

HR Pack – Program data management for Humanitarian Aid and International Development CSOs

The professional frame of reference: which skills are needed in program data management?

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1. A professional frame of reference: for what purpose?

This tool has been designed to **meet the needs of Civil Society Organisations (CSOs)** faced with the challenges of **structuring program data management skills within a mission or organisation**. It aims to list and organise the main functions, activities and tasks related to program data management, which are then matched to the relevant skills, organised in large groups (called skill blocks). The whole document therefore intends to reference the **skills associated with the occupations dealing (to various extents) with program data management**.

Among other things, this tool allows you to:

- Discover the skills in program data management
- Understand which tasks, activities and functions they are associated with
- Understand how these skills are linked with one another

2. Who can use this frame of reference? When?

The frame of reference can be used both by **HQ** and **field teams**, whether by a **person involved in program data management** or by the **Human Resources department** who wants to understand how these skills are structured.

Among other things, the frame of reference can be particularly useful when one wants to **understand what the main skill sets are in program data management**, in order to frame those that are necessary (or a priority) for your organisation.

This frame of reference is further detailed in the HR pack's document entitled "The professional frame of reference put into practice: a detailed overview of program data management skills to help frame your HR needs", where for each skill the associated know-how are listed, by level of proficiency.

3. How to use and understand the frame of reference?

The document consists of **5 sections**, divided into **2 parts**.

The left-hand side of the professional frame of reference focuses primarily on the actions or activities carried out in data management. It includes:

- 1) A list of all the tasks that can be performed in program data management...
- 2) ...grouped by activity
- 3) ...themselves grouped into 5 main functions, making it possible to categorise the activities.

The right-hand side of the frame of reference associates these three first groups with skills which are themselves grouped into coherent skills blocks.

- 1) Each activity has a corresponding skill.
- 2) Each function has a corresponding skill block

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Tool n°1 – The professional frame of reference: which skills are needed in program data management?

		ACTIVITIES		SKILLS	
FUNCTIONS (4 or 5 max)	ACTIVITIES (3 or 4 max per function)	TASKS (3 or 4 max per activity)		SKILL (1 per activity)	SKILL BLOCK (1 per function)
Define, implement and regularly update the data management strategy of a mission or organisation	Analyse and define the data management needs of program teams (throughout the data cycle)	Support program [and M&E] teams in analysing and defining their data management needs, from the project design and launch phase (including the integration of existing practices and secondary data)		Assess the data management needs of a project or organisation and identify methodologies and technical solutions to address them	Design and implement a data management strategy
		Adapt, design and standardise the data models related to the scope of the action (in connection with other internal information systems and initiatives of external actors - such as donors, state organisations, etc.)			
		Define and adapt data flows and aggregation methods to the different scales of your organisation / mission / project			
		Accompany the process of choosing technical and methodological solutions according to the identified needs			
	Contribute to the definition and implementation of data management procedures and tools (throughout the data cycle)	Define, adapt and implement data management standards (methodological approaches as well as technical and technological solutions)		Define and implement technical, methodological standards and associated procedures in accordance with the organisation's and the sector's best practices and standards	
		Establish, standardise, implement and enforce technical and methodological procedures in data management			
		Integrate related organisational strategies and policies within the scope of the action			
		Conduct experience sharing sessions and other initiatives to capitalise on data management projects			
	[Optional*] Weigh on and draw upon strategies and practices internal and external to the organisation	Participate in regional / sector-wise discussions		Develop and influence internal and external data management practices and strategies	
		Participate in communities of practice with peers			
Organise the structuring of datasets & support data collections	Prepare and structure data sets	Design or adapt databases meeting the needs of programs and ensure the quality of data according to database design principles		Design, organise and administer databases according to industry best technical practices (via one or several IT tools)	Organise and implement data collection and structuration activities
		Define or adapt the architecture between databases and configure the interfaces between the data storage solutions and the various collection and/or analysis tools (internal and/or external)			
		Configure and manage IT tools/solutions for storage and database management [in coordination with the IT department] & ensure data exports and sharing			
	Contribute to the preparation and monitoring of data collection activities	Contribute to the conceptualisation of data collection methodologies (quantitative or qualitative) in collaboration with the program [and M&E] teams: co-identification of secondary data, co-design of data collection protocols, choice of tools, co-design of analysis plans, etc.		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)	
		Adapt, build, configure, test, and validate data collection forms/tools to meet program [and M&E] needs using a computer-based tool(s)			
		Coordinate with program [and M&E] teams for data entry and integration of secondary data into IT systems			
		Participate in the training of people in charge of collection and contribute to the supervision of the collection in particular by functionally administering the technological tools/solutions			

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Provide data visualisation and analysis products for data driven decision-making.	Perform statistical pre-analyses and create graphical representations in relation to quantitative data	Calculate indicators from different data sources and conduct descriptive statistical pre-analyses on such data based on an analysis plan and the practices of the sector/organisation	Ensure the production of graphical visualisations and preliminary analyses (via various IT tools) of quantitative data adapted to the needs of the teams according to industry standards	Organise and implement data analysis, visualisation and dissemination activities
		Build graphical representations of data based on adapted IT solutions		
		Create advanced dashboards that get updated automatically		
	[Optional*] Conduct pre-analyses related to qualitative data	Carry out pre-analyses of qualitative data on the basis of an analysis plan and the practices of the sector/organisation	Ensure the production of preliminary analyses and visualisations of qualitative data adapted to the needs of the teams according to industry standards	
		Build relevant visualisations of qualitative data		
	[Optional*] Carry out spatial representations and analyses	Conduct attribute and spatial analyses using GIS tools	Ensure the production of spatial representations and analyses through the establishment and use of a geographic information system	
		Produce maps that meet the needs of different teams with the help of GIS tools		
	Support the sharing and dissemination of data internally and externally	Assist program teams in the analysis, interpretation and use of data for decision-making purposes	Provide support to other departments in their data analysis, usage and dissemination processes	
		Support the dissemination of data internally and externally by identifying appropriate communication formats, thus contributing to Monitoring & Evaluation, accountability, donor reporting and limiting the duplication of data collection efforts		
	Manage data quality to contribute to program quality	Monitor the availability, reliability, traceability and quality of data	Provide technical assistance and ensure a critical eye to program teams during all phases of the data cycle	
Contribute to the framework and strategy for monitoring activities and results (M&E) to ensure their feasibility and relevance in relation with the data management cycle				
Facilitate and carry out the process of data preparation, cleaning, error identification, triangulation and validation of quantitative and qualitative datasets				
Build the capacity of program teams and local partners		Identify gaps and needs for strengthening data literacy across the organisation/mission and develop a change management plan	Implement change management that is focused on a data culture tailored to the needs of the organisation/project	
		Continuously raise awareness of cross-cutting good practice in data management among all teams		
		Organise capacity building actions for key staff and local partners on technical and methodological aspects related to data management		

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Guarantee responsible data management for vulnerable populations' data (within the scope of the action)	Set up mechanisms to ensure that the management of personal data (within the scope of the action) complies with legal frameworks	On the basis of national and international legal frameworks [and in relation to the DPO], coordinate the implementation of an action plan to strengthen the protection of personal data related to the scope of the action	Be familiar with and implement data protection procedures and practices that ensure compliance with national and international law	Organise and implement approaches ensuring responsible data management
		[In relation to the DPO] Contribute to the completion of impact assessments relating to the protection of project data		
		[In relation to the DPO] Establish, standardise, implement and enforce technical and methodological data protection procedures		
	Implement responsible data practices	Contribute to the identification of ethical issues related to data management and alert when encountering practices that do not correspond to the principles and standards of the sector	Be familiar with and apply the ethical principles of responsible data management taking into account industry best practices and contextual specificities	
		Assisting program teams in the integration of ethical principles in data management		
	Contribute to data security (within the scope of the action)	Analyse periodically and as needed the strengths and weaknesses in terms of securing project data [in collaboration with the IT and logistics departments]	Define and implement data security best practices	
Technically organise the security of data falling under the scope of the action [in collaboration with the IT and logistics departments]				
[Optional*] Manage an "information management" department and related resources (HR, technical, finance, etc.)	Coordinate the data management department	Assess the department's needs	Coordinate one department in relation to other departments within the organisation's operational strategy	Ensure the management of a department and its resources
		Define and steer the department's action plan (coordinating with other departments)		
		Plan and monitor team activities on a daily basis		
		Evaluate the department's activities		
	Manage teams	Contribute to the recruitment of people in charge of data management	Organise the recruitment, supervision and evaluation of teams in compliance with the legal framework and the organisation's procedures	
		Supervise the team in charge of data management		
		Develop the skills of staff in charge of data management		
		Assess the team in charge of data management through ad hoc analysis and evaluation interviews		
	Ensure the availability of resources	Participate in the design phase of operational strategies and projects on the data management component, particularly in terms of budgets	Plan the department's resources in relation to other departments and the organisation's operational strategy	
		Implement the optimal allocation of resources (financial, logistical, technical, human) necessary for data management as well as their proper management		

All optional aspects appear in grey in this professional frame of reference. The choice of colours is anecdotal and is only used to distinguish the different sets of information: it does not denote any gradation.

**Optional: the optional side depends on the size, organisation chart and missions of the structure.*