TOOL N°2

HR PACK – PROGRAM DATA MANAGEMENT FOR HUMANITARIAN AID AND INTERNATIONAL DEVELOPMENT CSOs

THE PROFESSIONAL FRAME OF REFERENCE PUT INTO PRACTICE

SKILL BLOCK 2: ORGANISE AND IMPLEMENT DATA COLLECTION AND STRUCTURATION ACTIVITIES

cartong

CARTONG

Created in 2006, CartONG is a French H2H/support NGO specialized in Information Management. Our goal is to put data at the service of humanitarian, development and social action projects. We are dedicated to improving the quality and accountability of field activities, in particular through better needs assessments and monitoring and evaluation. We act as a multidisciplinary resources and expertise centre, accompanying our partners' strategies and operations. Our staff and volunteers also support the community as a whole by producing documentation, building capacities and raising awareness on the technical, strategic and ethical challenges of digital technologies.

ACKNOWLEDGMENT

Icons credits: by Becris, DinosoftLabs, Freepik, Gregor Cresnar and Pause08 available on Flaticon

1. SKILLS WITHIN THE BLOCK

S2.1: Design, organise and administer databases according to industry best technical practices (via one or several IT tools).

S2.2: Support data collection processes by contributing to their coordination and the development of their protocols whilst ensuring the establishment of suitable data collection forms (via one or several IT tools).

2. THE COMMON AIM OF THESE SKILLS

All of these skills are designed to help program [and M&E] teams **obtain relevant, reliable, and structured data sets** from **organised and efficient collections** and managed in **appropriate databases**.

The skills forming Skill block n°2 are needed when program [and M&E] teams need support to conduct surveys and ensure that the collected data can then be properly exploited. This can be applied on an ad hoc basis, to the conduct of a specific survey, or it can be part of an ongoing process, where the collected data feeds into analysis and representation tools on an ongoing basis.

3. ASSOCIATED KNOW-HOW AND THEIR APPLICATION

S2.1: Design, organise and administer databases according to industry best technical practices (via one or several IT tools)

Skill 2.1		
Level of proficiency	**Technical know-how**	**Methodological know-how**
	Be familiar with the various data formats (e.g., digital, text, single or multiple choice, date). Enter data and perform operations on an existing database (e.g., calculation, cleansing, filters, sorting, organisation and formatting, checking for double entries). Design databases: - In Excel, - With "1 to 1" relationships between tables or data sources. Design and harmonise simple data models, using practices such as nomenclature, categorisation, setting standards. Examples: - PCODE (attributed of a unique code to a geographical area), - Age group, - Calculation of indicators in which a plurality of data is grouped, - Having knowledge of the import-export formats of the technical solutions used, such as: .xlsx, .csv, .dta, etc. Import data into an existing database.	N/A
	Design and harmonise complex data models (e.g., database coordination, relationship management). Configure data collection fields (age, gender).	Translate the program's [and M&E] analysis needs into effective databases: Understand program constraints and expectations,

	Translate a data model in a database management software.	• Understand the rules and opportunities that the IT department can bring and adapt the collection tools accordingly (ask the IT department the right questions).
	Ensure data interoperability between different data sources (e.g., asynchronous, non-automatic, manual import).	
	Master platform / interface of mobile data collection applications management including:	
	• Access rights management,	
	• Role management.	
	N/A	Decide the data management strategy:
		• Choice and combination of tools,
		• Data management best practices,
		• Workflow,
		• Choice and representation of data models.
		Coordinate data management modalities and related services (M&E, IT, Programs).
	Design databases:	N/A
	• On a variety of tools (including SQL-based),	
	• With "1 to many" relationships,	
	• Enabling case management.	
	Set up data management tools (AidImpact, ActivityInfo): configure indicators, databases.	
	Be familiar with the features provided by the various IM and IT solutions (e.g., cloud, authentication system).	
	Design automatic interfaces between databases and various collection, management or analysis tools (e.g., cloud).	
	Ensure real-time data interoperability with APIs (e.g., API query).	

In which situation is skill S2.1 applied?	
In general, skill S2.1 is used	From the moment a team plans to collect data, it is necessary to organise and prepare for the arrival of this data...
And more specifically for level A	...and when it is necessary to create and manage simple databases, allowing for processing and analysis of data collected in ad hoc surveys.
And more specifically for level B	... and when it is necessary to create and manage complex databases, allowing for processing and joint analysis of data collected via several linked surveys (e.g., follow-up over time, data collected under different formats).
And more specifically for level C	...and when it comes to setting up a standard and harmonised system to process collected data, establish a common mission-wide strategy (e.g., selection of tools, adoption of good practices).
And more specifically for level D	...and that the collected data is mainly geared towards case management, or the "instant" reuse of said data by the program teams. ...and that the organisation uses an advanced platform with centralised management to manage this data.

S2.2: Support data collection processes by contributing to their coordination and the development of their protocols whilst ensuring the establishment of suitable data collection forms (via one or several IT tools)

Skill 2.2		
Level of proficiency	**Technical know-how**	**Methodological know-how**
	Design input masks or create forms via a form-builder. Master one or several MDC tools (e.g., ODK, KoBoToolbox): configure tools for data collection. Support data collection teams with troubleshooting bugs. Integrate secondary data, import data into an existing database.	Be familiar with the broad principles of MDC and know how to identify situations in which these tools are appropriate. Have knowledge of the steps required prior to any mobile data collection (such as the need to test the questionnaire: test protocol and validation). Train enumerators and data-monitoring personnel and adapt to the various levels encountered.
	Create forms using XLS Forms encoding. Master multiple MDC tools (ex: KoBo, ODK, ONA, Survey CTO, Survey 123). Carry out an analysis plan: • Define the variables to measure the desired metrics and indicators, • Plan descriptive analysis, general trends of the entire population, variable-crossing, statistical calculations. Organise activity tracking collections (case management), requiring a particular protocol. Master platforms / interfaces of mobile data collection applications management including: • Access rights management, • Role management, • Survey form update following a change, • Implementation of preliminary interest analysis.	Be familiar with the data ecosystem in its environment (sector, area), to retrieve secondary data. Support program [and M&E] teams in producing an analysis plan prior to quantitative data collection. Draft protocols for specific data collections (e.g., survey protocol). Confront needs with a comparative analysis, making it possible to choose suitable technical and methodological solutions. Perform comparisons of technical solutions, technical scenarios, and tool deployment experience. Based on limited information. Coordinate the human and financial resources required for collection.

	N/A	Coordinate standardised data collections in separate areas. Ensure consistency of collected data, via: • Implementation of standard protocols, • Quality and compliance monitoring of the collected data. Define resource mobilisation strategies for data collection.
	Master advanced questionnaire functions related to case management. Master the use of comprehensive and/or industry data management platforms (from collection to analysis). Examples: Akvo Flow, AidImpact, Dharma.	N/A

In which situation is skill S2.2 applied?	
In general, skill S2.2 is used	From the moment a data collection via one or several digital tools is organised…
And more specifically for level A	…and upon the launch of one or several localised and ad hoc surveys in a particular area. The data to collect is simple and small.
And more specifically for level B	…and when more complex and frequent surveys are launched (e.g., follow-up of the same information at several time points, requiring access to previously collected data, cross-referencing of several different surveys, same survey in different areas).
And more specifically for level C	…and when it comes to establishing a standardised and harmonised data collection system at mission or organisation level, or when the area of intervention is sensitive and requires increased control of the reliability of the data (e.g., health).
And more specifically for level D	…and when the organisation has to use an industry-specific data collection platform or one that is very advanced in its modalities. …and when it is necessary to create questionnaires requiring dedicated case management functions.

4. WHAT TO KEEP IN MIND WHEN RECRUITING

Mastery of key concepts and tools

	Basic	Intermediate	Advanced
Datasets preparation and structuring	• Excel (basic)	• Excel (advanced) (PowerQuery) • Google sheet • Excel online	• Access, MYSQL, PostGreSQL • Control of programming languages associated with database management systems (SQL, VBA...)
Data collection	• Simple tools of the ODK environment (KoBo Toolbox...) • Or other simple mobile collection tools used in the humanitarian sector	• Case tracking, data encryption, or quality control functions • SurveyCTO • XLS Form format for coding surveys	• Dedicated industry tools

Attitudes

- Ability to adapt to different management tools and systems
- Capacity for planning and monitoring
- Attention to detail
- Orientation towards quality control

cartong

23 Boulevard du Musée
73000 Chambéry (France)
+33 (0)4 79 26 28 82

INFO@CARTONG.ORG
WWW.CARTONG.ORG