Framework for Designing and Implementing
ICT Supported Extension and Information Services

This framework was put together by the MEAS project to help guide design and implementation of ICT interventions in support of extension and information services. It is not a technical manual. Too often the cart is put in front of the horse in the sense that a delivery tool is picked (e.g., mobile phone services), and often also the kind of information to be disseminated using that tool, without first doing the crucial work of identifying information needs, existing sources of information, what level of trust is associated with those sources, etc. In this framework, various ICT tools should be considered as the perhaps best suited delivery method. There are interdependencies between the message content and the tool used, the audience of that message, and the sender.

1) **Identify and assess needs and opportunities**
      At the farm and agribusiness level
      Amongst the information providers (agribusinesses and others)

2) **Build capacity**
      Contribute to workshops and institutional support for technology and methodology input (how to implement the extension model)

3) **Provide ICT support**
      Develop models and protocols for ICT options and use
      Develop support materials (both technical and methodological)
      Collate and curate a demonstration site (Egypt Ag)
      Plan and develop ICT applications
      Develop implementation and ICT testing plans

4) **On-going - Networking and field implementation and evaluation**
      Develop networks amongst key information generators information providers implementation and testing plans
      Work with partners to identify ways to improve information channels, tools, extension messages, and delivery formats
      Evaluate progress

One can use the extension framework to work with partners to develop agricultural information that is practical, accessible, relevant and engaging (see Annex 1).

Audience and needs. Identifying the key players and their major needs

Solutions. Identifying the major opportunities

Packaging and delivery of the message – How can messages best be packaged and delivered - including development and testing of "new" approaches combined with traditional approaches

Evaluation – How improve different aspects of the process?

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Program Overview

Step	Objective	Indicative Activities
Audience and needs	Assess needs	Discussions. workshop
	Build capacity	Workshops
	Understand existing information channels	Discussions. Workshop, reviews
	Share priorities for refinement	Compile needs, on-line resource development
Solutions	Identify options	Discussions. Workshop
	Test/validate	Field tests
	Build technical capacity	Workshop
	Enhance access to existing information	Reviews; workshops, on-line resource development?
Package and deliver	Understand existing information channels	Workshop, discussions, village surveys, reviews
	Identify delivery options and needed materials	Workshop, discussions
	Build capacity to package materials and to better deliver messages	Workshop, resource material development
	Plan material development, develop and package materials and plan material delivery	Workshop, discussions, material and on-line resource development
	Test delivery and message effectiveness	Field tests
Evaluation with the intent to improve	Workshops	Event Evaluation
	Delivery options	Field surveys, discussions, workshops
	Messages	
	Emerging needs	
	Document impact	

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Program Details:

Audience and Needs.

Objective	Indicative Activities
Understand existing information channels and ICT uses	Discussions. Workshop, reviews
Assess needs	Discussions. workshop
Build capacity	Workshops
Share priorities for refinement	Compile needs, on-line resource development

Key questions? Who are the key private sector players? What are their technical and capacity building needs

Steps
- Understand existing information channels of communication and key players. Where do the different groups get their needed information? What is the credibility associated with information sources.
- Identify existing ICT applications and players – which are successful and why? What has potential for success?.
- Conduct "focus interviews" and joint workshop(s) to identify priority needs and opportunities. Needs and opportunities will need to be identified at both the beneficiary level (farmers) and at the level of the information providers (e.g., Farmer Associations and input suppliers, etc.). Needs will include technical, market and extension methodology aspects.
- Build capacity as needed in needs and opportunity prioritization
- Literature and village review. The identification of information channels plus the needs and opportunities will build off existing reviews and reports
- Share and refine priorities
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Solutions.

Objective	Indicative Activities
Identify options	Discussions. Workshop
Test/validate	Field tests
Build technical capacity	Workshop
Enhance access to existing information	Reviews; workshops, on-line resource development?

Key questions? Based on the specific needs (both technical and methodological) what are the credible, relevant options to meet the priority needs of the different stakeholders?

While farmers will likely be looking for ways to improve their production and incomes, etc., the information providers will be looking for ways to improve their services. This will include strengthening their information access options, their technical skills and their "delivery" skills or options.

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Steps
- Ensure options are credible, relevant and valid. Test as needed.
- Technical strengthening workshops. These should be combined with ICT and extension workshops.
- Work with local groups to identify information sources, ensuring trust of source. Collate established solutions and bring together additional promising possibilities for validation. Specific topics will likely include:
  - Technical topics Content.
  - Market demands and product quality

Packaging and delivery - Understanding existing systems and the appropriate role of ICT in Extension

Objective	Indicative Activities
Understand existing information channels	Workshop, discussions, village surveys, reviews
Identify delivery options and needed materials	Workshop, discussions
Build capacity to package materials and to better deliver messages	Workshop, resource material development
Plan material development, develop and package materials and plan material delivery	Workshop, discussions, material and on-line resource development
Test delivery and message effectiveness	Field tests

Key questions:
- How do people access, distribute and package information to raise awareness and to convince people to adopt?
- How can they improve their access to information and improve the credibility and trust associated with themselves and their messages.
- How can strategic partnerships be used to build off existing dissemination activities (including priorities, possible models, training needs and consider how assess effectiveness)
  - Farmer Associations, Input suppliers and FFS, etc., e.g., collaboration on video development and dissemination
  - Ensure recommendations are clearly beneficial and easily testable. Are inputs available and recommendations complete?

Steps
- To improve delivery, we need to develop partnerships to
- Engage existing channels of communication, key players and the technical and methodology skills needed.
- Conduct capacity building workshops in both technical and dissemination methods.
- Analyze Key elements in an extension framework in relation to major considerations for ICT in Ag extension. Understand where are we now and where do we want to be? Break down extension elements of:

  - Where might ICT help (consider integration across elements)
  - Who to engage and how

Next steps (including how to encourage others to engage/participate)
- Analyze recommendations for testability and benefit.
- Evaluate trust (and see how it can be enhanced) associated with the information sources.
- Strengthen Packaging. How is the information presently packaged – how does it need to be packaged to be understandable and available for the different audiences?
- Identify ICT and traditional options to better make information available to information providers, and then options to move information to farmers.
- Work with partners to identify the most appropriate form of information for the different audiences.
- Workshops may focus on evaluation of needed materials and development protocols for different materials

Resources to draw on
- Specific ideas already developed for utilizing ICT in the project
- Preparatory work conducted by others
- The Egypt ICT landscape – report to be collated

Evaluation

Objective	Indicative Activities
Improve Workshops	Event Evaluation
Improve Delivery options	Field surveys, discussions, workshops
Improve Messages	Field surveys, discussions, workshops
Improve Emerging needs	Field surveys, discussions, workshops
Document impact	Field surveys, discussions, workshops

Key questions

- How can we improve the message, the delivery format and identify emerging needs?

Steps.

- Work with partners and external to establish procedures for collecting and responding to feedback to improve the message, the delivery format and to identify emerging needs.

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An effective information and communication system needs to provide:

- Useable content that meets real needs
- Materials that are used/applied
- Feedback mechanisms to respond to emerging needs and to improve existing systems and messages.
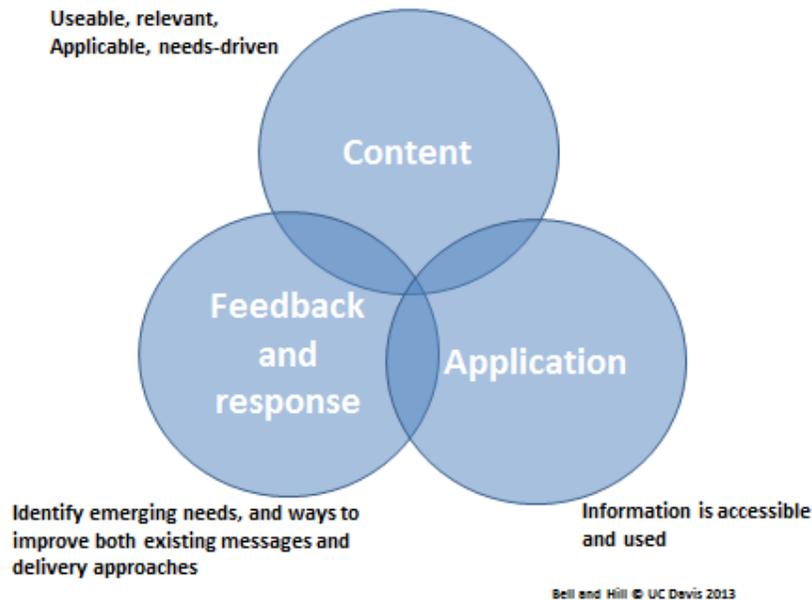
Useable, relevant,
Applicable, needs-driven

Content

Feedback and response

Application

Identify emerging needs, and ways to
improve both existing messages and
delivery approaches

Information is accessible
and used

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Annex 1.   Background Information to Help Construct a Sound Extension Strategy

The following outlines the UC Davis model used in extension and the associated integration of ICT. The extent to which the following information is available will greatly accelerate progress towards designing a strategy and implementing an ICT supported extension and information service.

Audience and needs

What are the audiences' priority information needs?

Identify the top 3-5 priority problems that farmers and agribusinesses wish to see addressed.

Also note the needs of the information providers/intermediaries.

Note: ICT itself, e.g., a tool like cell phone iform builder, can be used to collect survey information such as needs by location. Other methods include concept mapping (see http://www.meas-extension.org/meas-offers/pilot-projects) and workshops such as the GreenIdeas proposed by MSU.
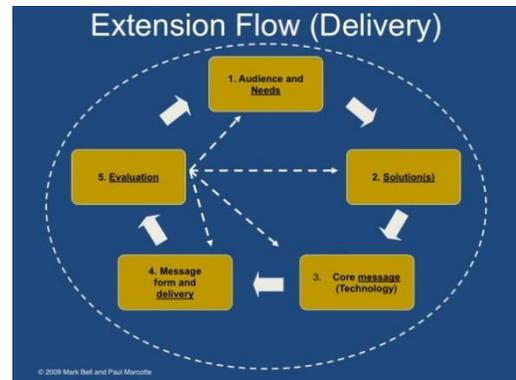
Solutions

What are the sources of credible information?

How is information validated and tested before promotion?

What are the projects (past or ongoing) being implemented that will/could provide content for farmers and for intermediaries?

Core message

What is the process to break down the message in terms of what the audience(s) needs to know?

Message packaging and delivery

What is (or are) the most effective ways to package and deliver information?

Where and how do farmers get information now? (in general, not just agriculture).

What is the level of trust associated with each source of information?

Who are the intermediaries or other potential partners that can help in message packaging and delivery? (Note: Agribusinesses can take on the role of audience, i.e., in terms of their need for information, but also as source of information for other links in the value chain)

Assess the existing dissemination infrastructure and potential strategic partnerships:

Map audience information access (see figure 1 below):

- Who is active and who can/will be engaged. Can they play a complementary role? Consider: 1) Farmer Associations, 2) Input suppliers, 3) NGOs, and existing projects (funded by various donors), 4) Public sector staff, 5) Other?
- Where and how do these intermediaries access information now?
- What is the level of trust associated with each?

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- What is the ICT access and types of usage of each (e.g., use cell phone, radio, TV, etc.)?
- Are there regional differences (e.g., what kind of intermediaries will you rely on where and what is their ICT ability / access, etc.)?
- Where in the project region are existing demonstration farms, sites, information centers, farmer field school groups, etc.? (Ideally present on a map). Note that access to information is often not sufficient to lead to behavior change (see Figure 2).
- AND how can the project build on or complement all these existing efforts?

Sources of information	Level of trust	Their sources of information	Methods of delivery

Farmers, Producer Organizations, etc.
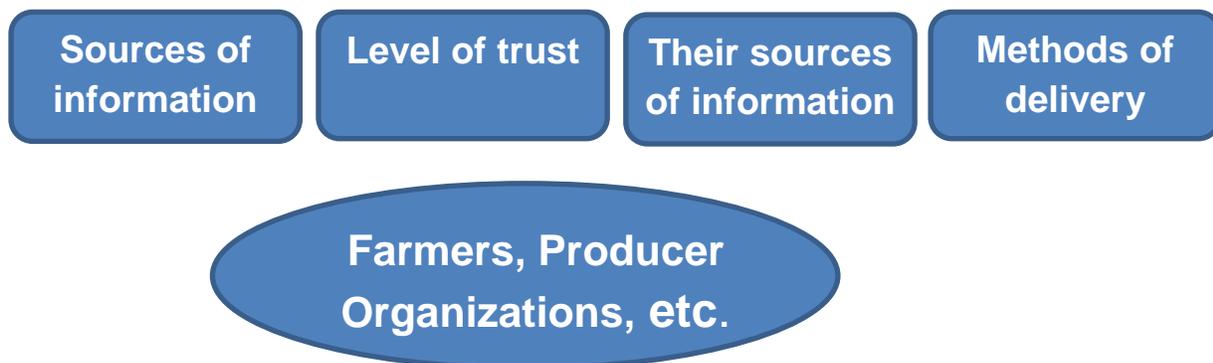
Figure 1. Mapping the audience(s) information access
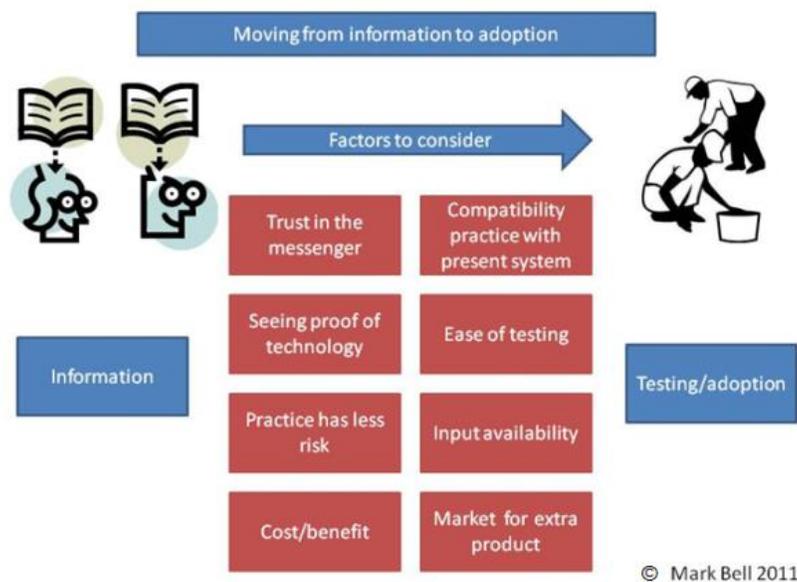
Figure 2. Moving from information to adoption

Evaluation

How will the usefulness of the message, the effectiveness and appropriateness of the delivery options and the rate of adoption be evaluated?

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July 2013