#), video and text tutorials for using all of the most common audio editing programs can be found online.

Mastering

The final step of the audio editing process is to master your audio. This is done after you finish your tight edit and are ready to finalize your radio program. Before you master your audio, make sure to listen to it from start to finish a couple of times to confirm that you are satisfied with it. If you notice anything that you are not satisfied with, go back and make the appropriate adjustments. Once you are satisfied, export your final radio program to an audio file. Your editing software will give you the choice of exporting the final into a variety of different formats, such as WAV, MP3, M4A, and others. It is very important that you export your radio program into the format preferred by the radio stations

WAV

MP3

M4A

Suggestions for lowering the barriers to entry

Your radio station partners will almost certainly have an expert on staff who can edit audio to create a final pre-produced program. Should your project staff decide to edit audio for purposes other than radio, such as to record a podcast to share with colleagues, it will take them some time and practice. To facilitate their growth, encourage them to watch training videos available online or challenge your team to create its own training screencasts for other colleagues using free programs like [Jing](#).



you are working with or on any other devices you will be using to disseminate your program. It is best to know this in advance, but the good news is that as long as you have saved your project, you can always re-export your audio file in a different file format.

Once you have finished mastering your radio program, consider creating a written transcript of the final version. A final transcript of the program makes it easier to translate and adapt your programs into other languages. Since this will take time, create final transcripts only if you have plans for using them.



COMPONENT THREE

Critical success factors

- *Establish baseline quality standards.*
- *Select the right people to do the work.*
- *Clearly define partner responsibilities.*
- *Consider sustainability from the outset.*
- *Create listener-centric programs that are relevant and engaging.*

COMPONENT THREE

Worksheets

- Audio Logging Worksheet
- Baseline Quality Standard Worksheet
- Creative Brief Template
- Radio Script Template
- Topical Area Expert Contact List
- How To Use Audacity to Record and Edit Audio



Audio Logging Worksheet

Clip Name	Description	Time Code (Start/End)

Baseline Quality Standard Worksheet

CRITERIA	BASELINE
<p>AUDIO QUALITY</p> <p>(How clear was the audio? How are sound effects and music used? How is the vocal clarity of the subjects?)</p>	
<p>STORY STRUCTURE</p> <p>(Does the audio flow? Does it have a beginning, middle, and end?)</p>	
<p>MESSAGE CLARITY</p> <p>(Is it clear what message the program is trying to convey?)</p>	
<p>ENGAGEMENT</p> <p>(Did the program capture your attention? Did it engage your thinking?)</p>	
<p>LEARNING OUTCOME</p> <p>(How well does the program achieve its desired learning objectives?)</p>	

Creative Brief

Proposed topic:	
Proposed duration:	
Prepared by:	
1. Target audience(s). Who are we talking to? (The more precise and detailed the better.) What should we keep in mind about this audience?	
2. What are we trying to achieve? (Learning Objective[s])	
3. What are we trying to say? (Key message[s]) What's in it for the target audience if we achieve our objective(s)? (Benefits) What are the barriers—the target audience's beliefs, cultural practices, misinformation, perceptions — to achieving our objectives? (Obstacles) Why do the benefits outweigh the obstacles? How can we support these statements? (Reasons)	
4. Program summary. What will the program be about? What type of format will it use? Who will be featured? What will the general tone be?	
5. Rationale. How will this program help achieve our learning objectives?	
6. Creative considerations. What about language, format, literacy levels? Anything required?	
7. What resources are needed?	

Adapted from *Spot On Malaria: A Guide to Adapting, Creating and Producing Effective Radio Spots*, written by Cate Cowan and Lonna Shafritz, (Washington, DC: CHANGE Project, 2005)

Radio Script Template

Title:	
Learning objective:	
Duration:	
Written by/date:	
Suggested Introduction: <i>This is where you add any suggested introduction you would like the radio announcer to say before playing your segment.</i>	
Sfx:	Use this tag for any sound effects
Music:	Use this tag for any music
Characters	You should have different names for each of your characters. Use their names to tag any dialogue you will have them say.
The following section should be used when you are inserting pre-recorded audio.	
Audio Insert Name:	This is the name of the audio clip you are inserting
In Words:	These are the first few words that the clip begins with
Out Words:	These are the last few words that the clip ends with
Duration	You should have different names for each of your characters. Use their names to tag any dialogue you will have them say.

Topical Area Expert Contact List Template

Name	Area of Expertise	Contact Information	Additional Details
<i>EXAMPLE: John Smith</i>	<i>Animal Husbandry</i>	<i>01-4535081 (mobile) Jsmith56@yahoo.com</i>	<i>Only available with 2 weeks advance notice</i>

COMPONENT FOUR

.....

What different approaches can be used to make our radio programming interactive?

COMPONENT GOALS // By the time you have finished this component you will:

- Understand what role your staff can play in supporting effective interaction.
- Have selected the interactive method(s) you will use.
- Have developed a plan to implement those methods.



There are a number of different ways to build interactivity into your radio programming. This component highlights the most promising approaches, what is needed to integrate them into your programming, and how to effectively implement them. In addition, it includes suggestions for other ways to disseminate radio programming without relying on traditional airwaves.

Increases in mobile phone penetration throughout the world and advances in other technologies have made it much easier to turn radio into an interactive media outlet. Interactivity here refers to interactions between a listener and a radio station, a listener and development organizations, and a listener and other listeners. Although the primary tendency may be to think in terms of increasing listener interaction with a radio station, it is important to look at the other types of interactivity as well. This is because each type of interaction has the potential to facilitate learning and support change differently.

When considering the potential for interactivity, think about the benefits that can be had by all parties involved. Radio stations may gain increased listener loyalty, listeners may benefit from increased learning, and your project may benefit from gaining a better understanding of your target audience's needs. Ideally, the interactive methods that you use will be crafted in a way that accrues all of these benefits.

There is no best approach to interacting with your audience. To decide how to best interact with your target audience, you need to develop a clear picture of who they are.

This can be done using the results of the questionnaire you used in [Component 2](#) to create a profile of your target audience(s). Whether or not they have access to mobile phones or are literate will be significant factors in deciding what type of interactivity to use.



Research on rice farmers' access to rural radio in Benin found that half of the farmers rarely or never listened to radio programming on agriculture. The reason stated by the vast majority of these respondents was that those programs are broadcast during times that were not convenient for them.

Knowing when people listen to the radio is essential. For instance, research on rice farmers' access to rural radio in Benin found that half of the farmers rarely or never listened to radio programming on agriculture. The reason stated by the vast majority of these respondents was that those programs are broadcast during times that were not convenient for them.¹ Of course, you may be somewhat limited in choice of time slots depending on the radio stations you are working with. They may not want to give up a prime slot for whatever type of programming you have developed. This is worthwhile knowing as well. If only half of your target audience have access to radios during the live broadcast time, you will want to consider additional ways to share those programs with them.

How people listen to radio is also important to deciding how to interact with them. Research by Search for Common Ground in Sierra Leone, Liberia, and Guinea, for example, found that women in those countries often listen to radio with friends and family, but that women who listen alone are 1.6 times more likely to call in to radio stations than women who listen in a group.² These data suggest that if most of your audience listens to the radio in groups, you may need to be more creative about how you interact with them to encourage active participation.

Also consider whether women have the same access to radios as men in the communities you are targeting. The same Search for Common Ground study also noted that “while radio reach and listenership [among women] is increasing, men are still more likely to listen.”³ Studies have shown, however, that when women are provided equal access to resources, it benefits overall household productivity.⁴ Implementers of USAID-funded projects should also consult the USAID Gender Equality and Female Empowerment Policy, which was released in March 2012, for further guidance on gender inclusive programming.⁵



Women who listen alone are **1.6 times** more likely to call in to radio stations than women who listen in a group.

¹ Zossou, E., Vodouhe, D.S., Van Mele, P. and Lebailly, P. Linking farmers' access to rural radio, gender and livelihoods: case study of rice processors in Benin (2012). [Accessed on 7/9/12 at: http://www.agroinsight.com/downloads/Articles-Agricultural-Extension/2012_AE2_Linking-farmers-access-to-rural-radio-gender-and-livelihood-Zossou-et-al-2012.pdf]

² Fortune, F., Chungong, C., and Kessinger, A. Community Radio, Gender & ICTs in West Africa: How women are engaging with community radio through mobile phone technologies (July 2011). [Accessed on 7/9/12 at: http://www.radiopeaceafrica.org/assets/texts/pdf/2012-Community-Radio-Gender-ICT_SFCEG.pdf]

³ Ibid., p. 6.

⁴ See reports from the International Food Policy Research Institute entitled, “Women: The Key to Food Security” and from the OECD entitled, “Women's Economic Empowerment,” which can be accessed online at <http://www.ifpri.org/sites/default/files/pubs/pubs/lb/lb3.pdf> and <http://www.oecd.org/dataoecd/50/60/47561694.pdf>, respectively.

⁵ The full policy can be found online at: http://usaid.gov/our_work/policy_planning_and_learning/documents/GenderEqualityPolicy.pdf

How can we make our radio programming interactive?

Once you develop a profile of your target audience, you can determine the most appropriate ways to interact with them. This section looks at seven of the most common methods of interaction.

You can use the [Interactive Method Selection Worksheet](#) at the end of this component to help you determine which method or methods are most likely to reach your target audience, and whether you have the capacity (both time and money) to use each method. This worksheet is an adaptation of the [ICT Option Assessment Tool](#) found in [Component 2](#).



Check out Farm Radio International's study entitled, *The New Age of Radio: How ICTs are changing rural radio in Africa*, for detailed assessments from the field of many of these options, online at: bit.ly/farmradioict



1. **Call-ins**



2. **Call-outs**



3. **SMS**



4. **Voice Messages**



5. **Interactive voice response (IVR)**



6. **Missed Calls**



7. **Facilitated listening**



8. **Web-based platforms**



The most sustainable types of interactivity will be those managed by your radio station partners. Once your project begins to manage interaction, you create a giant barrier to long-term sustainability. That is not to say

that your project staff should not interact with your beneficiaries, but the lead should be taken by the radio partners. Deciding which interactive methods to use, therefore, should be done in conjunction with your

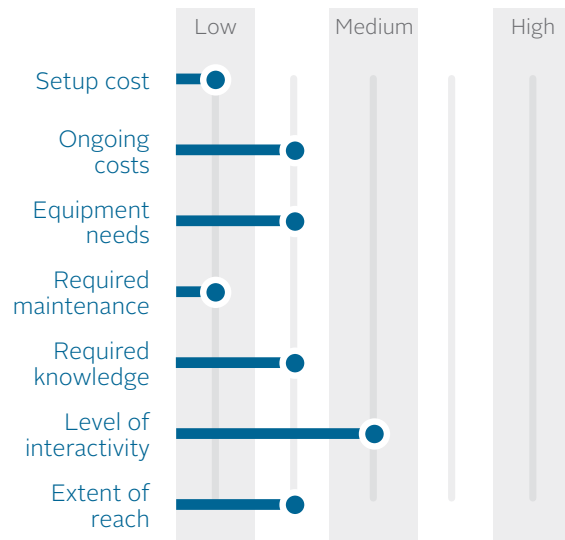
radio station partners. Your role is to inform them of what is possible, to help them set it up, and to support them, but the ongoing implementation should be theirs.

The following describes each of the methods and how they can be used to interact with listeners. Specific information on the hardware requirements and estimated costs for some of the options listed here can be found in [Component 6](#). Each method also includes a visual matrix that provides a snapshot of some of its requirements and interactive potential. The matrix presents a general overview of this information based on typical conditions found in rural communities in developing countries. It is not an exact science, since variations in local capacity, costs, and hardware availability exist both between and within countries across a region. For example, you may work in communities with a high internet penetration, whereas this matrix assumes low access to internet by a generic rural community in the developing world. Despite that, it should provide you with a comparative look at the requirements and benefits of each option.

Why Appropriate Technology Matters

The Kenya Agricultural Commodity Exchange Limited (KACE) developed a weekly 15-minute radio broadcast called Soko Hewani that advertised commodity requests and offers on the Kenya Broadcasting Corporation. Listeners interested in bidding would call a short code that linked to KACE's market call center. Although KACE had to pay for radio airtime, they anticipated being able to offset these costs through revenue share they received from the mobile network operator for calls placed to the short code, and through commissions from optional brokerage services they provided. The broadcasts were so successful that the number of listeners calling in frequently jammed their phone system. This led to frustrated callers who could not get through, and a loss of revenue to KACE. As a result, KACE had to temporarily suspend the program until they could find an appropriate and cost-effective solution that meets their call-in demand.

Call-Ins



OVERVIEW: Call-in programs are probably the most well-known example of radio interactivity. They involve listeners calling into the radio station directly. Most call-ins are received on-air by the announcer either in real-time or with a slight delay, although they can also be done by playing recorded listener messages on the air. Call-ins can be structured to allow listeners to share their

opinions or experiences on specific subjects or ask experts questions.

BEST USED: Call-ins work well to solicit audience feedback or questions during interviews with experts, panel discussions, or straight talk segments. Game shows structured around call-ins can also be a great way to engage with your audience. It is also possible to use this method at the end of a pre-recorded segment, such as a skit or a documentary, to solicit audience reactions or questions. This will give listeners a chance to dig deeper into the topic and share their own experiences. You can also use call-ins to collect localized content from field agents or other trusted sources.

INTERACTIVITY: Primarily between select listeners and radio stations. It is also possible to use call-ins as a way for listeners to interact with your organization or local development partners, although the most practical way to do this is by receiving and responding to recorded messages in conjunction with the radio station.



REQUIREMENTS: At a minimum, the radio station will need a phone on which to receive calls. Some stations simply use a mobile phone on speakerphone held up to their microphone for this. Although this is certainly

the cheapest option, it is not ideal for a couple of reasons. First, the sound quality will not be great. Second, and perhaps more importantly, if there is only one phone line, callers will likely need to call back dozens of times before getting through, which could discourage participation.

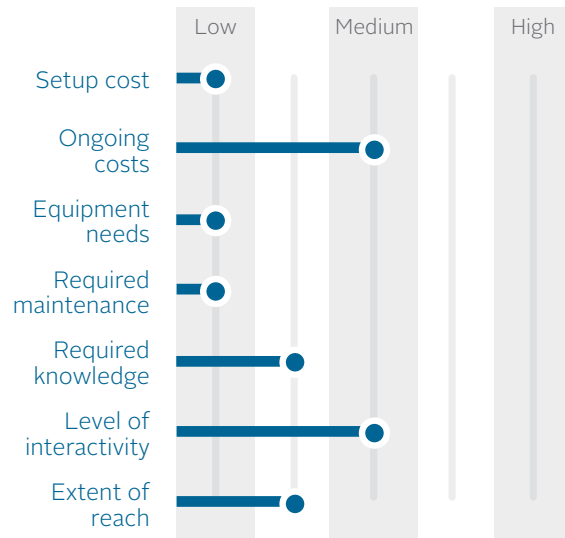
For a clearer audio setup, you will need to connect the phone into the mixer, usually by way of a computer. To overcome the challenge of having one line only, consider a second backup line that you also connect into your system, although you need to ensure the mixer and computer have enough audio inputs to handle this.

You can also connect multiple SIM cards into your computer using a GSM Gateway, such as the 2N External Routing Machine. Another option is the GRINS radio automation system developed by Gram Vaani in India, which has integrated telephony that enables users to connect up to four SIM cards to manage phone calls both live and through recorded messages. All of this gets a bit complicated, so it is best to work with a trained technician to set up a phone system to meet your needs.

OTHER CONSIDERATIONS: Call-in programs tend to put the burden of cost on the listener, who will need to use their own airtime to call in. Some of your listeners may not have the money to cover this cost and, therefore, will lose out on the potential interactivity. Where possible, you may want to consider setting up a toll-free number for callers to use. This can be paid for by your organization or the radio station, or in some cases you may even be able to enter into an agreement with mobile operators to provide a line free of charge. The ease (or difficulty) with which you can set up a toll-free number and the costs associated with doing so varies by country.

Also, keep in mind that call-in segments need to be well managed. Ideally, someone at the radio station should pre-screen callers to make sure that they know to turn off their radio in the background and to ensure that they are calling about something relevant to the subject being discussed. Hearing individuals like themselves call in can be a great way to capture the attention of your audience, although it is also easy to lose their attention because of other callers' irrelevant comments or overly long chatter.

Call-Outs



OVERVIEW: Call-out programs are similar to call-ins, except that in this case the radio station places calls to listeners instead of asking listeners to call in directly. Call-outs can also be used to reach out to experts for either on-air commentary or to pre-record segments. In addition, your organization or your partners may also provide your radio station partners with the phone numbers of individuals with specific questions or stories that were shared during field visits that you would like to share with a broader audience.

BEST USED: Call-outs interact with your audience in a way that is more controlled than call-ins. If you have already identified individuals with questions relevant to a panel discussion or interview that is being broadcast, call-outs can be used to bring those people on-air. This method can also be used to solicit audience comments or questions on pre-recorded programs, although you will want to make sure that the individuals you call were listening to the broadcast, are available, and have something constructive to add. Using the call-out method to interview individuals in advance is also a much more cost-effective way of gathering content than traveling to interview them in person.

INTERACTIVITY: The majority of the interaction with call-outs is between the radio station and the individuals who are called. Since radio station staff may not be as connected to some of the populations that development organizations work with, call-outs will likely be more diverse when done in collaboration with those organizations. Therefore, creating a triangle of interaction among your target audience,

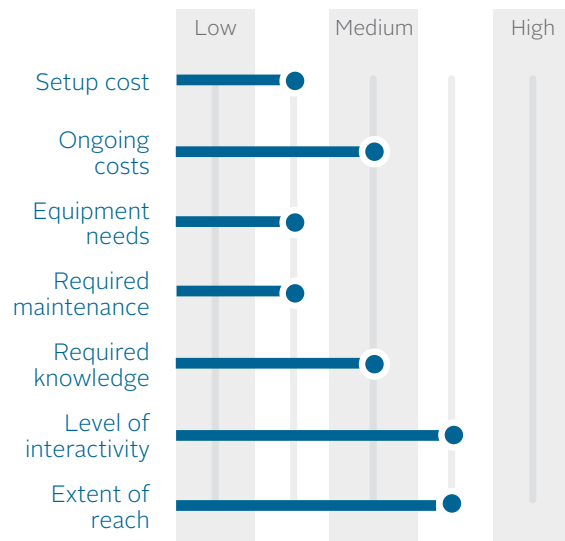
the radio stations, and your organization or its partners is essential.

REQUIREMENTS: The technical requirements for call-outs are pretty much the same as for call-ins, except you do not need multiple phone lines.

OTHER CONSIDERATIONS: From a logistical standpoint, coordinate with the individuals you are going to call in advance to make sure that they will be available and in a location with a decent mobile phone signal. Informing people in advance will enable them to prepare for the call and — with the possible exception of prank calling shows — always make for better conversation than cold calls.

You should also try to identify individuals who have something to share that is relevant to your audience and program. The benefit of call-outs over call-ins is that you can identify and prepare callers in advance so that their questions or comments are tailored to the overall learning objectives of your programming. Work together with your partners and the radio stations to build up a database of community members and experts

that can be called. Building a robust database will help to make your pool of callers more diverse and representative of your audience. Inviting your audience to subscribe to your caller database by SMS or at promo events is another good way to add to this database.



OVERVIEW: A growing number of radio stations are starting to use SMS messages to interact with their listeners. Listeners can send SMSs to the station at any point

throughout the program. Depending on the capacity of the station, responses may be sent back to listeners by SMS or a selection of messages may be read aloud and responded to on the air. SMS can also be used to poll your audience on a variety of topics or to send out reminders to your listeners before your program airs.

BEST USED: SMS can be a great way to poll your audience members on their opinions and knowledge of content, to identify new content they would like to see covered, or to vote on specific elements of your programming. As long as it is not cost prohibitive, sending out SMS reminders of programs to registered listeners can be an effective tool for increasing listenership. Farm Radio International has found that SMS alerts sent to listeners 30 minutes before broadcast can increase listenership by up to 20 percent. They can also be used to solicit brief feedback and questions from listeners. In addition, there is the added benefit from the fact that all messages will generally be received, as opposed to call-ins where most callers will likely receive a busy signal when trying to call. You can also use SMS to send out episode highlights and to reinforce

your messaging after programs air. For informational programs, SMS can be used to send updates and push out information, such as where to find health clinics that provide the support highlighted in your program.

INTERACTIVITY: Most radio stations that use SMS do so to interact directly with their listeners. That said, if your organization wants to interact with listeners directly about a program that you helped develop, you can always include an SMS number for them use. If the program is broadcast after your office hours have ended, just make sure that listeners know the timeframe within which you will respond to them.

Mobile chat platforms, such as WhatsApp and Mxit, also present opportunities to facilitate listener-to-listener interaction. Although they are not SMS-based, they allow for similar one-to-one text messaging, along with group chats on web-enabled feature phones. If any of these platforms are popular among your target audience, the group chat features could be worth exploring to support audience interaction with each other during your broadcasts.

Using SMS to Reinforce Radio Messages

In Malawi, Land O'Lakes International Development has teamed up with Esoko to reach over 2,000 farmers in the rice, cassava and small livestock value chains. Farmers receive reminders via SMS to tune-in to farmer-led weekly radio broadcasts on best farming practices. After a broadcast ends, farmers also receive a recap of the show's most valuable tips through SMS.



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REQUIREMENTS: The most basic point of entry is simply a mobile phone. If you want to manage messages and contacts, create polls, and send SMS announcements to a large group of people, you will want to consider a more sophisticated platform such as FrontlineSMS, GRINS, or others. Hardware requirements may vary slightly depending on the platform you select, but generally you will need at least a computer and a mobile phone or GSM modem. To facilitate interaction with listeners, set up a SMS shortcode. This way listeners do not have to remember a full phone number. Check with your local mobile network operator to see what options are available in your country. Again, the ease (or difficulty) through which shortcodes can be set up varies by country.

OTHER CONSIDERATIONS: There are three major considerations to keep in mind if you plan to use SMS to interact with your audience:

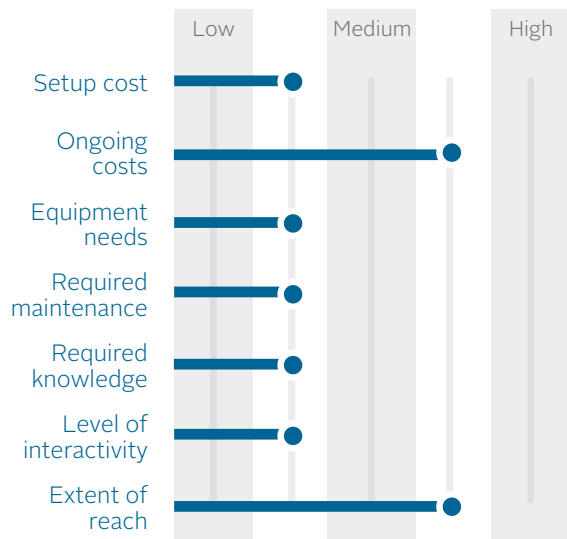
- 1. The cost both to the listener and the radio station or your organization.** Some individuals in your target audience may not have enough money to afford sending an SMS to you. On the other hand, if you are going to be responding to and

communicating with listeners by SMS, the costs will add up on your end as well. If this becomes an issue for you, you may want to consider grouping together common questions and responding to them all at once over the air instead of individually via SMS. If you are using SMS to send announcements, you can also reduce your costs by sending messages to a portion of your contact database and asking them at the end of the SMS to share it with others.

- 2. The literacy levels of your target audience.** Since SMS is a text-based medium, it is generally an ineffective way to reach illiterate or low-literate individuals. The case is often made that even individuals who are illiterate know a literate family member or friend, so this is a non-issue. This may be true, but rather than work off of this assumption it is advisable that you confirm whether this is the case for the majority of your listeners.

SMS length limitations. Sharing a brief opinion in 160 characters is not that hard, but asking a complex question that requires a response within such limitations could be discouraging.

Voice Messages



OVERVIEW: Voice messages are recorded audio messages that you can broadcast in bulk. In most cases, the user can either call a phone number to record their message or record and send it via their computer. Using a bulk voice messaging service, you can specify your contact list and schedule a time for the message to be sent. Everyone on your contact list is called at the scheduled time, and they hear your pre-recorded message when they answer their phone.

BEST USED: Voice messages can be used to provide previews of an upcoming program to generate interest, or to share a couple of salient points from an already-aired program to reinforce the message. Many systems can also be set up to conduct basic surveys, such as “Did you listen to our program on voter registration last night? Press 1 for yes, 2 for no, and 9 to repeat this message.”

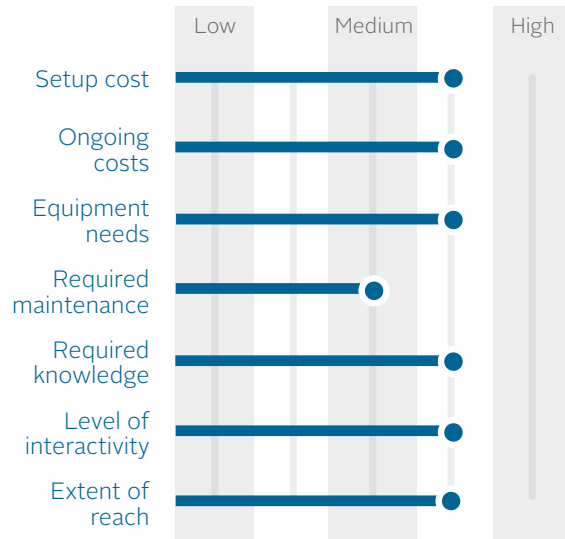
INTERACTIVITY: Generally speaking, voice messages are not highly interactive. Although they can conduct some basic polling, they are set up to be more of a broadcast mechanism than an interactive one.

REQUIREMENTS: There are third-party providers that offer voice messaging services, generally based on a unit price that is based on the number of individuals who answer the call. Some services enable you to record your message directly over the phone, in which case all you would need is access to a phone. Other services also use web-based platforms, which require a computer and some way to record your audio into WAV or MP3, either with a microphone through your computer or separately on another audio recording device.

OTHER CONSIDERATIONS: Some individuals may be less likely to answer a phone call from an unknown number. If they have never received a voice message, they may not be aware that it is a recording, which can lead to some initial confusion. If you are planning to use voice messages, it is helpful to inform your audience about the nature of these calls in advance so that they know to expect if an unknown number calls them. When evaluating third-party providers, consider their pricing structure and reliability.



Interactive Voice Response (IVR)



OVERVIEW: Interactive voice response (IVR) is actually an extension of the call-in method. These systems enable callers to navigate a menu via their phone's keypad or increasingly through speech recognition. Although these systems can be confusing — or frustrating to anyone who has ever encountered one when wanting to speak to a live customer service agent — they can enable a level of continuous interaction with listeners. IVRs can be configured to receive voice messages from callers 24 hours a day whether or not a

radio station or office is even open. You can also use an IVR system to play segments of your radio program on demand or to provide complementary or follow-up information.

BEST USED: IVR systems are best used to add a layer of interactivity to your radio programming outside of its regularly scheduled broadcast time. In addition to repurposing radio content so callers can listen to it on demand, you can create original content that complements your radio program or that engages callers with a question related to that program. For example, you may play a short clip from the program you broadcast that week and follow it with a question asking callers what they would do in that situation. If your radio program airs once a week, update the content on your IVR system at least as frequently. Depending on how sophisticated a system you are using, IVR can also be used to enable listeners to record and share their own messages.

INTERACTIVITY: Most IVR systems are set up to enable the operator (in this case a radio station or development organization) to interact with callers, although not always

in real or near-real time. Some systems, such as Awaaz.De from India, also enable callers to interact with each other using a navigable, voice bulletin board.

REQUIREMENTS: Many IVR systems require a computer and internet connectivity to connect to a remote system. If you do not have internet access, Freedom Fone offers a standalone system, although it does require a dedicated computer and a GSM device to connect to a mobile network. If you are running a standalone system, reliable electricity is essential to keep the system continuously available. More details on the technical features and costs of these devices can be found in [Component 6](#).

OTHER CONSIDERATIONS: Because many in your target audience may have no experience with an IVR system, you will likely need to run an education campaign explaining how it works. At the very least, explain that the voice they hear is a recording, what features are available, and how the navigation works (that is, it can only respond to specific commands). Staff who are in the field can explain or it may be demonstrated on video, and/or explained by radio announcers on the air.



Most callers will listen on average for
120 seconds.

Also consider who will be responsible for managing the system. This includes listening to, categorizing, and responding to all voicemails that are received, updating content, technical troubleshooting, and evaluating call records as part of your

broader monitoring and evaluation activities, if necessary. It is important to respond to the vast majority of calls that are received, otherwise people will likely stop calling in. Most IVRs will allow you to push out recorded messages in response to callers, so categorizing similar voicemails will help you send out one relevant response to multiple callers.

To encourage repeat use, provide fresh and relevant content on your IVR system. From experience, Farm Radio International learned that most callers will listen, on average, for 120 seconds. Because time spent listening to IVRs is shorter than that spent listening to content on the radio, you will need to edit any content from your radio program to accommodate the shorter duration of IVRs.

Although your project staff may help with the initial management of the system, over time you should try to transition full management to the station. If managing and maintaining an IVR system is new to your partner stations, you will likely need to provide them with technical assistance on how to do so.

Missed Calls

OVERVIEW: In a number of countries it has become common to flash or beep someone's phone, meaning an individual calls someone and hangs up right away so that the recipient can call them back. It is a way of telling the person that you want to talk, but you do not have enough airtime to pay for the call. The same concept, combined with mobile applications, makes it possible to interact with your audience in a way that is free of charge to them.

One way to use missed calls is to give people a number to call to sign up for a service,

	Low	Medium	High
Setup cost	X		
Ongoing costs		X	
Equipment needs	X		
Required maintenance	X		
Required knowledge		X	
Level of interactivity		X	
Extent of reach		X	



request playback of a radio segment or receive specific information. The application can be programmed to send out a specific call notification by SMS or voice when someone calls the phone running the application and hangs up. Using two mobile phones, you can also use missed calls for polling. For example, “Do you believe that climate change is real? Flash 8096457 to vote Yes or 8094332 to vote No.”

BEST USED: Missed calls are a great way to engage with your audience at no cost to them. For basic polling and enabling listeners to subscribe to services or request

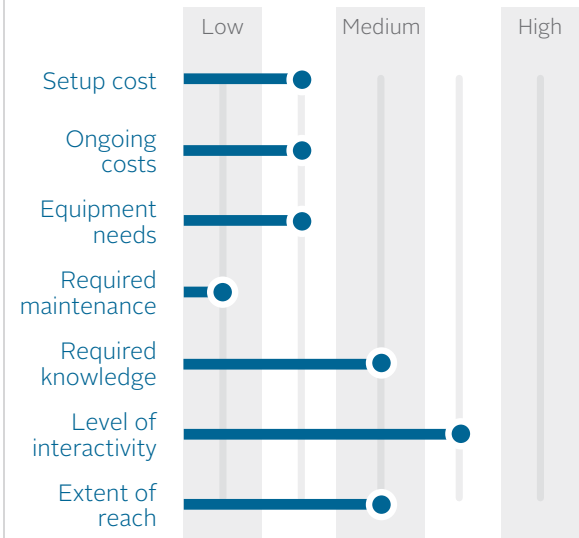
information on demand, using missed calls can make sense.

INTERACTIVITY: Beyond basic Yes/No voting it is not possible to receive feedback from people using this method. It is, therefore, best used in cases where a more substantive level of interactivity or engagement is not required.

REQUIREMENTS: A smartphone or computer with a GSM modem that is running an application that has options for sending call notifications to missed calls and counting the number of missed calls from multiple phones to make polling possible. Not all applications support these features, so you will need to do your homework first.

OTHER CONSIDERATIONS: If you are using missed calls for polling there is the chance that people may mix up the numbers to flash, which can throw off your responses. To mitigate this, repeat the numbers slowly and clearly a couple of times to increase the chance that listeners hear the correct number that matches their choice.

Facilitated Listening



OVERVIEW: Facilitated listening can come in many forms, but basically all involve some sort of in-person intermediary. Three of the most common examples are listening groups, radio agents, and interactive radio instruction (IRI).

Listening groups are groups of people who generally meet on a set schedule to listen to a radio program. They tend to be facilitated by a group leader and include discussion and questions after the program finishes. More

informal listening groups also exist and tend to involve friends and family listening to a program together.

Radio agents are individuals with recordable radios or MP3 players who charge a small fee to anyone who wants to listen to a radio program on demand. These enterprises are normally established with the support of a development organization, which may provide equipment and content to the agents free of charge or for a fee. By using a rechargeable radio with MP3 recorder, agents can decide what programs they want to record without any ongoing input. If your project works directly in the communities you are targeting on a regular basis, you can also record

material in advance and share it with the radio agents via MP3 player. In the latter scenario, control over content is with your office and not with each radio agent. Radio agents may also facilitate listening groups and/or allow people to listen to radio programs individually on demand.

Interactive radio instruction has been used for more than 30 years in primary and secondary schools. Content for IRI is developed to support teachers in low-resource environments to more effectively engage students. Unlike the other two examples, IRI programs provide prompts to teachers and students for specific actions throughout the program.

BEST USED: The prevalence of facilitated listening will depend on the demographic profile of your audience and radio ownership rates. You may find that in communities with high radio ownership rates people prefer to listen to programs in their own homes. Despite this, if you have the capacity, you should explore helping to establish or support existing facilitated listening groups in the communities where you are working.

INTERACTIVITY: Facilitated listening predominantly fosters interaction among listeners. You can also work with the listening groups or radio agents in your target area to build in interactivity with your field staff. For example, your staff can contact listening



NO ACCESS TO RADIO? NO PROBLEM.

If some of your beneficiaries do not have access to radios during the times when your program airs, consider the following:

- Create an MP3 player lending library hosted by your local offices or community groups.
- Work with radio agents to record programs using recordable radios.
- Push out short radio segments via recorded messages sent to their mobile phones.
- Set up an IVR system with recorded segments that callers can listen to on demand.

group leaders or radio agents after their scheduled sessions to answer any questions that may have arisen while they were listening to the program or to schedule follow-up field visits with specific individuals who expressed interest in learning more about a practice.

In Mali, Farm Radio International has also reported that Radio Fanaka is using call-outs to facilitate engagement with listening groups. At the end of each broadcast, they call out to each listening group in their broadcast area individually and give members 5 to 10 minutes to share comments or questions on the program they just heard. This is an innovative approach at linking listening groups into a broader community via the radio.

REQUIREMENTS: If you plan to help set up listening groups or radio agents, you may need to provide them with or help them to purchase the equipment they may need, such as recordable radios, solar chargers, MP3 players, and so on.

OTHER CONSIDERATIONS: When done well, facilitated listening groups can also increase the likelihood that individuals will learn about and adopt new practices. You may, therefore, want to provide training to group leaders and radio agents on effective facilitation skills, along with ongoing technical support.

Research from Farm Radio International conducted in five African countries has suggested that individuals who listen to radio programs with community groups recall more content and have higher adoption rates than those who listen at home or in unstructured groups with neighbors.⁶ This is similar to findings related to the benefits of facilitated learning with other ICT tools as compared to independent learning.

Consider the following benefits of working with facilitated listening groups:

- Facilitators can answer participants' questions or refer them to an expert if anything is unclear or if they are interested in learning more.

- Facilitators can provoke discussion on specific elements of the radio program, increasing the likelihood that participants will think critically about what they have just heard and, therefore, remember it more clearly.
- Facilitators can track attendance, questions asked, and practices tried and adopted by participants.
- Facilitators can encourage participants to share with and learn from each other.
- Facilitators can serve as a point of contact to collect and share participant feedback with you on what they liked or disliked about your radio programs.

Granted, not all facilitation is equal, and if done poorly, facilitation may actually drive people away. Later in this component, we will explore how you can prepare listening group leaders and radio agents to become effective facilitators and not just passive providers of radio content.

⁶ Perkins, K., Ward, D., and Leclair, M. Participatory Radio Campaigns and Food Security: How radio can help farmers make informed decisions (Farm Radio International, 2011). [Accessed on 7/11/12 at: bit.ly/farmradioprc]

WEB-BASED PLATFORMS

OVERVIEW: Most of your target audience probably has no access to the internet, so this type of interactivity may not be as relevant as the other methods mentioned above. That said, given the growth of mobile internet across many parts of the world, web-based interactivity may be an effective way to interact with a small subset of your audience, particularly youth. Live streaming or posting pre-recorded programs online can be a great way to make your programs available well beyond their air date. In addition, there are a number of social features that can be integrated alongside your program on the web to enable sharing, comments, and polls.

BEST USED: Live streaming only makes sense if you know there is a significant untapped audience who would listen online instead of on the radio. If it is not cost-prohibitive for your project, you may want to consider sharing recorded radio segments online even if most of your audience does not have internet access. By placing



REINFORCED MESSAGING

Although each of these methods has been highlighted individually, it is always important to consider how you can use multiple methods to enhance opportunities for interaction and learning.

Multiple methods can be used to reinforce your messaging more effectively than a single method. In addition to using the direct interaction methods mentioned above, you should also consider using secondary methods besides radio to communicate and reinforce your messaging.

Secondary methods that can be directly handled by your listeners (such as mobile video, SMS, flyers, or tip sheets) may be particularly helpful as references that they can use while they are trying out a practice on their own in the field. Your radio station partners might not have the capacity to develop and use these secondary methods on their own, your project and local NGO partner staff can play a role in reinforcing the messaging of programs through these means.

The research of Hermann Ebbinghaus and others has shown that spaced repetition of information is critical to increasing the likelihood of establishing and recalling long-term memories. If you have the capacity and resources, you might want to test the effectiveness of different primary and secondary methods by deploying them with a random selection of individuals who have listened to your radio programs to test whether their recall of information is higher than those who were only exposed to the primary method or those who had no interaction at all. Of course, recall alone does not translate to adoption or impact, but it is an important part of the equation.

programming online, you enable listeners with access to the internet to tune in at any time to learn and share their own ideas and questions. Also, content online increases the likelihood that other practitioners, outside the broadcast range of your partner stations, may hear your programming, thus potentially opening up new opportunities for collaboration and sharing.

INTERACTIVITY: Depending on how active a listening community you have online, this method can lead to high interaction between listeners and content managers. Unfortunately, it is not as simple as just posting radio content online. For starters, your radio station partners will need to have access to the internet. You will also need to make sure to use a platform that is already popular or be prepared to do some heavy advertising to generate interest. You can also interact directly with listeners who have access to the internet via email, assuming you have the time to respond to them individually.

REQUIREMENTS: To live stream audio, you will need a reliable internet connection and



a server to host your streaming audio. To share pre-recorded content online, you will need an internet connection, but that does not need to be at the radio station. You can transport the audio files on a USB flash drive and upload them anywhere with an internet connection. Before deciding on the best web platform to use, find out what platforms other radio stations in your country are using.

OTHER CONSIDERATIONS: Determine whether web-based interactivity is worth the budget and staff time relative to the

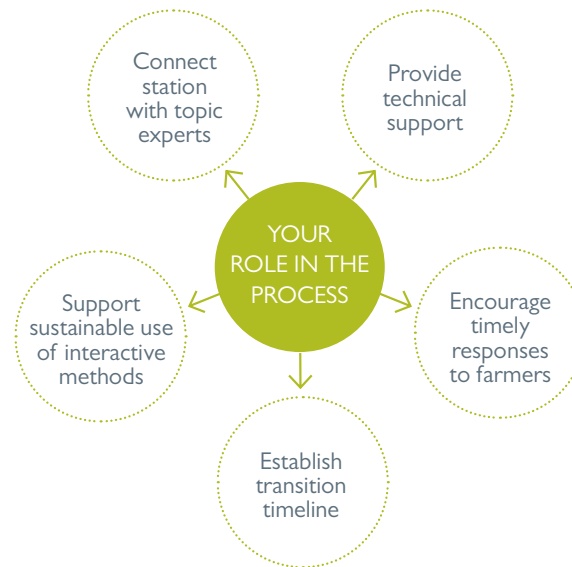
potential number of listeners you would be able to engage. Even if you decide not to share audio online, you might want to consider using the web — particularly social media — to promote upcoming programs, pose questions during broadcasts, and reinforce messages after the fact. If you choose to use the web, determine who will be responsible for managing this content and the interactions. Ideally, this should be the radio station, although it can also be managed by a local partner if they are invested in the subject matter over the long term.

What is our role in the process?

Since you will likely want any method you choose to be sustained by your partner radio stations beyond the life of the project, it is important to consider what your role will be from the outset. In some cases, the stations you work with will already be interacting with their listeners, whereas for some this might be uncharted territory. Ultimately, your role should be to support radio station partners to implement and sustain these methods over time.

In many cases, the announcers at your partner radio stations might not be topic experts in the areas you are focused on and will find it challenging to interact with their audience in a substantive way. Even if they do have the right technical background, they will not be an expert on all subjects that callers might be interested in. Therefore, help them establish contacts with topic area experts and a process by which they assign and respond to

all technical inquiries. If you are working with any local organizations, consider linking them into the process to play an ongoing role by providing topic area expertise.



Your partner radio stations may also need technical support to effectively use the interactive methods you are planning to implement. If this is the case, assess exactly what type of support they need to manage and maintain the method(s) you chose, and then determine how you will provide them that support. If their capacity is extremely low to begin with, it can be tempting to fully manage the implementation of the method for them. Although it is okay to play a large role at first, make sure that the station assigns at least one person on its staff who will be responsible for working with you. Work with that person to determine what training and support they need. It is also helpful to establish a transition timeline with the station — or any locally based partners who will be supporting them — by outlining concrete steps to move all technical responsibility and oversight to their station over time. This can be incorporated into your

CONTINUUM OF SUPPORT NEEDS



[Interactive Method Planning Worksheet](#) that we will talk about later in this component.

Your partner stations must have enough support to interact appropriately with your target audience and to properly manage the interactive methods being used.

Development is not the primary objective of most radio stations. Therefore, be prepared to provide the station with the support it needs, especially topic area expertise.

Your support can prevent the station from alienating listeners by ensuring that accurate information is transmitted, response times are

reasonable and the interactive technologies used are well managed.

Supporting facilitated listening

If you plan to use facilitated listening, your organization can play a role in helping to establish groups and train group leaders. When setting up listening groups, it is best to work with existing groups, such as farmer associations, cooperatives, citizens groups, or women's groups, rather than attempting to

form your own groups from scratch. Working with an established entity facilitates coordination.

If it is not possible to work with existing groups and if there is ample local interest, you can facilitate the establishment of listening groups in your target communities. This will require additional groundwork on your part. To make the process easier, consider working with community leaders to identify interested participants. Determine where members of your target audience commonly congregate in the community. Use flyers and community



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broadcast outlets to advertise. Be sure to explain why you are forming a group and how participants will benefit. Try to enlist people who are interested in participating over an extended period of time. This facilitates more useful data collection regarding individual change. Otherwise, if participants come and go at random intervals, it may be more difficult to track the impact of your intervention on each person.

Whether you are working with an established listening group or helping to set up a new one, identify one or two people from the group who are interested in facilitating. This person will be responsible for helping you collect information on participation and adoption, along with facilitating discussion among participants once the radio program has ended.

WHEN IDENTIFYING THESE INDIVIDUALS, LOOK FOR SOMEONE WHO IS

- trusted in the community
- inclusive (that is, does not lecture or exclude certain individuals)

- a leader in adoption of new approaches
- literate (if you want them to help collect information for you)
- easily accessible (that is, has a mobile phone, in case you need to reach out to them)

If established groups have selected their own leaders or operate more organically without any leadership, explain how having someone responsible for facilitating discussion can be useful and how that person will serve as a point of contact with your team for ongoing support.

Before each program airs, develop discussion questions that you share with the group facilitators to help guide them. These can be sent out to the facilitators the day before the program airs via SMS or you can provide paper facilitation guides for several radio programs at once weeks in advance. A sample print copy may look something like this:

Sample Discussion Questions

Program title:	Dehulling your soybeans for replanting
Air date:	August 5, 2012, at 8 p.m. on Radio Mwanza
Facilitation questions:	This program focuses on the proper way to dehull soybeans that you plan to replant. Many farmers use a stick to dehull the soybeans. This is fine if they plan to sell the beans for consumption or use them for animal feed. If you want to save the seeds for planting next season, this technique could damage the seed. Instead, you should use a dehulling machine or dry them in the sun.

1. When should you use the technique mentioned in this program?

2. What might happen to future germination if the seeds are beaten? What has been your experience?

3. What challenges might you have with the new technique that was presented in this program?

4. Has anyone ever tried this new technique? If so, what was your experience like?

If you plan to work with radio agents, in addition to training them on good facilitation techniques, you may also need to train them how to use and maintain any equipment you provide. You may also find it helpful to provide them with training on how to establish their new enterprise, including information on basic business accounting, advertising, and price determination. Small entrepreneurs can sometimes mistake cash flow for profit. Make sure that the radio agents you work with know the difference, and that they also separate their business finances from their personal finances. Also, help them build into their pricing the recovery and maintenance costs for any equipment they are using. They may not know what the costs of maintenance might be or how to account for those future costs in their current pricing, so you will need to help them.

Which interactive methods are most appropriate for our situation?

Determining the interactive method(s) most appropriate for your situation depends on a number of factors, including your partner's needs and capacity, who your audience is, and what you are trying to achieve. As you did for the ICT Option Assessment in Component 2, gather your team and other stakeholders together to discuss the strengths, weaknesses, and capacity needs of the different options. If you are unable to gather everyone together at the same time, consider finding time to speak with your stakeholders individually. This can be done either through informal conversations, or through more structured exchanges, such as focus groups or surveys.

There is no need to consider all of the options described above. Consider and pursue only the most realistic methods. For example, if no one in your target audience has access to the internet, forgo web-based methods for the time being. Once you have decided which options are worth considering, write them down in the columns at the top of the worksheet.

CONSIDER THE FOLLOWING QUESTIONS AS PART OF THIS PROCESS:

For project and radio station staff

- How and where are we currently interacting with our target audience?

- Are the radio stations we are partnering with interested in pursuing any of these options?
- How much time does our project staff have available to implement or support interaction?
- Do radio station and/or local partner staff have the technical capacity to implement each option? If not, what will it take to prepare them?
- What are the general types of costs associated with each option?
- Are any of these clearly costs outside of our project's available budget or those of our partners?
- What will it take to support our radio station partners to implement each of these methods?

For individuals in your target audience

- How often to do you currently listen to radio?
- What types of radio programs do you prefer?
- What types of radio programs would you like to hear more of?
- Where do you tend to listen to the radio? At home? With neighbors? With a listening group? Other?
- Do you have access to a mobile phone?
- Of the following options [insert options you are considering], how likely do you think you are to participate in each one? Why?

Through this process, you should be able to narrow down the interactive methods

that seem most appropriate to achieve your objectives. Once you have decided upon the method(s), consider who will be responsible for overseeing their implementation. Some methods might be done by your partner radio stations with minimal to zero support, while others may require more substantial input on your part.

You can use the [Interactive Method Planning Worksheet](#) at the end of this component to map out your overall plan for working with each radio station partner. This should include the exact steps to set up and maintain the interactive methods you plan to use, the timeline for each step, who will be responsible, and what, if any, materials are required. You may find it easier to use a different worksheet for each interactive method, although you can also combine them on the same worksheet if desired. If your radio station partners do not have the capacity to implement a preferred method on their own, make sure that you

include capacity-building steps and follow-up in your plan as well. The sample planning worksheet provided below can serve as a guide.

Once all involved parties have agreed on their action items and persons responsible, you can prepare to roll out your interaction methods. Give copies of the worksheet to each partner to keep in their office as a reference. At agree-on intervals (for example, one a month to start), convene status check meetings with all involved parties and revisit this worksheet to assess whether any changes need to be made or whether you need to provide any additional technical support to your radio station partners.



COMPONENT FOUR
Critical success factors

- *Appropriate method(s) for interacting with your audience is selected.*
- *Partners are provided with necessary and appropriate technical support.*
- *Facilitated listening groups are encouraged to increase recall and adoption.*
- *Messaging is reinforced through other media.*

Interactive Method Planning Worksheet Example

Radio station:	Radio Bopulu		
Interactive method(s):	Interactive voice response		
Secondary method(s): (e.g., flyers, tip sheets)	Flyers promoting how to use it, integration with SMS and on-air call-out responses during radio program		
Frequency:	Ongoing, but promoted weekly during program		
Required Steps	Timeline	Person(s) Responsible	Material Needed
Required Steps	Timeline	Person(s) Responsible	Material Needed
Set up IVR system	May 5	Project team	Cables, SIM cards, GSM device
Provide training on maintenance of system	May 5 – May 10, and ongoing as needed	Project team	Training materials and operating manual
Train target audience on what the system is and how to use it	May 1 – June 15	Project team	Demonstration videos, print materials
Promote the IVR system on the radio	Starting May 10th, ongoing	Radio station	Short script for announcers to read
Launch IVR system	May 15th	Radio station with support from project team	
Update IVR content	Weekly	Radio station	
Categorize and respond to voicemails	Within 48 hours of receipt	Radio station with input from project team for technical responses	
Review calling trends	Monthly	Radio station with initial support from project team	
Gather feedback from individuals in our target audience on their use of the system	After 90 days, and then twice a year	Radio station with initial support from project team	Questionnaires
Make improvements to system based on feedback	Within 30 days of receiving feedback	Radio station with initial support from project team	

COMPONENT FOUR

Worksheets

- Interactive Method
Selection Worksheet
- Interactive Method
Planning Worksheet



Interactive Method Selection Worksheet

	ICT OPTION					
Assessment Criteria	Call-ins	Call-outs	SMS	IVR	Web-based	Facilitated
Strengths of each option						
Weaknesses of each option						
Current staff capacity						
Potential costs						
Is this an appropriate option? Why?						

Interactive Method Planning Worksheet Example

Radio station:			
Interactive method(s):			
Secondary method(s): (e.g., flyers, tip sheets)			
Frequency:			
Required Steps	Timeline	Person(s) Responsible	Material Needed

COMPONENT FIVE

.....

How can we track the impact of our radio programming?

COMPONENT GOALS // By the time you have finished this component you will:

- Have determined what your indicators will be and how you will collect information.
- Know how to incorporate listener feedback to improve your approach.



Once your radio segments have been produced and broadcast, it is important to learn what, if any, impact they may be having. This component highlights various ways you can track listenership and measure impact. It also includes suggestions for how to capture listener feedback to inform your approach and create new and better content.

Measuring the impact your radio programming is having on listeners can be challenging, because oftentimes it is hard to determine who is actually hearing what is broadcast. That said, there are ways you can track this information. Most of the indicators you track to measure the impact of your work with radio you are probably already using to measure your broader work within communities. In addition to those indicators, however, you may want to identify other indicators to determine whether radio is achieving the impact you anticipated relative to investment in and performance of other ICT or traditional options.

This component assumes you have sufficient resources and staff capacity to conduct ongoing monitoring and evaluation (M&E). If your project has begun, your team likely developed an M&E plan. Our intention is not to supersede that plan or prior work or expertise of your team, rather to provide some perspective on elements to consider for effectively measuring radio's contribution to achieving your project's goals. You may choose to add some of these elements to your overall project M&E plan, or simply use these indicators for internal purposes. The following is not a guide for conducting M&E activities writ large.



For an extremely detailed guide to audience research, check out the [Handbook on Radio and Television Audience Research](#).

One of the best pathways to achieving your objectives — especially with any type of communication effort — is developing content that appeals to the needs and tastes of your target audience. This component will also look at ways that you can use listener feedback to improve your messaging and approach.

What information should be collected?

Generally speaking, the indicators you will collect fall into four categories: reach, recall, adoption, and circumstance. Each of these indicators will provide perspective on the impact of your interactive radio activity. Although these categories are interrelated, individually they tell us very different things about impact.

- **Reach is an output, and tells you the number of people exposed to your activity.** *Sample indicators include: number of people who have heard your program and number of people who have interacted with your radio station partners.*
- **Recall is an outcome, and tells you whether any changes in knowledge have occurred.** *Sample indicators include: percentage change in knowledge on pre- and post-tests and number of*

people who can identify the key points of a program one week later.

- **Adoption is an outcome, and tells you whether any changes in behavior have occurred.** *Sample indicators include: number of people who have experimented with adopting a practice and percentage of people who have successfully adopted a practice.*
- **Circumstance is an outcome, and tells you about any changes in the condition of your target audience.** *Sample indicators include: percentage increase in income and reported change in state of well-being.*

Theoretically, a larger reach will lead to a higher incidence of recall, which in turn will lead to increased adoption, which would then result in improved livelihoods and lasting

impact. Of course, it is not that simple. A large reach and an ineffective message could lead to a lower incidence of recall than a targeted campaign with a really effective message. In the same vein, high recall of information does not always lead to higher adoption of practice. And of course, adoption of a new practice does not always lead to improved circumstances, if it is done incorrectly or if the new practice is not appropriate for that person. By monitoring your activity's imprint on each of these areas, however, it will be easier for you to recognize what is working and what is not, so you can make adjustments as necessary.

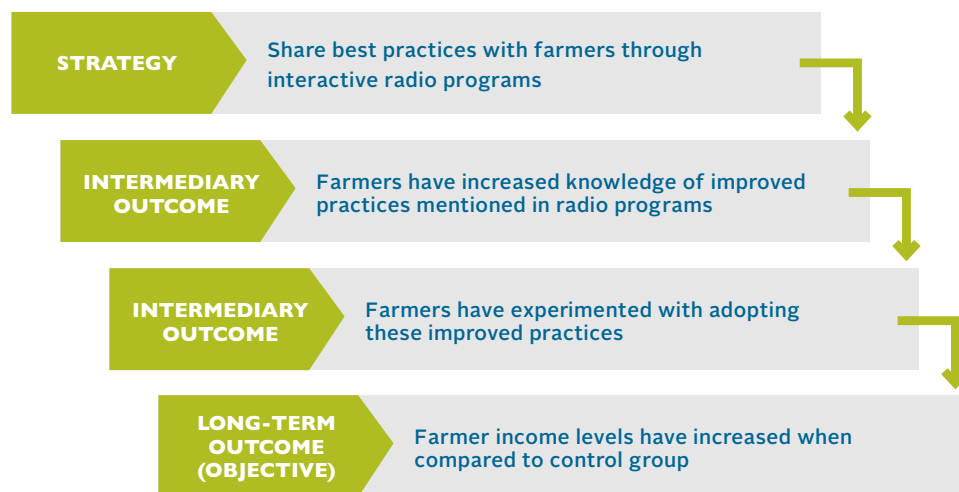
You may have considered indicators related to one or more of these categories when developing your draft Implementation Plan. As you read through this component, think about ways you can improve your draft plan to make it more specific and relevant to

assessing the impact of your work with radio. Remember to keep your end result in mind when deciding on the indicators you will use. All of your indicators should help you measure whether you have been able to achieve the change you would like to see as a result of your work.

While developing your indicators, you may find it helpful to create your own theory of change, which explicitly states your assumptions about how your work will lead to the changes you seek to produce. A theory of

change will also help you to map out exactly what intermediary accomplishments you will need to meet to achieve your overall goals. One exercise you may find useful is to create a chain linking your strategy to your objective via necessary outcomes.

For example, if your strategy is to use interactive radio to share best practices with farmers, and your objective is to increase the income levels of farmers, your theory of change might look something like this:



Think about each indicator that you will need to measure to assess the impact of your interactive radio activity. You may find it useful to conduct this activity with your project team, writing up each of the indicators you identify on flipchart paper or a whiteboard. At this point, do not discount any of the indicators that are identified. Once you have identified all of the possible indicators, then discuss as a group which are most relevant to your needs. Consider dividing up your indicators into the following classifications:

- **Essential** – This indicator must be measured.
- **Important** – This is an important indicator, but not essential.
- **Not important** – This indicator might be interesting, but it is not important to the donor, our project team, or our beneficiaries.
- **Not possible** – This may include an indicator that is essential or important, but we do not have the resources or capacity to actually measure.

At the end of this component, you will find an [Indicator Selection Worksheet](#) to help you organize your project team's decisions. In addition to the type of indicator, the worksheet includes sections related to how each one will be measured, who will be responsible for that measurement, and what your targets will be. Below is an excerpt of an example of a completed version of this worksheet.



Indicator Selection Worksheet

Indicator	Relevance*	How will it be measured?	Who will be responsible?	What are our targets?
Engagement with radio stations	Important	Number of interactions made with station each month	Radio station managers	At least 25% increase in interactions per month
Knowledge of best practices	Important	Monthly surveys of farmers	Field staff	At least 75% of farmers recall best practices one month after broadcast
Number of farmers listening to every broadcast	Not important	N/A	N/A	N/A
Adoption of improved practices	Essential	Monthly surveys of farmers	Field staff	At least 30% of farmers adopt at least one practice
Increased farmer income	Essential	Annual household surveys with farmers	Field staff	Farmers see 25% improvement in income in one year
Increased income relative to non-listeners	Important, but not possible due to capacity limitations	N/A	N/A	N/A

* Essential, Important, Not important, Not possible



In this example, the project identified a number of different potential indicators. Some of them were considered essential, and would definitely be collected. Others were important, but not necessarily essential. In this case, the indicators deemed important would likely still be collected by the project staff if resources permit. There was also an indicator that the project would like to collect, but does not currently have the capacity for, and an indicator that they did not feel was important toward helping them measure impact relative to their desired objectives.

It can be tempting to collect data on lots of different types of indicators. Although you certainly do want to collect data on indicators that are essential and, in most cases, important to measuring impact, be cautious about tracking indicators that are not related to your objectives. Data collection, input, and analysis can be time consuming. Try to make sure that you are not asking staff to spend their time collecting unnecessary data that you will never use.

ASSESSMENT STUDY

Check out Farm Radio International's, *The Effect of Participatory Radio Campaigns on Agricultural Improvement Uptake: A Preliminary Case Study Assessment*, for an example of an assessment study on radio impact [online](#).

If you plan on using more than one type of intervention to achieve your objectives, you should also consider doing a comparative analysis of the data you collect. This does not necessarily need to be done formally as a randomized controlled trial if you have limited resources. Even with more modest resources, you can at least compare data points on the same indicators for each type of intervention. For instance, if you are using face-to-face training in some communities, video in others, and radio in others, you can look at how people who are engaged by each method compare in terms of your indicators. The lack of randomization and control would disqualify your assessment from any peer reviewed journals, but it could provide you with helpful comparison in terms of general impact per method relative to cost.

How should this information be collected?



Because many of your listeners will be tuning in on their own, it can be difficult to know exactly who is listening to your programs and what impact it may be having. One of the additional benefits of interactive radio is that it enables you to communicate with at least a portion of your listeners. This makes collecting information somewhat easier than it is with listeners of one-way radio communication. It is important to recognize though, that listeners who interact with you do not necessarily constitute a representative sample of your audience. Therefore, you will need to consider a variety of ways to collect data to measure your indicators. For the purposes of this Toolkit, we have divided up this section based on the type of listener:

those who are in structured listening groups and independent listeners.

Listening groups

If you are planning to work with listening groups, they can be a great way to collect information on listening habits, adoption, and knowledge. Work with the group leader to register the members so that you have baseline information on them before you begin implementing your activity. If you are working with radio agents, you may want to ask them to help you collect the same types of information from individuals who use their services.

Below are some examples of the very basic information that you may want to consider collecting from listening group members:

- name
- age
- sex
- phone number — to help you follow up with them later

You may be tempted to track lots of other information, such as occupation, marital status, and so on. Be practical; avoid collecting information you will never use. Once you have



this baseline data, aim to collect the same information from group members on at least an annual basis. This will enable you to track changes in circumstance of listening group members over time. This information can either be collected by the group leader or radio agent, or by a member of your own staff if you would prefer to have more control over these data.

Each time the listening group meets, encourage the group leader to collect information on attendance, interest, questions, and adoption of techniques from prior programs. At the end of this component you can find a [Dissemination Record](#), which is an adaption of the form used by [Digital Green](#), an organization that works with video screening groups in India, Ethiopia, and Ghana. You may choose to ask for more or less information than is included on this form, so feel free to adapt it further to meet your needs.

More likely than not, this information will be collected using a pen and paper. If that

is the case, develop a system for collecting each of these records from group leaders and radio agents on a regular basis. This could include providing them with postage to mail forms to you or arranging for your staff or local partners to pick up the forms from group facilitators. The sooner you receive these forms, the more likely you will be able to provide timely responses to any questions that were asked during the group session. The more responsive you are able to be, the more likely it will be that participants will see the added benefit of participating in listening groups, as opposed to listening independently.

Set up a database to compile this information. It can be as simple as a basic spreadsheet. The amount of time needed for data input and analysis will depend on how many groups you are working with. It is important that the staff responsible for these tasks have enough time to complete them. Otherwise, your data will just end up being a stack of papers sitting on a desk somewhere without much value for analysis. That said, there are

increasing numbers of mobile data collection solutions that can cut down on both cost and time. If the listening group leaders have mobile phones, mobile-based data collection platforms offer an attractive solution over paper-based collection. The NOMAD project has an online selection tool to help you to identify mobile-based data collection platforms that meet your needs. It is available online at <http://humanitarian-nomad.org/online-selection-tool/>.

Independent Listeners

There is a good chance that the majority of your audience consists of independent listeners. You may have a sense of who some of these listeners are, but you will not necessarily know precisely who is listening when and to what. Although there is no perfect way to make sure that you are capturing data on every one of your listeners, there are steps that you can take to increase your data pool.

If you are already working with specific communities on other activities, consider administering a baseline survey to individuals in your target audience before you begin broadcasting any of your radio programs. The survey should capture as much information as needed to establish a starting point for each person in terms of current knowledge, circumstances, and practices. Ideally, your questions should focus on topics you plan to address during your radio programming. So, for example, if one of your objectives is that citizens will become more engaged in local planning, your survey should include a question about their current involvement and also a question related to their knowledge about ways to be involved.

This process can be time consuming, especially if your target audience has low literacy levels, but it can be an effective way to measure aggregate impact over time. You can also capture individual change over time by assigning respondents a unique ID number, so you can link them to subsequent surveys. How often you conduct follow-up surveys will

depend on your resources, the length of your project, and how frequently you would like to assess change. Keep in mind that people's memories are not always reliable. If you want to find out what people's reactions were to a specific program, it is better to ask shortly after it airs rather than months later.

In addition to surveys, you can ask people in your target group to self-report on their listening habits and any actions they take as a result of listening to your radio program. One traditional way to do this is to provide individuals in each community you are targeting with journals that they can use to record this information. This will enable you to track listening habits much more effectively than a survey, which may be administered weeks or months after a program airs. Of course, this option is highly contingent on literacy levels and may not be appropriate in all situations.

At a minimum, the radio journals you use should provide fields for respondents to record the date, time, and program that they

listened to. You may also consider adding sections for reflection on what they heard or on any actions they took as a result of the program. Remember that someone from your team is eventually going to have to review each of these journals and compile the information, so try to keep them as simple as possible. Review journals on a monthly basis, if possible. The more time that elapses between each review, the more burdensome the task of compiling data from each one.

Another option is using SMS or an IVR system to elicit input from your listeners. One way to do this is to ask listeners during the radio program to text or phone in their response to a particular question. For instance, you may ask them if they plan to use the technique mentioned in the program that was just broadcast or about any new techniques they have tried as a result of hearing them during your program. If your radio station partner is already using SMS or IVR to interact with listeners, then coordinate with them.

The downside to this approach is that people may often only leave their first name or no



name at all, so there is really no good way of determining how representative a sample you are receiving. To mitigate this, try to collect basic information from each person with whom your project or partner radio stations interact. This might include the same basic information mentioned in the bulleted list above under Listening Groups. For example, each individual might have a unique ID based on their name, mobile number, and village. By having this information in a well-organized database, you will be able to push out targeted surveys to your listeners via SMS.

In addition, any time someone interacts with the radio station, whether by SMS or phone,

you will be able to match the number they called from to an individual in your database if you have their information. If not, you can contact that caller to ask for that information so that you can register them. Doing this will also enable you to track whether there is any correlation between the number of interactions an individual has with the radio station and changes in recall, adoption, or circumstance.

In countries that do not allow for mobile number portability, make sure you are not registering duplicates each time someone changes their SIM card and therefore, their mobile number. The easiest way to do this is

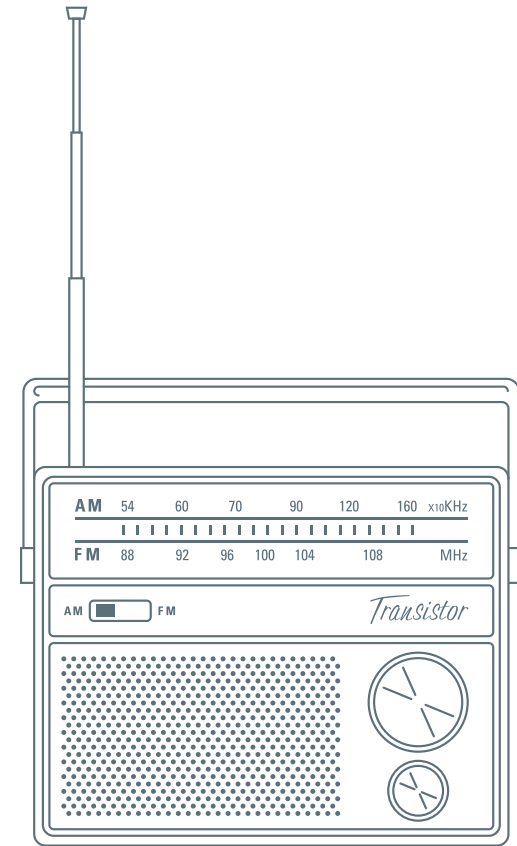
to check for entries with the same name and from the same location to determine if it is a duplicate or someone new. If it is a duplicate, you can simply update their phone number in your database.

The M&E methods you plan to use should be included in your implementation plan from the beginning. Work with whoever on your team is responsible for M&E to make sure that you have the capacity and resources to implement your plans. You may also need to provide training to listening group leaders, radio agents, radio station staff, and your local partners on how to accurately collect any data that they will be responsible for.

If you are working with multiple radio stations, coordinating the collection of all of this information and managing a central database of listeners can be challenging. Your partner stations will not have the same incentives to collect some types of information you plan to collect for your project. Since any database of listeners will likely be housed within each station, it can make sending out surveys to listeners in a wide geographic area difficult.

One solution is to encourage all of your partners to use the same database program, which in most cases your project would need to provide. This way, you can synchronize each station's local database with a central database. You can also set up individual login credentials so that not everyone has access to all of the content. For instance, stations might only have access to their data, whereas your project has global access. Doing this may require you to train radio station staff so that they know how to use the system properly. However, there are a number of affordable and relatively easy-to-use solutions currently available for these purposes, including those mentioned earlier in this component.

If your partners already are using their own — and different — databases and are not interested in changing, you may need to find a software developer to create an application that pulls data from each of their individual databases — whether that be through an IVR or SMS management system — into one web-based database. More likely than not, you may need to coordinate with stations individually to access and contact their listener database.



If they do not already have listener databases, you should work with your partner stations to develop their own. Make sure to provide them with sufficient training so that they are able to manage this database. If they do not see any value in keeping a database, you will need to come up with an alternative solution, such as encouraging a local NGO partner to manage it for the radio stations.

How can we use listener feedback to improve our potential impact?

In [Component 3](#), we discussed ideas for soliciting feedback from listeners before you finalize your radio programs. Once your partner stations have begun to air the programs you developed with them, you will also find it beneficial to solicit ongoing feedback from listeners to further improve both your programs and your approach to interactivity. The process of collecting feedback, analyzing it, and taking concrete actions based on it will help your team create an experience that is more closely aligned with the needs and interests of your beneficiaries. Doing so will likely lead to greater engagement with your audience, and through greater engagement you can increase the likelihood that your interactive radio activity will have an impact.

It is best to encourage whoever will be taking the lead in content development to also

lead the collection of feedback with your guidance and technical support. This will help to increase the likelihood that they are able to continue to do this effectively beyond the end of your project. At the start, many of your partners may not have the capacity to manage the amount of feedback they receive. Your project staff, or even better, local NGO partner staff should expect to play a large role in setting up the systems for collecting, managing, analyzing, and acting on feedback.

Although it can be tempting to collect feedback on an ad hoc basis, the greatest benefit from feedback will likely come through using a structured system. This is because it can often be difficult to decide what changes, if any, need to be made when feedback is received sporadically and without purpose. Through radio broadcasts, listener databases, and established relationships in

the communities in which your team works, however, you should be able to solicit fairly diverse and robust feedback from your target audience.

While you are thinking about developing a system for feedback, work with your partner stations to consider how frequently to solicit formal feedback. Remember, the amount of resources and time required by each feedback method varies. Some methods will be easier to conduct more regularly, while others might require much more work on your end. This is important to consider while you are planning what your feedback system will look like. You may want to use a combination of methods to help you solicit feedback both with frequency and detail.

At the end of this component you will find a [Listener Feedback Worksheet](#) to help you

plan what type of feedback to collect from your target audience. It includes information on your target audience, how you plan to collect feedback, what questions you will ask, who will be responsible, and the frequency with which you will solicit feedback. The following sample will provide you with an idea of how you might use this worksheet.

Your partner stations may not be able to solicit formal feedback after each program they broadcast or within each of your target communities. Even if they cannot solicit feedback all the time and from everyone, they will likely find value in whatever feedback they do receive.

Remember, you do not necessarily need to alter your programs or approach based on all of the feedback you hear. Rather, the feedback your partner stations receive should help to inform decisions about new programming or changes to your team's approach. It is helpful to develop a method to process and take action on feedback so that everyone on your team is clear on the process. If one of your partner stations receives a lot of feedback suggesting a particular change that you are unsure about, consider helping them pilot test the change first. Give the pilot some time — at least a few months — and then solicit feedback again from listeners in that broadcast range. If feedback is positive, you may then consider proposing that your other radio station partners consider the change as well.

All of this is not to say that you should not welcome feedback that is received outside of your explicit calls for feedback. Try to group similar types of feedback and keep an eye out for anything with high incidence. If you notice a lot of feedback on the same issue, pose it as a question to a broader audience to check whether it represents your larger listenership

Listener Feedback Worksheet

Target Audience	Rural school teachers from Eastern Province		
Method of Collection	Questions	Person(s) Responsible	Frequency
In-person surveys and call-outs	<p>Have you listened to [insert program name]? If yes...</p> <ul style="list-style-type: none"> » What were the main points that you learned? » What did you like about this program? » Was anything unclear? If so, what? » How would you improve this program? » What are some other topics you would like to hear about in this program? 	<p>In-person surveys: Project field staff in each district, each targeting a minimum of 25 teachers in Chipata, Chadiza, Katete and Mambwe districts</p> <p>Call-outs: Project coordinator in district office will call at least 25 registered teachers in Nyimba to administer survey over the phone due to lack of staff on the ground in this district.</p>	One week after air date
SMS and call-ins	What did you think about this program? Call ___ or SMS to let us know.	Radio announcer to ask question on the air, responses managed by project team	Immediately after airing

or is just the idea of a small, but opinionated group of listeners. Helping stations to sort and make sense of all of the feedback is very important.

The following provides you with more information on some of methods for collecting feedback that your team may want to consider employing.

Call-Ins / Sms

One of the easiest ways to solicit feedback from listeners is to invite them to call in or send an SMS in response to a question posed to them on the air. This question could be embedded into a pre-produced radio program or asked by the announcer after the program. To ensure that you receive a larger response rate, consider turning the call for feedback into a raffle. For instance, you might say that one random caller will receive a free bag of organic fertilizer or some other prize relevant to your audience. This will encourage even some of your more passive listeners

to consider calling in to respond. If you plan to use call-ins or SMS to collect feedback, you will definitely want to encourage your partner station to employ an IVR or SMS management system. The investment is well worth the time saved from manually logging phone calls or SMS responses. The downside of this method is that you can potentially receive feedback from anyone who is listening to the broadcast. This can impact the relevance of the feedback you receive. Let's say you are targeting married women, but the majority of listeners who respond are men or single women. You may be led to a possibly false conclusion that your target audience wants to see a certain change, when in reality it might just be something that your secondary audience is interested in seeing.

Call-Outs

If you have already developed a listener database, call-outs or sending SMS polls to a specific group of listeners can ensure that you are getting feedback from only the people

you are interested in hearing from. Some IVR systems will allow you to record a message, call your sample group, play the message to them, and give them an opportunity to respond either to multiple choice questions or through voice recordings. If the vast majority of your sample group is literate, you may prefer to send out polls via SMS. There are a number of options available for SMS polls. If you plan to use this option, do some research on their functionality and cost to find the option that best suits the needs and capacity of your partner stations. For this type of feedback to be effective, your listener database needs to be fairly representative of your target audience.

In-Person Surveys

Chances are that your staff or local partners will occasionally be working within the communities that you are targeting. If this is the case, consider conducting in-person surveys to gather feedback, then share it with your radio station partners. One of the main



benefits of in-person surveys is that they allow you to reach individuals in your target audience who may not listen to your radio programs. This is a great opportunity to find out why they are not listening and to learn how you can engage them. The traditional way of collecting this feedback is with paper and pen, although if your staff have compatible mobile phones, tablets, or laptops, consider using digital survey tools to facilitate the process. A growing number of services

exist that enable you to create offline forms on these devices that can link up with a cloud-based database once the user is online. As mentioned earlier, customizable off-the-shelf mobile data collection solutions already exist. Do your own research to find the solution most appropriate to your needs. Obviously, the big downside of in-person surveys is that they can be time consuming and expensive to conduct.

Focus Groups

Another option for in-person feedback is to conduct focus groups with your target audience. Unlike surveys, which are pre-defined, focus groups allow for follow-up questions to explore a response in greater detail. They also provide an opportunity to play a program or segment of a program, which allows you to ask for specific feedback on what was just heard. Of course, it is also easy for a focus group to be hijacked by a couple of very vocal respondents. You will need a trained moderator to ask clear

questions, engage all participants, and limit the responses of more vocal respondents to within reason. A Focus Group Discussion Guide has been included at the end of this component as a reference for conducting your own focus groups. Your partner radio stations may not have the capacity to organize and facilitate their own focus groups, so your project staff or local NGO partners may need to conduct this on their behalf. If this is the case, make sure that the questions asked during the focus group are driven by what your partner stations are interested in learning.

Other Options

Although much of the feedback you receive may be more qualitative in nature, you may also want to consider building in an interactive rating system for each of your programs that airs. For example, at the end of each program the station might include a message such as, “Tell us what you thought of this program. Send an SMS to 39555

with the word HEALTH followed by a rating of 1 to 5, with 1 being terrible and 5 being amazing.” This will enable you to compare which programs are most popular with your listeners. Through this process, you may notice similar elements that exist in the popular programs that do not exist in the less popular ones. If this is the case, you may want to consider re-scripting and recording a less popular program to include those elements and see what happens.

Regardless of what type of feedback your team is collecting, consider scheduling standing meetings with staff and partners involved in your interactive radio activity to review and discuss that feedback. By holding a regularly scheduled meeting — say on a quarterly basis — your team will have an opportunity to learn from and react to this feedback, enabling them to make any changes in a timely manner. If you are working with more than one radio station, consider analyzing feedback from each one to see if you can identify any common themes. This information will likely be useful for each

station to learn, and also for your project team to help you better structure the support you are providing to your partners.

Whenever your team does decide to make changes based on feedback received, encourage your partner stations to advertise those changes with listeners so that they know you heard them. For example, before a new program is played, the announcer might read a message such as, “We’ve heard your thoughts on what type of programming you want to hear, and I think you’ll find this next program to be just what you are looking for.” The exact message will vary, but the important thing is that your audience knows that you value their input and are taking action based on what they tell you. This will likely give them a more positive impression of interacting with your team and hopefully lead to greater loyalty to tune in. Increased interaction and loyalty from your listeners are not sufficient to achieve your objectives on their own, but they will likely improve your odds.



COMPONENT FIVE

Critical success factors

- *Establish indicators that measure outcomes and impact, not just outputs.*
- *Select collection techniques that will reach a representative sample of your target audience.*
- *Build capacity of partner radio stations to manage listener feedback.*
- *Systematically solicit listener feedback and use it to make improvements.*

COMPONENT FIVE

Worksheets

- Dissemination Record
- Listener Feedback Worksheet
- Indicator Selection Worksheet
- Focus Group Discussion Guide



Dissemination Record

Date: _____ Start Time: _____ End Time: _____

Video Title: _____

Village: _____

Location Of Screening: _____

Name Of Group: _____

Facilitator's Name: _____

S/N	Given Name	Surname <i>(Or Father's Given Name)</i>	Male/Female	Attendance (•)	Interested*	Questions & Comments <i>(List Below)</i>	Expressed Adoptions <i>(Area, Date)</i>	Participant Signature
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								

Dissemination Record (Continued)

S/N	Given Name	Surname <i>(Or Father's Given Name)</i>	Male/Female	Attendance (•)	Interested*	Questions & Comments <i>(List Below)</i>	Expressed Adoptions <i>(Area, Date)</i>	Participant Signature
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								

*Expressed interest in techniques mentioned? (Yes/no)

Facilitator Comments:

Facilitator's Signature

This form has been modified from a version that is used by Digital Green to record attendance during video screenings.

Listener Feedback Worksheet

Target Audience: _____

Method of Collection	Questions	Person(s) Responsible	Frequency

Indicator Selection Worksheet

Target Audience: _____

Indicator	Relevance (Essential, Important, Not important, Not possible)	Will it be Measured?	Who will be Responsible?	What are our targets?

Focus Group Discussion Guide

Introduction

Holding a focus group discussion is a good way to learn about people's interests, perspectives, opinions, and knowledge about different topics. Because focus groups are structured and directed, but also expressive, they can yield a lot of information in a relatively short time. Knowing the perspectives, attitudes, and desires of your target audience is essential to developing relevant interactive radio content, support services, and dissemination approaches.

Creating and Running a Successful Focus Group Discussion

The following provides some tips and suggestions for creating and running an effective focus group discussion.

DEFINITION

A **focus group discussion** (FGD) is an informal, guided conversation about a particular research or program topic. An FGD brings together four to eight participants who share a set of personal characteristics relevant to the research or topic being investigated. A qualitative research technique, FGDs explore topics in depth and answer questions like “why?” and “how?” A facilitator guides the discussion, encouraging participants to talk freely and reveal their thoughts and feelings about the research topic. FGDs are a good way to learn more about a designated topic, and then guide future action.



Getting started

STAFFING: Ideally, it takes two people to conduct a focus group discussion. One, the facilitator, works with the project team to develop the questions and then guides the discussion. The other, a recorder or note taker, sits off to the side, writing down what is said. Afterward, with the facilitator, the recorder analyzes the discussion and writes a report. (The facilitator should not take the notes because it is very distracting and will likely inhibit open and free discussion.) If two people are not available, consider using an audio recorder, then transcribing the discussion.

- **The facilitator** should be a good leader, know something about the topic, have experience facilitating groups, relate well to the participants and be a good listener. It may be someone from your team or from outside who specializes in facilitating these kinds of groups.
- The **recorder**, probably on your team, should know something about the topic and be a good listener and writer.

- The optimal number of participants in a focus group is four to eight; no more than 12 people in any one session.
- To ensure transparency, distribute information to the community about the purpose of the focus group meetings, the topics that are to be discussed, and how participants will be selected. Each focus group discussion should last no longer than one hour.

PLANNING: Nail down the details before you start recruiting people: day, time and place. The place should be comfortable and quiet where the group can meet undisturbed.

- Clearly define the objectives of the discussion. Then, prepare four to eight primary questions that will serve as the facilitator's guide, rather than an exact script.
- Identify and invite a representative sample of those whose opinions you are concerned about to be part of the group. Highlight why and how they will benefit by participating.

- Arrange for light refreshments to be available for participants during the focus group.
- Provide name tags for each participant so that the facilitator can address people directly by name.



Conducting the Focus Group Discussion

The facilitator greets all of the participants, makes introductions and ensures that participants are comfortably situated.

THE FOLLOWING IS A COMMON SEQUENCE OF EVENTS:

- Thank people for coming.
- Review the purpose of the group and the goals of the meeting.
- Reassure participants that their comments will be confidential, that reports will not associate names with anything said.
- Go over the flow of the discussion—how it will proceed, and how the participants can contribute.
- Lay out the ground rules. Encourage open participation. Set the tone.

- Ask an opening question. This could be a very general question (“What are your general thoughts about X?”), or something more specific. Both choices are good; and both types of questions might be asked before the group ends.
- To conclude, again thank everyone for their time and insights. Tell them what you will do next. Reinforce that the discussion will help improve the project/program/services.

FACILITATION TECHNIQUES: The facilitator should try to engage all members of the focus group, but avoid turning the meeting into a simple question and answer session. All opinions on a question should get a chance to be heard. Be aware that some participants may feel intimidated or shy about expressing their opinions in the presence of others. Try to draw them out. Consider these techniques:

- Summarize what you think you have heard, and ask if the group agrees

- Phrase the same question in a different way
- Ask if anyone else has any comments on that question
- Ask follow-up questions that gently push participants to provide specific responses. Simple probes are “Can you say more about that?” “Can you give an example?” “Help me understand...” “What can someone else tell me about that?”
- Look around the room, and make brief eye contact, especially with those who may not have spoken.
- Encourage participants to engage with one another. For example, say “Some people have said that one way to improve X is to do Y. Do you agree with this?” (Or, “How do you feel about that?”)



- Maintain control of the group. It is common for one or two people to try to dominate the conversation or take the discussion way off topic. When this happens, say “Let’s stop for a minute. I want to remind you of a ground rule we agreed on.....” Or “This is the subject of another focus group. Now, let’s get back to this group.” If this doesn’t work, ask the group for ideas about how to increase participation.

Immediately After the Meeting

- Verify the discussion was recorded if using an audio recorder. Create a transcript.
- Review the written notes, clarifying anything hard to read, ensuring pages are numbered, filling in notes that don’t make sense.
- Write down any observations. For example, anything that was surprising.
- Analyze the discussion looking for patterns and themes. For example, devise and use a coding system to “score” the data and count the number of times a particular theme is expressed.
- Write a report. Make sure that participants’ names are not linked to comments made during the session. A final version of the report may list the names of the focus group participants so that the project team can ask them for clarifying information if needed.

This guide has been adapted from:

- Rusten, Eric. [*The Computer System Sustainability Toolkit: A Practical Guide for Schools*](#). Washington, DC: AED, 2010.
- Work Group for Community Health and Development at the University of Kansas. [*The Community Tool Box*](#). Accessed 6.11.14
- De Negri, B. & Thomas, E. [*Making Sense of Focus Group Findings: A Systematic Participatory Analysis Approach*](#). Washington, DC: AED, 2003.
- Shafritz, L. & Cowan, C. [*Spot On Malaria*](#). Washington, DC: AED/CHANGE Project, 2005.

COMPONENT SIX

.....

What are the technical considerations we need to keep in mind?

COMPONENT GOALS // By the time you have finished this component you will:

- Determine which devices, accessories, and software you will use for your interactive radio activity.



There are a number of technical choices that need to be made before you can begin creating your own radio programming. This component includes overviews of different types of low-cost audio recording devices, their strengths, weaknesses, and examples of applications for which they may be most appropriate. It also covers devices that support interactivity, peripheral devices, audio editing software, and other important technical choices. This section does not recommend the best devices, instead, it provides technical considerations so you can assess what is most appropriate for your project's needs.

Once you choose a general approach, you must, decide what equipment you will need. By working through the Toolkit, you likely have a sense of what you will need. This component expands on technical considerations for four different types of devices:

- audio recording devices
- interactive devices
- peripheral devices
- software

The information provided here was accurate at the time of publication. Given the rapid development of technology, though, some of the content may be outdated by the time you read this. Before making any final purchase decision, do your own research into each technology, including consumer opinions and any new models that have been released. A number of online resources exist to help you with this research. One of the most comprehensive sites is [CNET](#), which includes expert and consumer reviews on both hardware and software.

At the end of this component, we have included a [Cost Calculation Worksheet](#) that you can use to keep track of the total estimated cost of equipment, accessories, and software. If you are planning to purchase equipment for your radio station partners, you will also want to include these in your calculations.

The total cost of hardware and software will likely constitute only a small percentage of the total costs of implementing your interactive radio activity. Even so, it is important to keep track of what you anticipate those costs to be to make sure

that they are within with your overall budget. You can use this worksheet to help you develop a rough estimate for what your costs are likely to include.

The worksheet is divided into five columns:

- **Item** – the name or type of device, accessory, or software you plan to use.
- **Distribution** – the scope of distribution for each device, including the geographic areas you in which are planning to use each device. For example, if you plan to distribute digital voice recorders to several locations, you can track that here.
- **Number Needed** – the total number of items needed to implement your activity.
- **Price Per Unit** – the price for a single unit of each item.
- **Total Price** – the number of items needed multiplied by the price per unit.



After you have listed all of the items you anticipate purchasing to implement your activity, add up the prices of these items to determine your anticipated total cost. For multi-year projects, consider replacement costs for each item. The life expectancy of each device will depend on a number of factors, including the environment in which it will be used, the quality of the device, and the likelihood of theft.

Your organization may already use a set formula for determining replacement rates for equipment. If not, use past experience with similar devices along with consumer research to assess average life span. Generally, most electronic devices need to be replaced at least every three years, although some devices need to be replaced sooner. Through its experience in Africa, for instance, Farm Radio International has found that the



MP3 players/recorders that they use in the field need to be replaced every year.

If an item is not locally available, consider the cost of shipping and tariffs if you plan to purchase it elsewhere. In addition, think about whether it is possible to repair the device locally. A brand in the country of your home office that is cheaper than another brand might not be the cheapest option in the long run if it is not locally available for purchase and repair. Once you add the cost of shipping, tariffs, and lack of local repair options, a device could be more expensive than a similar locally available brand that has a higher price. This is particularly important if you plan to purchase anything for your local partners. If they will be unable to replace or repair a device on their own, then it will very quickly become an irrelevant piece of technology.

Ideally, work with your local partners to purchase any additional equipment or software that they need. Should it be necessary to make any purchases on their behalf, develop a clear plan with them

that includes who will be responsible for maintenance, and how the cost of repairs, upgrades, or replacements will be covered over time. If this is the first time the radio station is using a type of hardware or software, they may not know what it will cost them to replace it or how long it might last. You may need to help them with this process. You and any partners you will be procuring equipment for can use the [Equipment Tracking Worksheet](#), at the end of this component to track each item's age, operational status, and other relevant information.

All price estimates below are based on retail prices in the United States and are accurate as of April 2014. Prices and availability may vary in each country.

Audio Recording Devices

The type of audio recording device you will need will depend on how you plan to use it. Generally speaking, you will either be recording in the field, through the phone, or in the studio. The first two types of recordings will require specific audio recording devices, whereas recording in a studio can be done with only a computer, a good microphone, and the right software. Deciding on what type of setup you need will depend on how you plan to collect audio. In this section we will look at options for each method of audio recording.

In The Field

Your primary option for recording audio in the field is a digital voice recorder (also sometimes called an audio recorder or MP3 recorder). Nowadays, most recorders

are portable, handheld devices that run on batteries and can save audio that you record into a digital format, such as a WAV or MP3.

THINGS TO CONSIDER

- **Memory:** Some recorders have a built-in internal memory, while others use removable SD memory. Recorders that use SD memory will give you greater flexibility because if you fill up a memory card while in the field, you can always exchange it for an empty one. If the recorder only has internal memory, you will need to connect it to a computer to clear up room first.
- **Battery life:** The average battery life for a device depends on typical usage, and what type of battery it uses. Some recorders have built-in batteries. Ideally, you should look for a recorder that has a removable battery. That way you can always have a backup battery charged and ready to use if the battery dies.
- **Audio quality:** Audio quality is measured through a combination of sample rate and bit depth, which are expressed in terms such as 96kHz/24-bit. Without going into too much detail, the larger these numbers



are, the higher quality audio you will be recording. In reality though, your average listener will likely not notice any difference between 24-bit and 16-bit or 96kHz and 48kHz. What you will notice, however, is file size. A file recorded in 96kHz/24-bit will be about triple the size of one recorded in 48kHz/16-bit. This is all to say that you should not necessarily feel the need to purchase a recorder with a high sample rate and bit depth.

- **Microphone quality:** What will likely impact the quality of sound much more than the audio recording capacity of the recorder is the microphone quality. Some recorders have adjustable microphones that you can move, while others are fixed. Models may also have more than one microphone on board to allow for multidirectional recording. You will also see models that have condenser microphones, which generally record at a higher quality than standard (or dynamic) microphones, although they are more

likely to break given their sensitivity. Last, you should check to see if the device has a microphone input jack. This will enable you to plug in an external microphone if you desire that flexibility.

- **Durability:** The durability of each device varies, and some are certainly designed to withstand more than others. You will want to check consumer and expert reviews for the actual durability of any device you are considering. Also check with colleagues to see if they have had any experience with a given device in the field.
- **Multifunctionality:** Some devices you use, such as mobile phones or MP3 players, also have digital recorders built in. In its work with community radio stations in Africa, for example, Farm Radio International uses the Sansa Clip+ MP3 player because of its low cost, compact size, and decent quality. As long as multifunction devices meet your minimum needs, you may want to consider

using them instead of a standalone audio recorder to reduce costs and the number of devices that staff need to carry around.

ESTIMATED PRICE RANGE:

Prices for standalone audio recorders can range from \$40 to \$500, although you can find models that will likely more than suit your needs on the lower end of this spectrum. In the \$30 to \$60 range, you can also find several different MP3 players with built-in microphones that may be sufficient for your purposes.

FOR MORE INFORMATION:

There are lots of resources online, although B&H has a fairly helpful buyer's guide to handheld digital audio recorders available at: <http://bhpho.to/wbyaO>

Through the Phone

As discussed in Component 3, there are several options for recording phone conversations using a smartphone, a landline, or a computer, which will provide radio or podcast-quality audio. All require use of an app, adaptor, and/or other device to facilitate recording.

Although you can always place your phone on speakerphone and record audio that way, for a small investment you can purchase a phone recorder that will greatly improve the audio quality of your recording. As mentioned in Component 3, there are a few different low-cost options to recording through the phone. There are also much more sophisticated devices such as digital telephone hybrids that allow for cleaner sound than lower cost options. For live broadcasts of interviews, you can also configure the radio station's mixer to receive audio from the phone.

THINGS TO CONSIDER

- **Compatibility:** Any phone recorder you plan to purchase must be compatible with the phone you will be using. Phone recorders that plug directly into landlines are different than those that plug directly into mobile phones.
- **Additional hardware:** Most mobile phone recorders are standalone devices with built-in or SD memory, so all you need is the recorder and cables — should be included — to connect to your phone. For some landline recorders, however, you may need to connect them into a computer to record the audio. In addition, if you plan to use a digital hybrid, you will need to connect the device into your mixer for live broadcasts or a computer for recording.
- **Audio quality:** Generally speaking, phone recorders that connect directly into your phone will record better quality audio than



those that rely on external microphones to pick up sound. Placing the call to or from a landline will also generally result in better quality audio than calls placed to or from mobile phones. Mobile phones can also sometimes create electromagnetic interference, which you've probably noticed if you have ever had a mobile phone close to a computer.

- **Multifunctionality:** Some digital voice recorders also include functionality for tapping into mobile phones to record calls. It may be worthwhile exploring devices that can do both if you plan to record audio both out in the field and over the phone.



In the Studio

If you are going to be working with local radio stations, they will almost certainly have the appropriate setup for recording interviews in the studio. There may be instances, however, when you want to record an interview or audio from your own office. If you have a digital voice recorder, you can always use that to record your interview in the office. That said, you can also record the interview directly into your computer if you do not have a digital voice recorder available or want to use a better quality setup.

THINGS TO CONSIDER

- **Computer:** When recording audio directly into your computer, use a computer that runs smoothly without any latency — or lag as it is commonly called. Close all programs that are running except for the software needed to record the audio. If the computer you are using records clearly without any jumps or delay, it should be fine. Otherwise, try limiting the number of programs that run at start

ESTIMATED PRICE RANGE:

The lowest cost option is probably the Olympus TP-8 telephone pick up, which is a dual external microphone device that costs around \$20. The Mini Recorder Control from Radio Shack is another cheap option for recording landline phones at around \$25. Standalone phone recorders range from around \$50 to \$150,

while digital telephone hybrids can cost from \$450 and up.

For more information: Atlantic Public Radio's website [Transom.org](http://transom.org) has a fairly informative, although slightly dated, article on recording phone calls for interviews that includes audio samples from each recording device. The article is available online at: <http://transom.org/?p=1165>

up by typing 'msconfig' into the 'Run' field in the Windows start menu and disabling all of the items listed under the Startup tab. Any essential programs will override this disabling, so do not worry. Restart your computer. If it is still too slow, you will likely need to find another computer to use.

- **Sound card:** As mentioned in [Component 3](#), if you plan to do a lot of recording on the computer, it is worth investing in a good quality sound card. A sound card with a 192kHz sampling rate, 24 bit resolution, and an SNR of at least 95 dB should be more than sufficient for your needs. Also, look for a sound card with more than one microphone input jack, so that you can record from more than one microphone simultaneously.
- **Microphones:** Using at least two microphones will make it much easier to conduct an interview, otherwise you will need to sit huddled around a microphone or pass the microphone back and forth. Most computer-ready microphones will either have a USB plug or a 3.5mm audio input plug. If you

want to use a higher quality microphone with an XLR or ¼ inch input plug, you will either need a plug adapter or a USB audio interface to connect them to your computer. More information on microphones is provided later in this component. To figure out what type of microphone is best for you, check out reviews of — and if possible, test — a few different microphones that fall within your price range.

- **Pop filters:** These are placed in front of the microphone to help reduce the 'popping' sound that occurs when a person speaking is very close to a microphone. You can buy these or you can make your own with an embroidery hoop and nylon stockings. Search online for 'DIY pop filters' to find several different do-it-yourself designs.



ESTIMATED PRICE RANGE:

Since there are a number of different factors to setting up a computer recording studio, prices will vary based on your needs and choices. Decent sound cards generally range from \$75 to \$175. Reasonable quality USB dynamic microphones can be found for as low as \$30, while higher quality studio condenser microphones can sometimes be found for as low as \$60. If you want to use a USB audio interface, expect to pay at least \$80. The other alternative for using an XLR or ¼" microphone is to use an adapter. A decent XLR-to-USB microphone adapter will cost you about \$40 to \$60. Finally, a decent pop filter will cost about \$15 or around \$2 if you build your own.

FOR MORE INFORMATION:

In the event that you need to help one of your radio station partners improve its recording facilities, Transom.org has a fairly comprehensive guide to setting up a small recording studio at: <http://transom.org/?p=23904>.

Interactive Devices

As discussed in [Component 4](#), interactivity can come in many forms. This section will focus primarily on the types of devices that you may need to purchase to facilitate that interaction. It will not talk about mobile phones, since you are not likely to be purchasing mobile phones for individuals in your target audience. Instead, this section covers devices needed to set up your own interactive voice response (IVR) system and also devices that enable users to record radio programming for playback.

Interactive Voice Response (IVR)

Choosing the right IVR solution for your needs can be complicated. Although these systems have been used by companies for many years, there are growing numbers of options that are explicitly designed to target the needs of development organizations.

THINGS TO CONSIDER

- **Hosting location:** Some IVR systems are hosted in the cloud, which means that you will need internet access in order to manage the system. The benefit of these systems is that they do not require any extra equipment on your end besides a computer and it will operate continuously even during periods when you do not have access to electricity. Other IVR systems are hosted locally, giving you complete control over their management. The benefit of these systems is that they do not require internet access to operate, although they do require a reliable power supply and staff qualified to manage the hardware. If your radio station partner has neither reliable access to electricity or internet, then you may want to consider hosting the IVR system off-site for them or not using IVR at all.
- **Additional hardware:** If you plan to host your IVR system locally, you will need to have a dedicated computer to run the system and a GSM or UMTS gateway to route calls into the system using mobile phone SIM cards. Some local systems may also require their own hardware to manage the calls and to interact with your computer or mixer. You may also want to purchase a UPS backup device if your area is prone to power outages.



- **Functionality:** The functionality of IVR systems varies. Confirm that the system you plan to use meets your functionality requirements. Some providers may be willing to add on a function that you want, so make sure to ask even if you do not see it offered.

ESTIMATED PRICE RANGE:

The price range for an IVR system really depends on the functionality you need and how you plan to host it. Check with several providers first for price quotes. The price of a GSM or UMTS gateway can range from as low as \$700 up to \$2,000 or more, while UPS backup devices range from as low as \$50 up to \$400 or more. The exact price of each of these devices will depend upon your specific needs. Also, remember to consider the ongoing cost of mobile phone minutes if you will be calling out to people.

Recordable Radios

If you are working with radio agents, or even listening groups, recordable radios can be a great way for them to record your program to play back to individuals within your target audience upon demand. This will save you the time and resources of having to distribute recordings of your program after the fact via MP3 player.

THINGS TO CONSIDER

- **Power source:** Many of the models on the market are battery powered and require either disposable batteries or mains electricity (that is, electricity through a power outlet). If the radios will be used off the grid, consider models that can operate from other sources of power. The Lifoplayer MP3 by Lifeline Energy, for example, has solar and wind-up chargers built into it, as well as ability to charge off of mains or a car battery.
- **Memory:** Like digital voice recorders, most recordable radios have one of two types of memory: internal or SD memory. With internal memory, you cannot swap out memory cards once they get full and will have to erase recordings to make room for new ones. Radios that use SD memory allow the user to swap out SD memory cards, cost permitting, so they could actually catalog every show they record on SD cards and insert them into the radio for playback on demand. If you



want to push out special content to your audience that did not air on the radio, you can also pre-load it on an SD memory card and mail it to the radio agents or listening group leaders.

- **Local availability:** This really applies to all of the devices mentioned in this component, but particularly so with the recordable radios since the end user will be one of your beneficiaries and not project or partner staff. Ideally, whatever device you recommend should be available to be purchased or repaired locally. Otherwise, once your project ends the radio agents and listening groups will have no way to sustain their activities with a recordable radio if it breaks.
- **Durability:** Since these radios will likely be passed around and used out in the open, you will want to look for models that are durable. Dust and moisture are two of the most common reasons why electronic equipment malfunctions, and

these radios will likely see a fair share of both. As with digital voice recorders, check consumer and expert reviews to research the true durability of the models you are considering.

ESTIMATED PRICE RANGE

The base price of the Lifepayer MP3 is currently \$80. Prices for consumer models vary by other brands, but you can expect to pay in the range of \$100 to \$250 per unit, depending on the make and model.

FOR MORE INFORMATION

Additional information on the Lifepayer can be found in Component 1. Kaito, Grundig, and Degen are a few brands that also produce consumer models of recordable radios.

Peripheral Devices

Microphones

If you are planning to record in the studio — or even as a supplement to your digital voice recorder — you will need to select the most appropriate microphone for your needs. There are a number of factors to consider when determining the right type of microphone to purchase, including:

- type of microphone (dynamic, condenser, ribbon)
- polar pattern (cardioid, shotgun, omnidirectional, figure 8)
- diaphragm size (large, medium, small)
- orientation (desktop, headset, handheld, lapel)

Dynamic microphones are what most people would recognize as standard microphones. They provide decent sound quality and are fairly durable. Condenser microphones, on the other hand, are more sensitive than dynamic microphones but record much better sound quality. Condenser microphones also require a power supply called phantom power.

The polar pattern is the direction from which the microphone records audio. Cardioids record in a heart shaped pattern directly in front of the microphone. Shotguns are much more directional and focused on audio coming from the direction toward which the microphone is pointed. Omnidirectional microphones pick up audio from all directions, while figure 8s pick up audio equally from the front and back, but not from the sides. There

are other polar patterns besides these, but these are the most common types that you will encounter.

Diaphragm size refers to the width of the microphone capsule. Unless you are a trained sound engineer, chances are that you will not notice the difference in audio quality between diaphragm sizes. For spoken word, though, larger diaphragms tend to be preferred by most studios.

Finally, you will need to decide on the orientation of your microphone. Some microphones are designed to rest on a desk or tabletop, others can be mounted to a tripod. If you are recording into a computer, you can also use a headset microphone, although these are more difficult to share

with multiple speakers if you only have one audio input jack on your computer. Handheld microphones are often preferred when interviewing subjects out in the field, although some people prefer lapel microphones that clip onto the individual's shirt.

Use will determine the best microphone for you. If you are working in a studio or the office, a desktop or mounted condenser microphone with a large diaphragm and cardioid polar pattern is your best option. If you want to capture an interview in the field without holding your digital voice recorder close to the speaker, consider an omnidirectional lapel microphone that can be clipped onto clothing to capture audio.

What is phantom power and how do I get it?

Phantom power is a 48-volt power source needed to operate a condenser microphone. You can get it through a phantom power supply unit, a mixer, or a preamplifier. Not all mixers or preamplifiers provide phantom power, so check first. If you are using a USB condenser microphone it will be powered through the USB port.





Headphones

If you would like to monitor the audio you are recording in real time, purchase a pair of headphones. Many digital voice recorders have an audio output jack that you can plug your headphones into. This will enable you to hear the audio as it is being captured by the recorder. If your recorder does not allow for real-time monitoring, a pair of headphones is still useful for playing back what you have recorded to check if you need to do a second take. For between \$30 and \$50 you should be able to find a pair of headphones that is suitable for your needs.

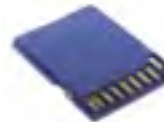
Tripods

If you are planning to record out in the field, consider purchasing a mini tripod to mount your digital voice recorder on, rather than having to hold it the whole time. Not all voice recorders have a tripod mount, so check in advance before buying one. If you are using a mounted microphone in the studio, you will also need to purchase a tripod to hold the microphone. A mini tripod can be purchased for as little as \$2, whereas larger tripods for the studio can cost between \$30 and \$50.



SD Memory Cards

If you are using a recording device or radio that uses SD memory, you will need to purchase SD memory cards. Many models use microSD, which are a smaller version of an SD card. Most microSD cards also come with a standard SD card adapter so that you



can use it with any device that takes either microSD or standard SD memory. Prices of SD memory cards continue to fall. You can currently find a 32GB card for about \$20 to \$30 and a 64GB card for \$60 to \$70.

Rechargeable Batteries

If you are planning to use a device that takes alkaline batteries, consider purchasing rechargeable batteries. They have less environmental impact than disposable batteries and will likely save you money over time. When searching for rechargeable batteries, look for the milliamps hour (or mAh). The higher the mAh, the longer the battery will last when charged. Prices vary based on brand and mAh, so shop around first.





Off-the-Grid Chargers

If you will be recording audio for extended periods of time in a place that does not have dependable access to electricity and your device does not use disposable batteries, consider an off-the-grid charger. The most common solutions are either solar-powered charger or wind-up chargers. A solar charger with enough electrical output to power a digital voice recorder will cost you about \$100 to \$150, while a wind-up (or hand crank) charger costs between \$15 and \$30. Obviously, you will need to be somewhere with strong sunlight to get the most benefit from a solar charger. Not all chargers provide the same level of output, so research before buying.

Software

To implement your interactive radio activity, your project or your partners will likely consider using three different types of software: audio recording and editing software, SMS management software, and IVR management software. Whether you use any of these types of software will depend on how involved you will be with radio program production and the type of interactivity you plan to use.

Audio Recording and Editing

To record and edit audio through a computer, you will need audio recording and editing software. There are a number of options available that you can purchase, although before investing any money in editing software you might want to consider using



a free, open-source program to see if it meets your needs. One of the most popular, free audio editing programs available is called Audacity, which allows you to both record and edit audio. It is fairly easy to use with a little practice and will likely have all of the functionality that you require.

A basic guide to recording and editing audio with Audacity can be found online [here](#). There are also lots of tutorials available on the Audacity website, as well as user-created video tutorials that can be found online on sites like YouTube and Vimeo. You can download Audacity free online at: <http://audacity.sourceforge.net/>.

SMS Management

If you are planning to interact with your listeners via SMS, consider using SMS management software to help you push out messages in bulk and to organize messages you receive. To send messages through your computer, you will need to be connected to the internet or to a mobile phone network through a compatible mobile phone or GSM modem. Sending messages through the internet is generally much cheaper than by mobile phone.

The most popular free program for managing SMS interaction is FrontlineSMS, which can be downloaded for free at: <http://www.frontlinesms.com>. Their cloud-based version, which provides hosting of all of your content, is available on a subscription basis for \$10/month. There are other options available as well, so you will want to look at a few different options to decide which one is best for your purposes. Features

vary by program, but most of them at least include features for sending bulk messages, automatically replying to incoming messages, and visualizing responses to polls.

IVR Management

All of the IVR solutions mentioned earlier have their own locally run or cloud-based software with their systems. There are also a number of other providers of IVR systems that sell IVR management software that you can install and manage on your own. The downside of some these systems is that they are built primarily to be used to help businesses route incoming calls, and may not have all of the features that you need. They are also generally built to work with landlines, so they may not be compatible with mobile phone systems.

All of that notwithstanding, it still may be worth looking into a couple of IVR

management programs in addition to those highlighted in this component. It is possible that one of these solutions meets your technical requirements—or can be adapted by the developer to meet your requirements—at a reasonable cost. Since IVR systems can be a bit complex to set up and manage, confirm that the provider you use offers technical support for free or at a reasonable cost.



COMPONENT SIX

Critical success factors

- *Items purchased are based on what is most likely to help achieve your objectives.*
- *Total cost (including necessary support and training) is reasonable and within your budget.*
- *Items purchased are suitable to the local context, including environmental conditions, technical compatibility, availability of local repair, and user capacity.*
- *Local partners have the capacity to repair, upgrade, and replace items purchased for them.*

COMPONENT SIX

Worksheets

- Cost Calculation Worksheet
- Equipment Tracking Worksheet
- How To Use Audacity to Record and Edit Audio



Cost Calculation Worksheet

Item	Distribution	# Needed	Price per Unit	Total price
Total cost of all devices/accessories/software Needed to implement activity				

Congratulations!

You've made it to the end of the toolkit. By now you should be ready to use interactive radio. As with anything new, creating interactive radio programming will not be easy and will require a dedicated team of partners. We encourage you to take an iterative approach to learning and refinement, which over time should make your investments of time and resources more than worthwhile. Make sure to refer back to sections of this toolkit as you develop your interactive radio activities over time. You will likely find that some parts of the toolkit that may not seem relevant right now will become useful as you progress. In addition to this toolkit, never stop exploring other resources and sharing with others who are also learning how to use interactive radio. The process of working with your team to develop engaging and interactive radio programming will not always be easy, but we hope you experience the sense of fulfillment that comes from hearing the radio come alive with interactivity and the impact it has on your target audience and their lives.