

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 1: DESIGN AND IMPLEMENT A  
DATA MANAGEMENT STRATEGY

## 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. SKILLS WITHIN THE BLOCK

**S1.1:** Assess the data management needs of a project or organisation and identify methodologies and technical solutions to address them.

**S1.2:** Define and implement technical, methodological standards and associated procedures in accordance with the organisation's and the sector's best practices and standards.

**S1.3:** Develop and influence internal and external data management practices and strategies.

## 2. THE COMMON AIM OF THESE SKILLS


The purpose of these skills is to help **define the strategy of a mission or organisation**, whilst keeping in line with a **broader data management ecosystem**. They also ensure the possibility of implementing and updating said strategy, through **the use of harmonised/coherent technical tools and standard, tried-and-tested procedures**.


**The skills forming Skill block n°1 are necessary when the data management strategy at project, mission or organisation level is lacking (whether non-existent or incomplete)**, and the data management needs require that this strategy be accomplished or improved, and that standard data management practices be defined. This may also concern the entire sector's strategy, which would require changing practices externally.

### 3. ASSOCIATED KNOW-HOW AND THEIR APPLICATION



#### SI.1: ASSESS THE DATA MANAGEMENT NEEDS OF A PROJECT OR ORGANISATION AND IDENTIFY METHODOLOGIES AND TECHNICAL SOLUTIONS TO ADDRESS THEM

##### Skill 1.1

| Level of proficiency  | Technical know-how  | Methodological know-how   |
|---|---|---|
|  | <p>Break down the different data collection and processing needs during the project cycle (e.g., needs assessment, case management, M&amp;E, CRM, etc.)</p> <ul style="list-style-type: none"> <li>Identify metrics that may cause data management complications (e.g., multiple data sources, case management, etc.) so that they may be taken into account.</li> </ul> <p>Translate the program's [and M&amp;E] data management needs into technical data management principles. Examples:</p> <ul style="list-style-type: none"> <li>Understanding that medical patient follow-up involves a particular practice and data model adapted to case management,</li> <li>Avoiding double-counting involves assigning a unique number/code to each beneficiary,</li> <li>Combining data from different programs involves ensuring data interoperability.</li> </ul> <p>Use data flow models to coordinate data management activities (e.g., databases update, data transfer, etc.).</p> | <p>Map the data management cycle and adapt it to the needs of the program [and M&amp;E].</p> <p>Identify the comparative advantages of various technical solutions and methods for all stages of data management (ex: MDC, DBMS, Analysis).</p> <p>Confront needs with a comparative analysis, making it possible to choose technical and methodological solutions adapted to projects.</p> <p>Justify technical scenarios for one or several projects.</p> <p>Plan and implement the deployment of a tool (collection, management and analysis) or of a working method covering technical, HR and financial aspects.</p> |



|   |   |   |
|---|---|---|
|  | <p>Choose and represent graphical data models and flows adapted to the needs of the structure, allowing joins (relationships) and analysis queries.</p> <ul style="list-style-type: none"> <li>• Knowledge of typical and standard industry models (e.g., flakes, HXL),</li> <li>• Identify and locate data (tangible vs. IT),</li> <li>• Graphically display data.</li> </ul> <p>Design data management processes based on the data models chosen.</p> | <p>Perform a data management diagnosis on a mission that includes needs, opportunities and constraints, practice analysis (context-specific or non-context-sensitive), comparison of different tools, proposal for recommendations, cost estimate.</p> <p>Develop the data management strategy for a mission or organisation, involving identification of the following:</p> <ul style="list-style-type: none"> <li>• Standard technical solutions,</li> <li>• Interoperability needs,</li> <li>• Workflow and segregation of duties,</li> <li>• Human resources (recruitment, training),</li> <li>• Budget.</li> </ul> |
|---|---|---|



### In which situation is skill S1.1 applied?

|  |   |
|--|---|
| <p>In general, skill S1.1 is used</p>  | <p>From the moment it is necessary to ensure that the collected data and techniques used are in line with a project or an organisation's goals...</p>   |
| <p>And more specifically for level B</p>  | <p>...and when it is necessary to provide support to the program teams in assessing their data management needs, in order to choose suitable technical solutions.</p>                                       |
| <p>And more specifically for level C</p>  | <p>...and when it is necessary to choose data management tools and methods, to guide and harmonise a mission or organisation's strategy, on the basis of the most advanced practices within the sector.</p> |

## SI.2: DEFINE AND IMPLEMENT TECHNICAL, METHODOLOGICAL STANDARDS AND ASSOCIATED PROCEDURES IN ACCORDANCE WITH THE ORGANISATION'S AND THE SECTOR'S BEST PRACTICES AND STANDARDS

### Skill 1.2

| Level of proficiency  | Technical know-how   | Methodological know-how   |
|---|--|---|
|    | <p>Have knowledge about and be capable of using the technical tools chosen by the organisation.</p> <p>Be familiar with and enforce data management best practices and standards at each stage of the project cycle, for instance:</p> <ul style="list-style-type: none"> <li>• Unique identifiers,</li> <li>• Metadata usage,</li> <li>• Single-entry database usage.</li> </ul> <p>Develop and organise harmonised data management models across multiple zones.</p> <ul style="list-style-type: none"> <li>• Interoperable forms and collection tools,</li> <li>• Similar database models.</li> </ul> | <p>Adapt and implement procedures for collecting, transferring, managing, analysing and storing data (data management cycle). Example: Standard Operating Procedures (SOPs) well suited to an area, or project.</p> <p>Adapt methods and tools to the opportunities and challenges encountered (context).</p> <p>Ensure proper dissemination of information on practices and tools used or projected to be used.</p> <p>Ensure consistency of data management tools and methods at the different levels and programs of an organisation/mission (e.g., coordination between branches).</p> <p>Carry out activities fostering the exchange of best practices between the various projects.</p> <p>Provide feedback on methods and tools.</p> |
|  | <p>N/A</p>   | <p>Be familiar with the data management ecosystem within the organisation and among external stakeholders, so as to adapt to it (<i>depending on the sector or area of intervention, e.g., knowledge of the health data management ecosystem</i>).</p> <p>Ensure integration and application of the organisation's general policies in data management procedures (technical and methodological).</p>   |

|  |   |   |
|--|---|---|
|  |   | <p>Develop consistent general standards and procedures for all stages of the data management cycle: collection, transfer, management, analysis, storage.</p> <p>Link data management policies and procedures with related policies and procedures: IT infrastructure, legal, MEAL, HR, risks.</p> |
| <b>In which situation is skill S1.2 applied?</b> |   |   |
| In general, skill S1.2 is used                   |   | From the moment data is collected at organisation-wide level and that there is a desire to ensure standard data quality...  |
| And more specifically for level B                |    | ...and when it is necessary to coordinate several projects and/or bases to ensure that their project management approach is comparable to ensure data interoperability.   |
| And more specifically for level C                |  | ...and when it is necessary to make these choices, not just based on needs, but also in connection with a broader organisational strategy, and to take into account more complex and plentiful models and data flows.   |

## S1.3: DEVELOP AND INFLUENCE INTERNAL AND EXTERNAL DATA MANAGEMENT PRACTICES AND STRATEGIES

### Skill 1.3

| Level of proficiency  | Technical know-how  | Methodological know-how  |
|---|---|--|
|  | N/A   | <p>Host a community of practice (e.g., create or become part of an IM cluster).</p> <p>Have a cross-sectoral vision of data management tools and best practices in the industry.</p> <p>Assess the data management ecosystem within Humanitarian Aid and International Development CSOs, its sector or its area of intervention.</p> <p>Identify the strengths and weaknesses of other data management actors.</p> <p>Influence CSOs and donors' practices on data management issues via production of sector-structuring documents.</p> <p>Argue and adapt the discourse on data management to different audiences (internal, external, technical, non-technical).</p> <p>Coordinate and exchange on data management practices related to specific areas or themes with other stakeholders in the sector.</p> |
| <b>In which situation is skill S1.3 applied?</b>                                  |   |  |
| In general, skill S1.3 is used  | From the moment an organisation wants to position itself as a major player in the field of data management... |  |
| And more specifically for level C   |                            | ...and when it is necessary to influence the practices and strategies of its actors, sector/area of intervention, in order to improve coordination between organisations and/or encourage best practices.  |



## 4. WHAT TO KEEP IN MIND WHEN RECRUITING

### Mastery of key concepts and tools

| Basic   | Intermediate   | Advanced  |
|---|--|---|
| <ul style="list-style-type: none"><li>• Metadata</li><li>• Data quality</li><li>• Data aggregation</li><li>• Data management cycle</li><li>• Interoperability</li></ul> | <ul style="list-style-type: none"><li>• Data models</li><li>• Data integrity</li><li>• Relationship models</li><li>• Case management</li></ul> | <ul style="list-style-type: none"><li>• Data management ecosystem</li></ul> |

### Attitudes

- Overall vision, strategic thinking
- Ability to structure and create schematic models (data models)
- Ability to manage and work with a diverse group of people whose technical specialisation, background and level of expertise are heterogeneous
- Ability to express oneself and to argue ideas in an effort to convince



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