

Mobile device based data collection

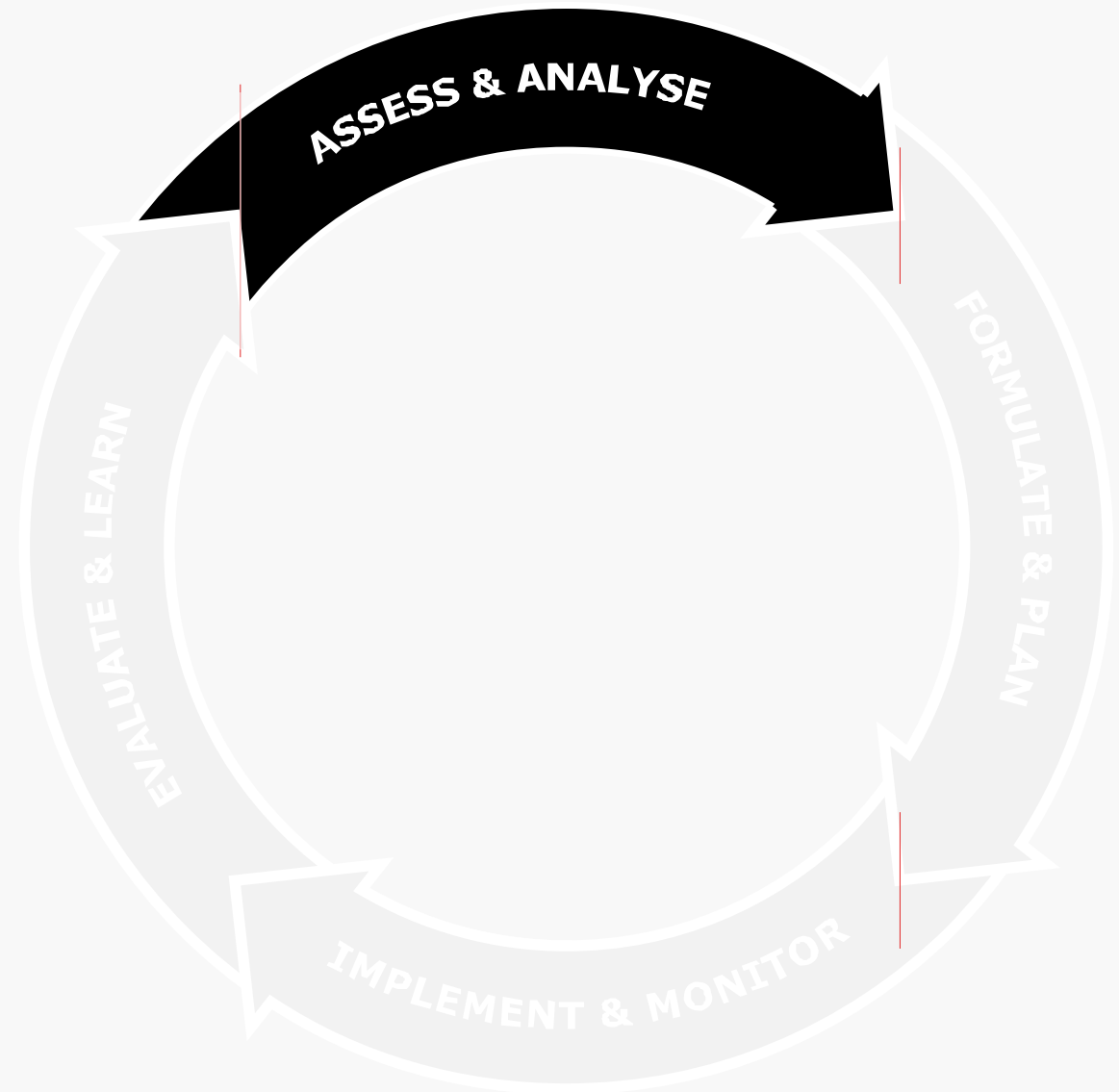
DeviceMagic + Survey 123

@International Committee of the Red Cross

Nomad Workshop – Amman 27.01.16

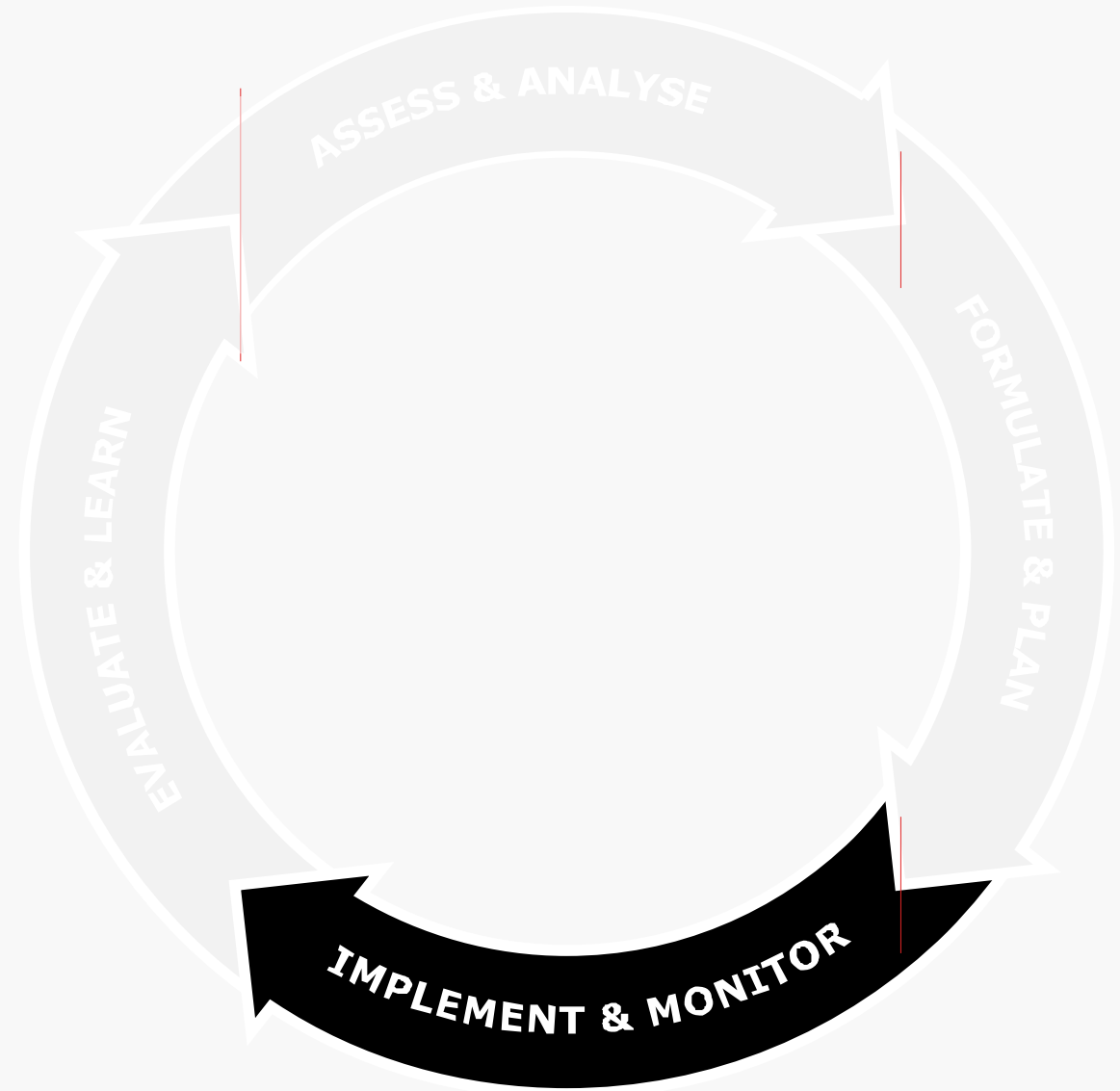
Assessments + situation monitoring

- Methods vary according to situation, information requirements and time available
- Can be rapid collecting data mostly at community level or more detailed involving household or individual surveys
- Communication with affected communities



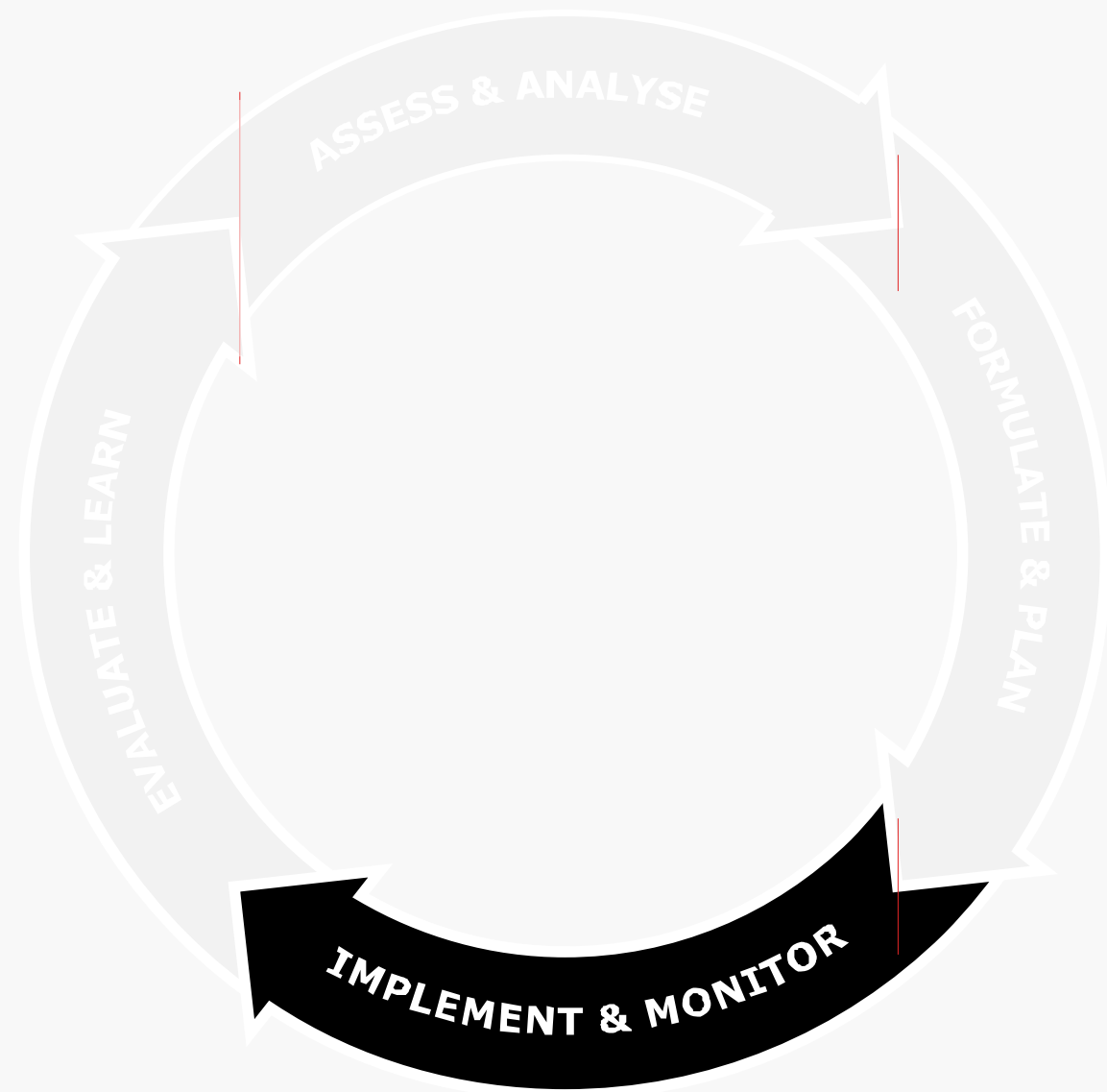
Beneficiary registration

- Methods vary depending on the context + project
- Structured data in large amounts → In an average month in 2014, 900 distributions were recorded for 1.3 million households or 7.5 million individuals. This is equivalent to anywhere **between 225 and 900 hours of data entry!**
- Communication with affected communities



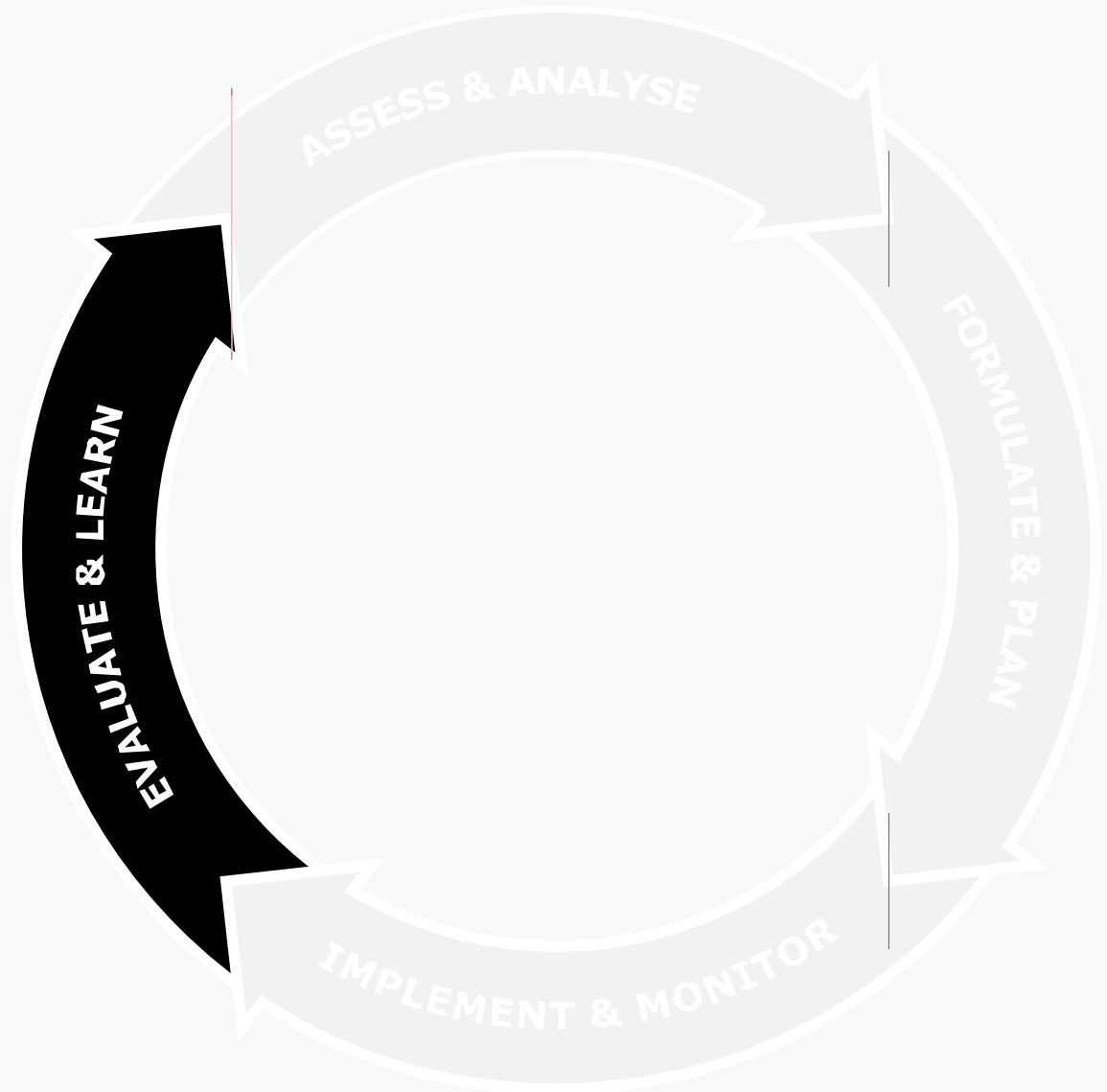
Post-intervention monitoring

- Often [ideally] will contain data collection at both community and beneficiary level
- Quantitative & qualitative data on **beneficiary feedback, project outputs** and **target outcome indicators**
- Communication with affected communities



Review or evaluation

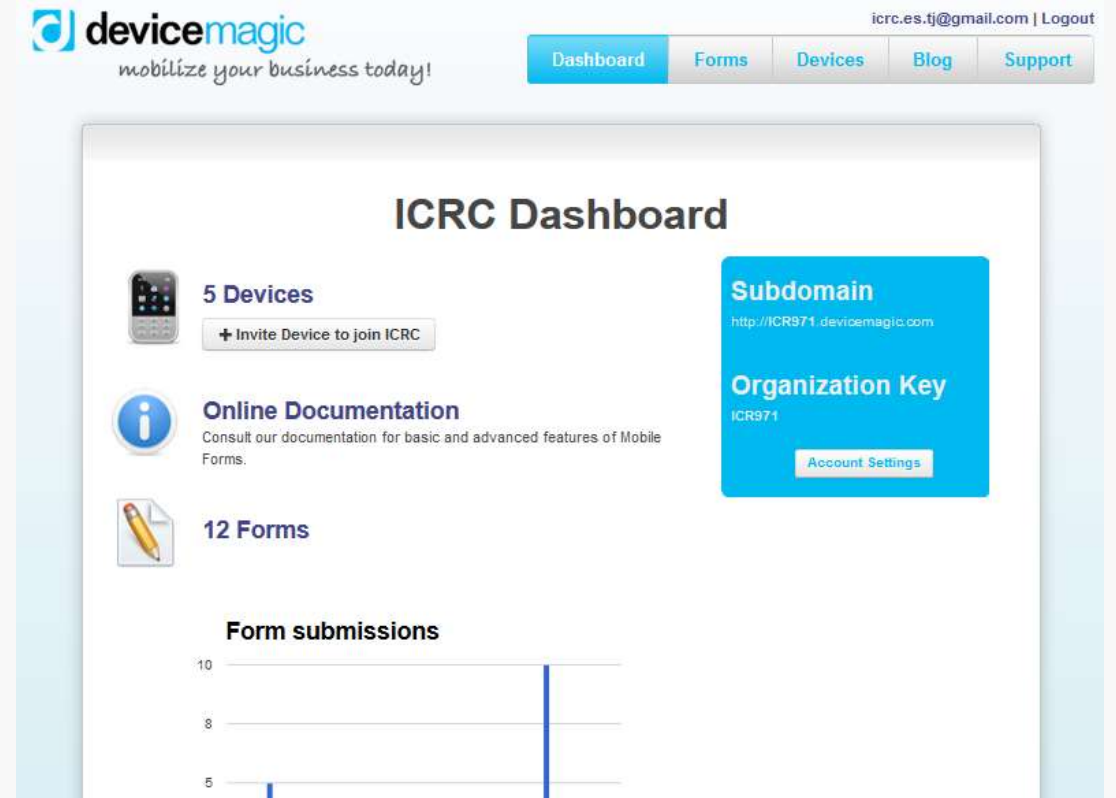
- Often [ideally] will contain data collection at both community and beneficiary level
- Quantitative & qualitative data on **project or program outcomes**
- Communication with affected communities



Device Magic (www.devicemagic.com)

Collecting structured data for further analysis and program management.

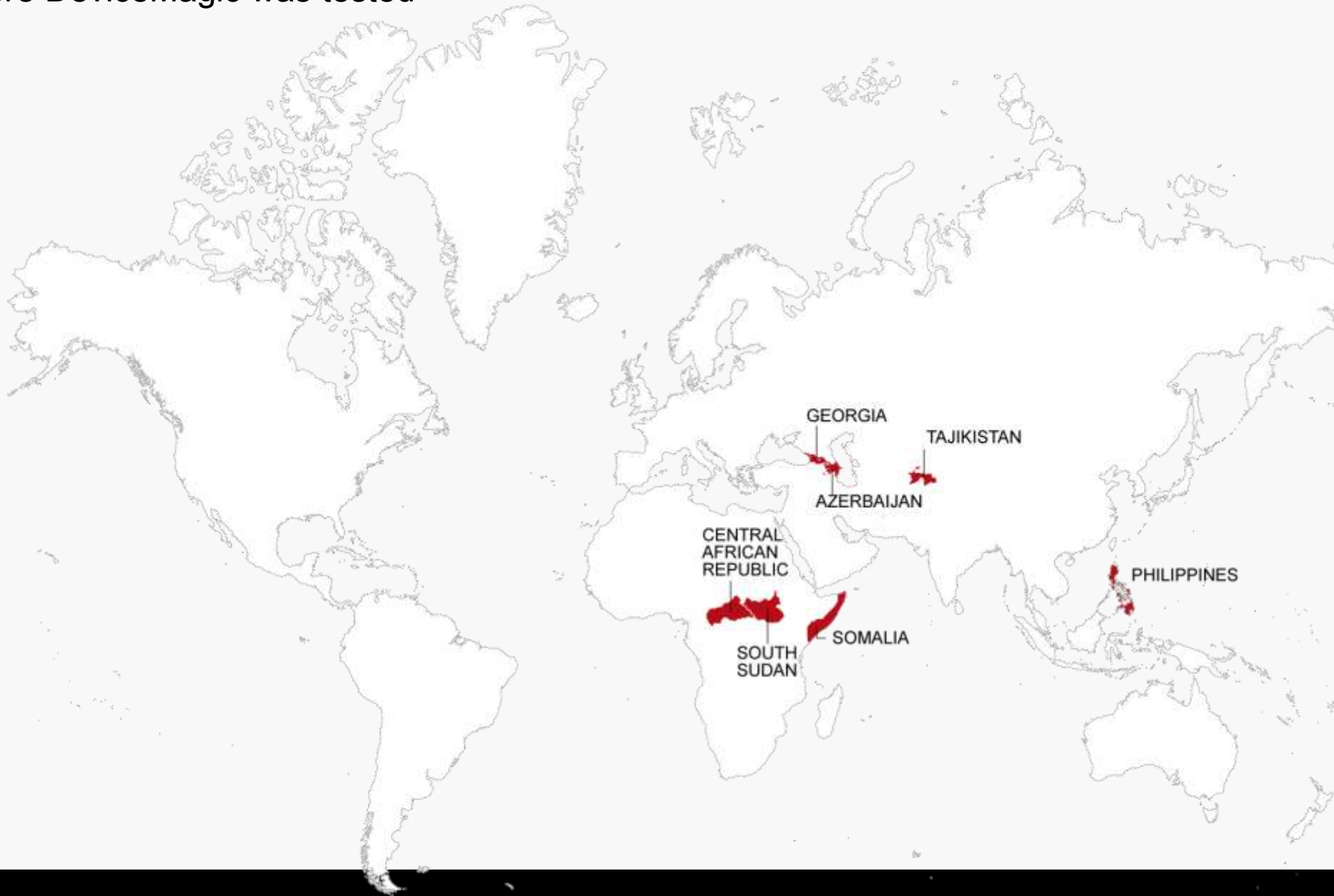
- Mobile data collection on Android, iOS or Windows (coming soon) device & centralization on web portal



The screenshot shows the Device Magic dashboard for ICRC. The top navigation bar includes the Device Magic logo, the tagline "mobilize your business today!", and a user profile for "icrc.es.fj@gmail.com" with a "Logout" link. A secondary navigation bar contains links for "Dashboard", "Forms", "Devices", "Blog", and "Support". The main content area is titled "ICRC Dashboard" and features several key metrics and sections:

- 5 Devices:** A card showing a mobile phone icon and a button to "+ Invite Device to join ICRC".
- Online Documentation:** A card with an information icon and a link to "Consult our documentation for basic and advanced features of Mobile Forms".
- 12 Forms:** A card with a document icon.
- Form submissions:** A bar chart showing a single submission of 1 unit on a scale from 0 to 10.
- Subdomain:** A blue box displaying "http://ICR971.devicemagic.com".
- Organization Key:** A blue box displaying "ICR971" and an "Account Settings" button.

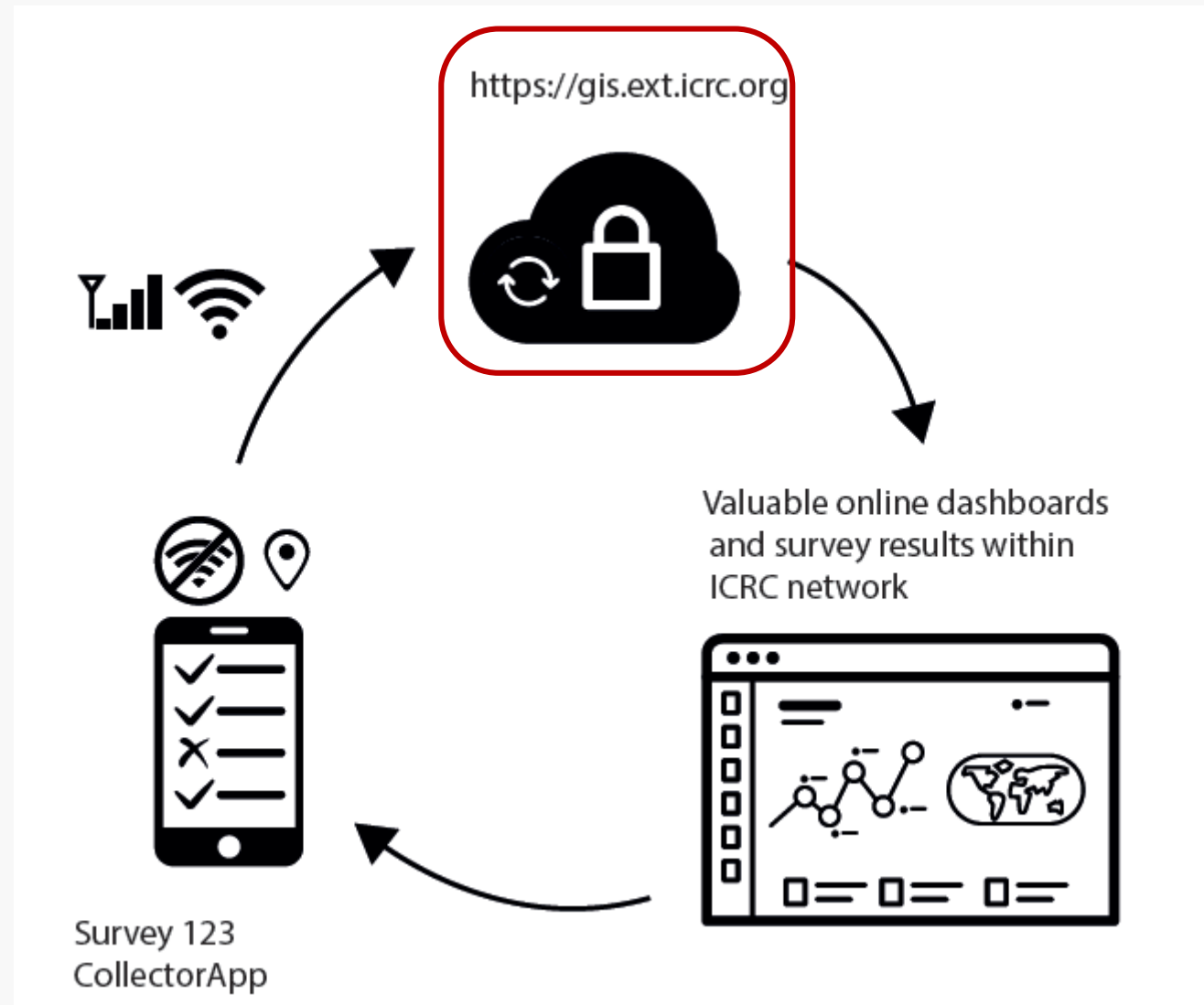
Countries where DeviceMagic was tested



Collecting geolocated information within ICRC Infrastructure

(replacing the GPS ?)

- Store on ICRC Network and DB.
- 90% of needs+ advantage of offline mapping.
- Direct accessibility to data and analysis once synchronized on ArcGIS Server.
- Dashboard (D3Js- Tableau Software), Webmaps, Maps (ESRI).
- (Geo)Processing via FME(planned), to store and push the data into the appropriate feature class.



Countries where Survey123 was tested

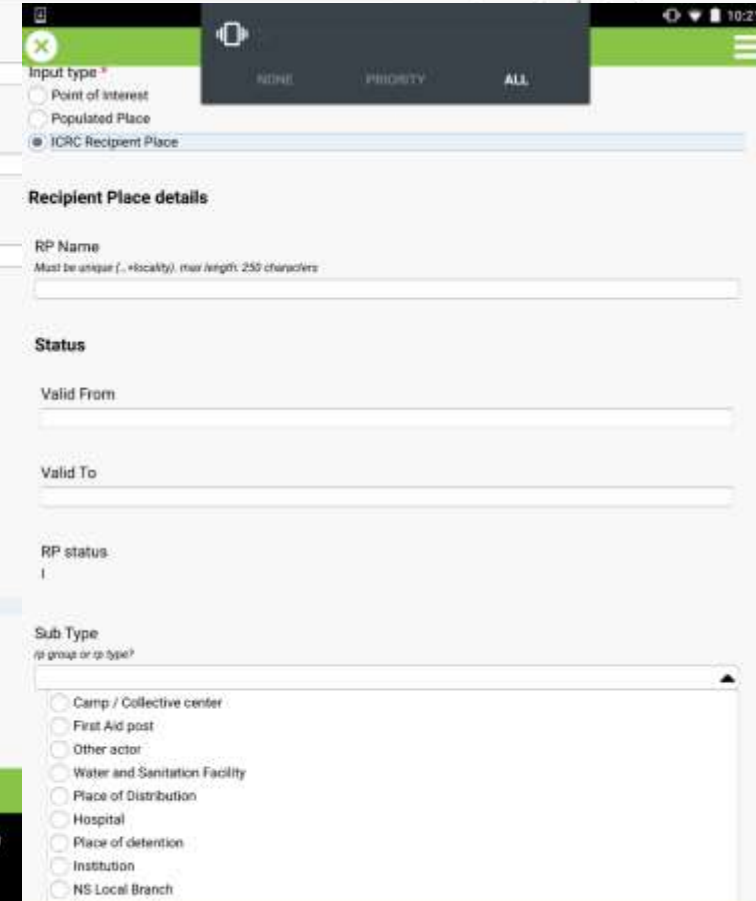
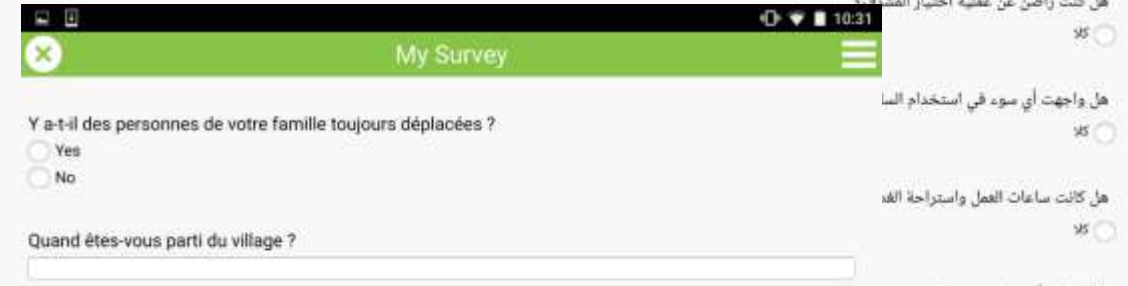


Survey 123 (<http://survey123.esri.com/>)

Short survey, fast (geo)located results

Mobile data collection on Android, iOS or Windows device & centralization on ArcGIS online (cloud) or ArcGISPortal (in house)

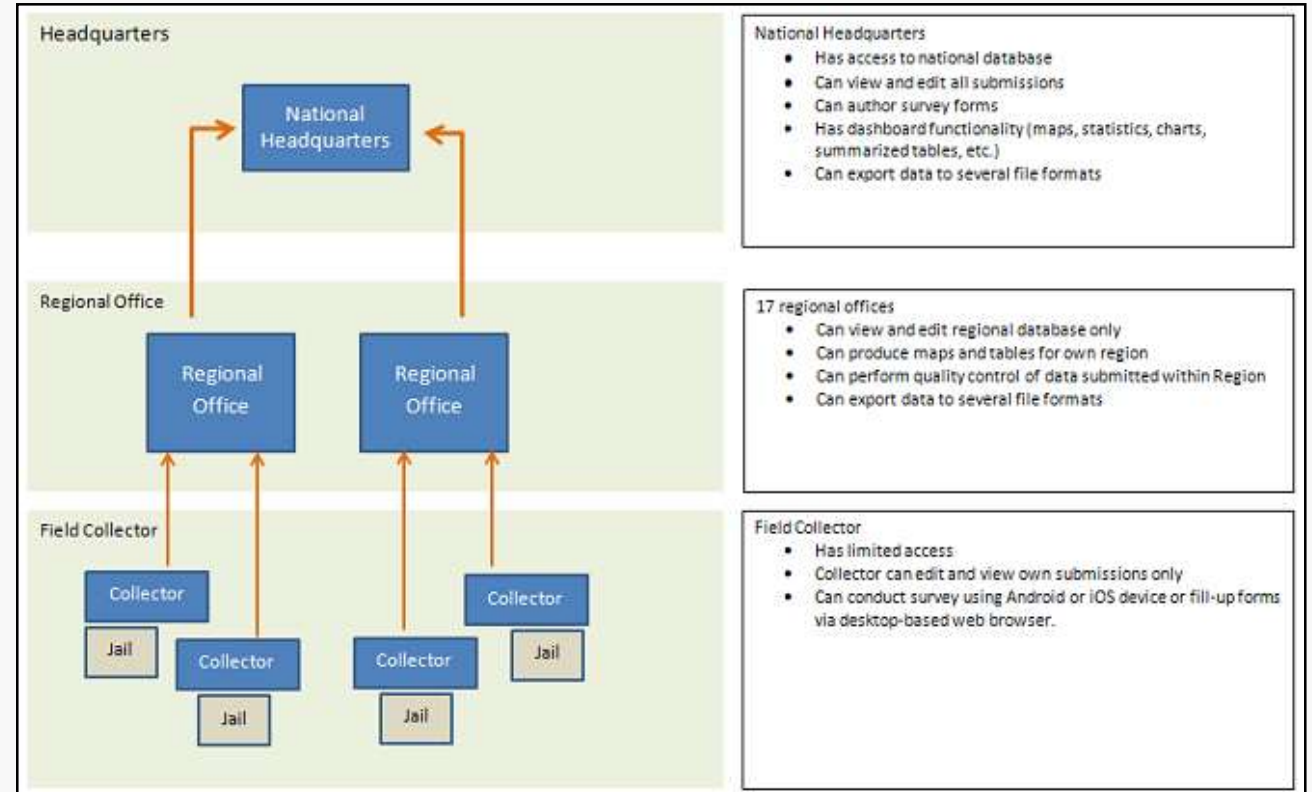
Integrated mobile data collection solution at the ICRC, integrated within ICT infrastructure and directly connected to the GIS server (Geoportal and other related applications)



Majella Insight (<http://majellagt.com>)

Supporting Authorities (Jail authorities, Water board)

- Aggregating data from the field to centralized level.
- Interest of cloud and easy setup
- 2 component of the system
 - MI Mobile
 - Mobile Application (Android)
 - Online & offline environment
 - MI Command
 - Database management
 - Dashboards
 - Automatic report
 - Mapping functionality



Ex. BJMP support

Countries where Majella was tested

**!More on the support of the BJMP (Jail Authorities
of Philippines)
During the lightning talk session !**



Key lessons learned

- Electronic data collection has a huge potential to **improve quality** of any structured data collected in the field
- Electronic data collection can also **facilitate a better managed data collection process and workflow**
- **Technology *can* expedite the beneficiary registration process** → know when it's worth the set-up “cost”
- **Many tools do the same thing** → know the needs + context



Key lessons learned

- Setting up a new tool (particularly BenReg) **will take time**
- **Dedicated staff** in the field may be required
- It key to have **constant support to the field**
- ...for this we need **“experts” in the solutions** we use and **solutions that don’t require too much “expertise”**
- Know **the users** at every stage → designer, data collector, etc.



Key lessons learned

- Exercise design (e.g. questionnaire development, sampling strategy) Preparation of devices.and registration workflow **require human insight**
- Analysis done by the tools tested **often does not go beyond descriptive statistics** → in any case requires human insight



Primary challenges “Behind the scene”

- Moving from paper to digital → need to adapt tools
- **Qualitative data collection + analysis** remains an essential part of our work
- **Analysis and interpretation requires human interaction and forethought** – *the computer cannot do everything for you*
- **Data protection of personal data (Professional Standard for protection work** <https://www.icrc.org/eng/resources/documents/publication/p0999.htm>)
- **Data ethics**



Primary challenges

- **Challenging operational environments** → connectivity, security, electricity, technology experience, beneficiary awareness, etc.
- Each situation (=context + program + people + ...) is unique
- Technological **system proliferation**
- Moving **past the pilot stage** → Where to invest?
- Need for patience + persistence + we work in emergencies



Secondary challenge scaling-up moving towards an “Industrialization”

- From the cloud based solution to ICRC hosted solutions.
- Choice of unified and standards devices supported by ICT.
- Configuring and securing all web access for in house connection. Device itself remain the weakness point.
- Availability of the softwares in the ICT store.
- User, groups and role management plugged on LDAP (Active Directory)
- Guidelines, standard library of forms with core questions for global aggregation.
- Using the georeferential database should be clean for regular use and wide range of users



Mobile device based data collection

DeviceMagic + Survey 123

@International Committee of the Red Cross