

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 4: ORGANISE AND IMPLEMENT
PROCESSES ENSURING DATA QUALITY**

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.

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1. SKILL BLOCK 4: ORGANISE AND IMPLEMENT PROCESSES ENSURING DATA QUALITY

1.1. SKILLS WITHIN THE BLOCK

S4.1: Implement devices that ensure the availability, reliability, traceability and quality of data, to contribute to the quality of programs.

S4.2: Implement change management that is focused on a data culture tailored to the needs of the organisation/project.

1.2. THE COMMON AIM OF THESE SKILLS



All of these skills are designed to ensure **that the data collected is relevant to the program's objectives; that it is reliable, traceable and of good quality**, by direct intervention on said data or via team capacity-building.


The skills forming Skill block n°4 are required when the program [and M&E] teams collect data, either on an ad hoc or continuous basis. The larger the volume of collected data, the more crucial the skills required to ensure data quality will be, and the more important it will be to instill a data culture within the organisation.

2. ASSOCIATED KNOW-HOW AND THEIR APPLICATION




S4.1: IMPLEMENT MEASURES THAT ENSURE THE AVAILABILITY, RELIABILITY, TRACEABILITY AND QUALITY OF DATA, TO CONTRIBUTE TO THE QUALITY OF PROGRAMS

Skill 4.1

Level of proficiency	Technical know-how	Methodological know-how
	<p>Master the data management cycle and apply it to data preparation and cleaning practices.</p> <p>Prepare for data collection: consistent naming (e.g., PCODE), attention to data types and attributes.</p> <p>Clean up duplicate and inconsistent data.</p> <p>Check the collected data: spot check, calculation, meaning.</p>	<p>Be aware of the issues involved in collecting certain program-specific information.</p>
	<p>Implement workflows in a team ensuring traceability, reliability, consistency and quality:</p> <ul style="list-style-type: none"> • Use of metadata and monitoring of the data collection, • Data validation, • Triangulation of data with other sources, • Editing and deletion rules, • Refreshing data and backups of previous copies. <p>Ensure data availability: storage of single-entry table data (allowing for efficient analysis queries such as pivot tables).</p>	<p>Get involved in setting the goals for an M&E plan and challenge the program teams.</p> <p>Interpret M&E needs, in collection, management and analysis methods.</p> <p>Coordinate quality control methods on a mission-wide basis.</p> <p>Ensure a consistent level of data and analysis quality.</p> <p>Support program teams in defining standards for the calculation of their indicators (e.g., counting beneficiaries or results).</p>
	N/A	<p>Evaluate data collection, management, and analysis methods against data quality objectives.</p>



		
		<p>Assess data quality, reliability, traceability and availability and identify gaps (e.g., data quality method audit, of the USAID DQA type for instance).</p> <p>Contribute to the data management aspects of the M&E strategy, the strategy for collecting, managing and analysing data across multiple projects.</p> <p>Recommend best practices in terms of data management.</p> <p>Integrate data management principles into an M&E strategy.</p> <p>Assess M&E feasibility from a data management, tool management interoperability, aggregation, data integrity perspective.</p>



In which situation is skill S4.1 applied?

In general, skill S4.1 is used	From the moment data is collected...
And more specifically for level A	 <p>...and when the collected data comes from unique sources (e.g., a survey), and/or said data is limited in quantity.</p>
And more specifically for level B	 <p>...and when data originates from multiple sources, and an important structure prior to collection is crucial to ensure data quality and traceability. This is particularly the case when the same data is collected longitudinally, for the monitoring of indicators or case follow-up. Or when the Monitoring & Evaluation plan involves indicators that are complicated to measure (aggregation, specific methodology).</p>
And more specifically for level C	 <p>...and when an organisation wants to implement a strategy and standards in terms of data traceability, reliability and quality.</p>

S4.2: IMPLEMENT CHANGE MANAGEMENT THAT IS FOCUSED ON A DATA CULTURE TAILORED TO THE NEEDS OF THE ORGANISATION/PROJECT

Skill 4.2

Level of proficiency	Technical know-how	Methodological know-how
	<p>Synthesise qualitative and quantitative data for the program teams.</p> <p>Build and understanding of data and develop skills their analysis, with a view to decision-making:</p> <ul style="list-style-type: none"> • Understand what is included in a data set, • To which questions data may help provide an answer, • Understand the data (types, attributes, data vs. information), • Know how to analyse the data (causation vs. correlation), • Understand data aggregation. <p>Train in best practices at all stages of the data cycle: collection, cleaning, analysis, for instance:</p> <ul style="list-style-type: none"> • Sampling, data aggregation, • Data cleaning, • Use of suitable visuals (map, type of chart, representation for qualitative analysis). <p>Initiate reflection around data quality, management, and analysis objectives:</p> <ul style="list-style-type: none"> • Understanding of the origin and reliability of the data, • Collection methods, • Data protection. 	<p>Adapt training to one's public and spark interest within the organisation (pedagogy and popularisation).</p> <p>Guide program teams in their understanding of the quantitative, qualitative and cartographic analysis produced.</p> <p>Assess the teams' levels and needs.</p> <p>Guide data management teams in their data collection, management and analysis practices.</p> <p>Enforce data management best practices across departments.</p>
	<p>N/A</p>	<p>Assess data quality and identify gaps.</p> <p>Guide the teams in charge of the data management strategy in their data collection, management and analysis practices.</p>

		<p>Develop and steer an action plan for improving data management within an organisation.</p> <p>Define data management best practices across departments.</p> <p>Foster change management within an organisation.</p>
In which situation is skill S4.2 applied?		
<p>In general, skill S4.2 is used</p>		<p>From the moment an organisation wants to disseminate data management and usage best practices. Very useful when data management tasks are scattered across multiple positions...</p>
<p>And more specifically for level B</p>		<p>...and when an organisation wishes to develop, for its program teams, a minimal understanding of the concepts around data usage and analysis, so that they may take more informed operational decisions.</p>
<p>And more specifically for level C</p>		<p>...and when an organisation wants to develop a thorough understanding of the data with the people performing the collection, management and analysis to optimise their technical skills.</p>

3. WHAT TO KEEP IN MIND WHEN RECRUITING

Mastery of key concepts and tools

	Basic	Intermediate	Advanced
Quality system	<ul style="list-style-type: none"> Unique identification code (e.g.: PCODE, beneficiary codes) 	<ul style="list-style-type: none"> Consistency, validity, triangulation, completeness and timeliness of data Data cleansing 	N/A
Data culture	N/A	<ul style="list-style-type: none"> Data vs. Information Cause vs. Correlation Data type and attributes Data aggregation type (sum, mode, average, median, number, min., max.) Visualisation type and their correct use (e.g., circular chart, linear chart, histogram) Sample and confidence interval Standard deviation 	<ul style="list-style-type: none"> Data culture concept (reading, working, analysing and conversing with data) Collection method Data protection Models and data flows

Attitudes

- Attention to detail
- Data culture / Data literacy
- Collection and dissemination of useful information
- Awareness of cross-functional issues in data management (capacity for coordination, systems/organisations analysis, communication, etc.)



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