# Key Questions for ICT Integration in Emergencies

The **purpose** of the key questions for ICT Integration in Emergencies is to help staff make informed decisions about whether or not to use ICT4E. Whether considering ICT as part of the design of a new project or for integration in an existing project, **do not make a decision to incorporate ICT4E into emergency programming until you have answered these questions**:

1. What is the **purpose** of your ICT4D solution?
2. What is the **ICT landscape** in the country and project area and country?
3. What is the **ICT4D landscape** in the project area and for the problem(s) you seek to address?
4. Who are the project’s potential ICT4D **users**?
5. Who are the project’s ICT4D **beneficiaries**?
6. Who are the project’s ICT4D **implementers**?
7. How much **time** is needed **to develop and test** the solution?
8. Does the project have **money** to cover the cost of an ICT4D solution?

In technology terms, these key questions for ICT4D concept development are asked during the “Initiate” stage of the ICT4D Project Lifecycle.

**Key Question 1: What is the purpose of your ICT4E solution?**

ICT solutions can have multiple purposes. But it is important to define the primary and, if applicable, secondary purpose(s) of your solution before you begin defining the actual content, messages, and/or questions to be asked. Defining your purpose will help you begin to identify whether your ICT solution will involve single or multiple ICT applications and/or users.

Examples:

* Primary (and only) purpose: collect survey data
* Primary purpose: project monitoring
	+ Secondary purpose: Aggregating project data into country program or Agency databases
* Primary purpose: counseling, behavior change communication
	+ Secondary purpose: monitoring, data collection

**Key Question 2: What is the ICT landscape in the project area and country?** i

ICT landscape refers to an assessment and analysis of the current technology context in the project area and the country. This includes things such as:

* *Mobile phone penetration* – The number of active mobile phone numbers within a specific population (usually presented as a percentage). When possible, disaggregate this information by urban and rural, male and female, basic phone and smartphone, and carrier and platform use.
* *Key technology players* – Who are the major mobile network operators and telecoms, major handset manufacturers? What is mobile network coverage in the project area?
* *Trends* – current local costs for SMS, GPRS, basic phones, smartphones, tablets, etc. Are these prices likely to decrease, increase or stay the same over time?
* *Current industry regulations* – What are technology (especially mobile) industry regulations, policies and upcoming changes? Do any pose a challenge or advantage to the project’s proposed use of ICT?
* *Electricity* – Is there a reliable power supply in the project area? If no, what are available alternatives for powering ICT hardware?
* *Pre-positioned devices and trained staff* – Are devices available for use in the project – either through pre-positioned stock or locally sourced? Are staff with knowledge of the ICT solution available in the time frame needed? Is there dedicated IT staff to support device configuration and troubleshooting?

IT staff are often best placed to answer questions related to the ICT landscape. If program teams are considering the use of ICT in a project, they should immediately initiate discussions with IT staff in order to ensure that essential elements of the ICT landscape are understood. If there are no IT staff or ICT is something new for the program staff, think hard about whether this is the best time to integrate ICT for that emergency.

**Key Question 3: What is the ICT4E landscape in the project area and for the problem(s) you seek to address?**

There are many existing ICT solutions in use among development and humanitarian actors worldwide. There is no need to “re-invent the wheel” if an appropriate solution already exists. Likewise, caution should be used before investing in an ICT solution that is not sustainable or scalable within the project and country context. Before making a decision to invest in ICT, it is important to understand:

* What kind of ICT4E solutions are being used or promoted in the project area? Who are the major ICT actors (implementers, NGO, technology partners, government, donors, etc.) in the country?
* What kind of ICT solutions already exist for the problem you want to address?
* How might you adopt or adapt existing ICT solutions?
* What are national policies regarding ICT? What are the country’s regulations about data privacy and security?

**Key Question 4: Who are the project’s potential ICT4E users?**

“Users” are the people who will actually interact with the ICT4D solution (i.e. the people who use the technology hardware and/or software).

Examples:

* INGO consortium staff members carrying out rapid assessments;
* Local partners conducting post-distribution monitoring;
* Staff registering program participants;
* Government supervisors monitoring cash-for-work attendance

It is possible that the problem(s) you are trying to address will require a solution that has multiple categories of ICT users (e.g., community-based workers, project supervisors, etc.). Identify all categories of proposed ICT users in your project. If you have multiple types of users, expect that you might need to design separate ICT solutions for each type of user.

When identifying potential ICT4D users it is also important to know their profile:

* **Language**: What is the users’ primary and/or working language?
* **Literacy**: Can the users read and write? If yes, in which language are they most comfortable reading and writing?
* **Mobile access**: What is users’ current access to mobile technology? Do they own or share mobile devices? Who pays for the phone and the airtime? What kind of mobile device(s) is most common among users? How long do people generally have the same mobile phone numbers? How do people recharge their devices?
* **Mobile literacy**: What is the users’ range of ability to operate mobile applications and functions? Do they know how to use a mobile phone? Can users make calls, send/receive SMS, access the internet, use email, etc.?
* **Reaction**: What is users’ the level of comfort with and openness to an ICT solution? For example, do they feel safe using the ICT device in the field?

**Key Question 5: Who are the project’s potential ICT beneficiaries?**

**Know the Potential Users & Beneficiaries**

When assessing potential users’ access to mobile technology, pay attention to any uniform **gender or age-related differences in mobile ownership, access and literacy**.

If almost every household in the project area owns a mobile phone, but that phone is most often held and managed by the male head of household, how might that effect your plans to address post-disaster needs through a mobile phone-based ICT4D solution?

“Beneficiaries” are the people with whom the users share or use the ICT4D application.

Examples:

* Survey respondents;
* Survivors of natural disasters who receive non-food items;
* Community-based workers supervised by a government worker;

If you identified multiple users for your ICT4E solution, be sure to identify the beneficiaries who correspond with each user. The same questions of language, literacy, ICT access, ICT literacy and reaction asked of potential ICT4D users should also be asked of potential beneficiaries.

  [[1]](#endnote-1)

**Figure 1. Relationships between ICT4D implementers, users and beneficiaries.**

**Key Question 6: Who are the project’s ICT4D implementers?**

As shown in **Figure 1**, ICT4D implementers are the people involved in developing and delivering the ICT4D solution. The core team of implementers must include subject matter experts for the target sector (e.g., emergency, health, agriculture, education, etc.), program managers (your organization and partners) who are familiar with the operating environment and will oversee implementation, as well as technology specialists who can help select, design, develop, test and deploy the ICT solution. Before making an investment in ICT, consider:

* Does your organization have the necessary in-country capacity in terms of subject matter expertise, technology expertise, available staff time, and financial resources to select, design, develop, test and deploy the proposed ICT4E solution? If no, what outside expertise are needed?
* Is there sufficient capacity among the in-country implementers (your organization and/or partners) to operate and maintain the ICT4E solution once deployed? If no, what support is needed to strengthen in-country capacity to operate and maintain the solution?
* Has your organization mapped the data flow and estimated the size of the target database?

If the proposed ICT4E solution is to be phased-over to a partner or government for continued use beyond the life of the project, it is essential that key partner/government stakeholders are engaged as implementers during the selection and development of the ICT solution. If your project plans to phase-over its ICT solution, answer the following questions:

* What is the partner/government’s level of comfort with and openness to the proposed ICT solution?

**Key Question 7: How much time is needed to develop and test the solution?**

The time required varies depending on the complexity of the ICT solution, the number of people involved, and whether or not the solution is building off of an existing platform or is being built from scratch. But regardless of the complexity, all ICT solutions should include these four key stages: analysis of solution requirements, solution architecture and design, testing, and deployment. Before investing in ICT, consider:

* How much time is there before the ICT solution needs to be deployed?
* How much time remains in the project?

Project and country program teams, especially those with limited experience in ICT, are strongly encouraged to contact the Regional ICT Special and Regional Technical Advisor(s) in the sector of interest for their input on the time required to design, test and deploy the proposed ICT solution.

**Key Question 8: Does the project have money to cover the ICT4D costs?**

No ICT4D solution is free of cost. Before deciding whether or not to pursue an ICT4D solution for the identified problem, make sure that you have sufficient funds to cover the costs of solution design, testing, deployment, operations and maintenance. Costs that should be considered include:

* Cost for either internal (CRS) or external subject matter and/or technology specialists to support solution selection and development;
* Devices and other hardware costs—including initial purchase, maintenance, repair, and replacement costs;
* Software costs;
* Data plan or other communication costs (e.g., SMS, etc.)
* Staff and/or partner costs to oversee deployment, operations and maintenance of the solution.

## Making a go/no-go decision for ICT4E

Once these concept development questions are answered, teams should review the responses to make an informed decision about whether or not to pursue investment in ICT4E in their project. The ICT4E Integration Analysis Tool can be used to facilitate go/no-go reflection.

If a “go” decision is made, teams should immediately complete the online [ICT4D Project Support Request](https://global.crs.org/teams/GKIM/Lists/Project%20Log/NewForm.aspx?RootFolder=/teams/GKIM/Lists/Project%20Log&Source=https://global.crs.org/teams/GKIM/Lists/Project%2520Log/Project%2520Definitions.aspx) form to alert and access support from CRS’ Global Knowledge and Information Management (GKIM) team.

1. [↑](#endnote-ref-1)