PROGRAM DATA: THE SILVER BULLET OF THE HUMANITARIAN AND DEVELOPMENT SECTORS?

PANORAMA OF THE PRACTICES AND NEEDS OF FRANCOPHONE CSOs

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 center, 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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ACRONYMS

AFD	*Agence Française de Développement* (French Development Agency)
ALNAP	Active Learning Network for Accountability and Performance
AMP	*Agence des Micro Projets* (Agency for Micro Projects)
BI	Business Intelligence
CRS	Catholic Relief Services
CSO	Civil Society Organisation
DFID	Department for International Development
DIAL	Digital Impact Alliance
GDPR	General Data Protection Regulation
GIS	Geographic Information Systems
HAID	Humanitarian Aid and International Development *(Solidarité Internationale* in French*)*
IASC	International Accounting Standards Committee
ICRC	International Committee of the Red Cross
ICT4D	Information and Communications Technologies for Development
IM	Information Management
IMO	Information Management Officer
M&E	Monitoring and Evaluation
MDC	Mobile Data Collection (*Collecte de données sur mobile*)
NGO	Non-Governmental Organisation
NICTS	New Information and Communications Technologies
OCHA	Office for the Coordination of Humanitarian Affairs
ODI	Overseas Development Institute
ODK	Open Data Kit
SDC	Swiss Agency for Development and Cooperation
SDG	Sustainable Development Goals
USAID	United States Agency for International Development

EXECUTIVE SUMMARY

Program data management - also known as Information Management (IM) - is both a topical issue and the source of numerous debates within francophone Humanitarian Aid and International Development (HAID) Civil Society Organisations (CSOs). Based on a survey of CSOs, a literature review and interviews with key stakeholders, this study is intended to feed into sector discussions on the topic.

Based on the concept of IM, program data management is a term whose scope of application continues to fluctuate and whose definition remains unclear. With a view to facilitating its ownership, readers of this study will be given an accessible definition - based on the data life cycle - and a relatively small scope of application, at the juncture of Monitoring & Evaluation (M&E), Information and Communications Technologies for Development (ICT4D), information systems and knowledge management.

Despite studies still being relatively sparse as to the link between project data management and project quality, the available evidence shows that good data project management makes for greater efficiency and transparency in organisations. The evidence gathered suggests, however, that project data management is widely used today for the benefit of bottom-up accountability - towards decision-makers and financial backers - rather than for day-to-day project steering.

The reasons for this state of affairs are manifold, but it appears that chief amongst them is a significant lack of maturity from francophone CSOs in matters relating to data and digital issues. Six main weaknesses and levers for action have thus been identified: (i) an insufficient data literacy within CSOs; (ii) unduly fragile, siloed and insufficiently funded program data management strategies; (iii) a lack of leadership and often overly vague responsibilities; (iv) a technological environment that is neither controlled nor influenced by CSOs; (v) the use of approaches that foster information overload and neglect qualitative data; and (vi) an under-estimation of the responsibilities carried by CSOs and of the ethical issues at stake with regard to the data they manipulate.

Confronted with these challenges, it appears that francophone CSOs are somewhat lagging behind - at least in terms of awareness and strategic positioning - compared to their anglophone counterparts. Moreover, program data management continues to be approached by the various CSOs in an inconsistent manner: the study therefore proposes a classification of CSOs and reflects on the main existing differences - between types, sectors and sizes - and in particular points out the difficulties encountered by the smallest organisations.

Finally, this study is an opportunity to identify both the type and the content of materials required for program data management by francophone CSOs; it should also be put-to-use to suggest recommendations to the various international aid and development actors, especially CSOs, who would benefit from being more proactive on this topic, as well as to donors and network heads who play a pivotal role in these issues.

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RATIONALE

Mirroring our society, the Humanitarian Aid and International Development (HAID) sector is in the throes of a digital revolution. Whilst the latter is undeniably impacting day-to-day management of Civil Society Organisations (CSOs) - whether in their administrative duties or in those related to fundraising - it is also generating radical changes in actions being implemented for the benefit of populations.

Although it has become a key element in the coordination of operations, data management remains somewhat invisible from the perspective of the sector, in spite of its many ethical, financial and human implications, and above all its impact on project quality. In the field and at headquarters, project teams are therefore devoting an increasing amount of time to data management, often at the expense of other activities. Poorly trained and ill-equipped, these teams can produce substandard performances with regards to these tasks, and without the topic necessarily being regarded as an operational issue by most CSOs.

At present and to our knowledge, no equivalent study with a view to examining, as a whole, the practices of (francophone) CSOs, or to identifying their needs in terms of program data management, has yet been carried out. A number of analyses and articles do exist, yet these generally approach the subject either from a technical standpoint or as if these were still innovations for the sector and thus with limited constructive hindsight. The organisational dimension is moreover relatively unexplored and very little consolidated data at the inter-CSO level is available. Lastly, although CSOs have been handling large amounts of data for almost 20 years, there remains much debate: what level of attention and investment should data management be subject to? Does the activity require a dedicated person in-house and, if so, which profile should be given priority? In fact, where does the scope of data management begin and where does it end? Do CSOs working in humanitarian situations have different needs than those working in a development context? Do differences in approach exist between francophone and anglophone CSOs, the latter often deemed more advanced in the field?

The purpose of this study is therefore to explore and provide preliminary answers to these questions. It thus aims to make a valuable contribution to bolster the debate on data management. We have thereupon sought to synthesise and formalise often scattered and at times contradictory considerations. By clarifying the various elements feeding the debate along with the issues at stake, we hope that this document will fuel discussions at the level of CSOs and their stakeholders, including donors and networks. In summary, this study should enable specialised organisations, including Support CSOs* such as ourselves, to better define their priorities.

* For more information, see the French Support NGO group or its humanitarian equivalent.

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1. METHODOLOGY

1.1 SCOPE OF THE STUDY

This study focuses mainly on operational francophone CSOs within the Humanitarian Aid and International Development sector. This scope - which may seem relatively limited - is justified not only by (i) the determination to remain within a reduced field that is compatible with an analysis of sufficient quality, but also by (ii) an observed shortage of available data to date on these organisations and (iii) the willingness to test the often heard hypothesis according to which the francophone community is definitely lagging behind - particularly when compared to anglophone CSOs - in said data management.

> **THE NAME "FRANCOPHONE HUMANITARIAN AID AND INTERNATIONAL DEVELOPMENT CSOS"** is understood here as incorporating organisations that implement both humanitarian aid operations and international development activities, having their headquarters in a French-speaking country irrespective of their status (NGO, association, foundation or other), size, sector (education, health, agriculture, etc.) or method of intervention. However, international organisations and local authorities are excluded from this group, among others.

This analysis focuses on international CSOs with headquarters in Europe, either France, Switzerland or Belgium. So-called "Southern" national or regional CSOs have not been included. The latter are in fact an essential link in the chain of solidarity, and we hope to include them into future studies.

1.2 SOURCES OF THE INFORMATION USED

This study is based on three data sources that were triangulated during the analysis: an existing secondary literature review, semi structured interviews and an online quantitative survey of CSOs operating in the aid sector.

A total of sixty-five documents, identified as relevant, were thus reviewed by the CartONG teams for this study (bibliography available in Appendix 1.3). With less than a quarter of these documents being available in French and/or in reference to francophone CSOs, we were compelled to make extensive use of anglophone studies in our analysis and therefore in the set of arguments set out in this study.

As for the semi structured interviews, they were primarily conducted with networks of CSOs, donors, anglophone CSOs[1] and small francophone CSOs (list of interviews available in Appendix 1.4 and semi structured grid in Appendix 1.5). All in all, eighteen interviews with twenty-five people were carried out. It should however be noted that some twenty-five organisations - mainly francophone donors and small CSOs - did not respond to our interview requests, either because they were unable to identify anyone capable of addressing the issue internally, or because the theme of the study did not seem to carry very high priority for them or was too removed from their day-to-day operations.

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1. One of the main objectives of the interviews conducted with anglophone CSOs was to compare their approaches with those of Francophone CSOs, but also to identify lessons learned that could be beneficial to the sector.

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FIGURE 1: Methodology of the study
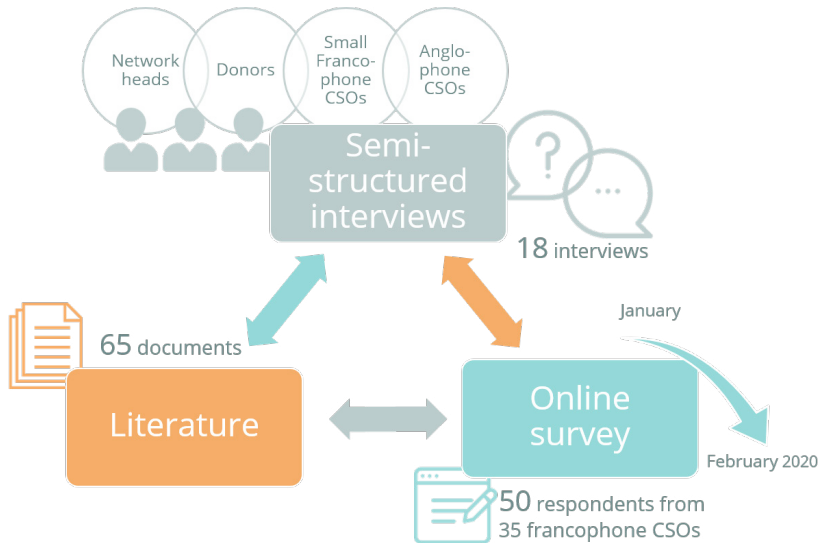
The survey intended for CSOs (c.f. the form in Appendix 1.7), widely disseminated by CartONG across francophone HAID networks between January and February 2020, made it possible - after removing out-of-scope respondents - to collect contributions from fifty interviewees comprised of:

- Forty-four employees and/or members of thirty-five operational francophone CSOs - five organisations having more than one respondent.

- Six individuals who responded individually, either anonymously or as data management specialists working as consultants or within an organisation that is not a CSO.

Brief profile of respondents: respondents are chiefly HAID employees (at close to 95%) and headquarters-based - as such, fewer than 10% of responses originated from the field. They are predominantly qualified (nearly three-quarters of them have five years' experience in HAID and 40% over ten years) and more than 20% are in senior management positions. About half hold positions related to program management, while a quarter are in new technology or data management positions and approximately 10% perform duties associated with Monitoring & Evaluation (M&E). Lastly, close to 50% are women and 40% are men - with the understanding that 10% of respondents did not wish to specify.

Of the thirty-five CSOs represented, the majority have their headquarters in France, with only one CSO based in Belgium and three in Switzerland. The thirty-five CSOs represent a wide variety of sectors and areas of intervention. The table below presents CSOs by budget size and type of operational context. It should be noted that almost all of the organisations that we define as small (with an annual budget of less than 2 million euros) or medium-sized (2 to 10 million euros) work in a development context. Large organisations (over 10 million euros) working in a crisis or mixed context (22%) are under-represented in terms of number of CSOs, but nevertheless represent 38% of respondents.

TABLE 1: CSOs that responded to the survey by annual budget and opertaional contexts

	Less than 0,5 million €	From 0,5 million to 2 million €	From 2 to 10 million €	More than 10 million €	**Total**
Mainly in development contexts	2	10	9	5	**26**
Both in humanitarian and development contexts	1			5	**6**
Mainly in emergency / crisis / humanitarian contexts				3	**3**
Total number of CSOs	**3**	**10**	**9**	**13**	**35**

It should be noted in closing that the information collected via the three main sources was augmented by the knowledge of CartONG's teams, gained from: (i) projects conducted with various partners of the organisation since 2006, (ii) informal interactions in recent months with different CSOs, and (iii) discussions and collective work carried out by a dozen CSOs within the Francophone Information Management Community of Practice, in existence since 2015 and led by CartONG - who, inter alia, have contributed to the section on defining the scope of data management.

1.3 METHODOLOGICAL LIMITATIONS

This study was designed with a limited budget and a relatively short time frame. Owing to its methodology, it contains several biases that are our responsibility to clarify here:

- The relatively limited number of survey respondents has enabled us to index a reasonable number of practices, attitudes and perceptions but does not allow the extrapolation of results to the whole of the CSO sector. We also consider that the sample of respondents is made up largely of an informed public. Therefore, the data gathered during the survey should be interpreted as trends illustrating the evolution of the sector, without purporting to be exhaustive. Despite having endeavoured to mobilise beyond our usual networks, the data collected during the survey and the interviews is chiefly derived from the French sector and could not be sufficiently triangulated on the Belgian and Swiss sides.

- Given the profile of respondents and the fact that we've had to limit the scope of the study, the data collected allows for only a limited understanding of the perception of personnel directly present in areas of intervention; whether it be field staff from international CSOs or from national CSOs based in these same areas.

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- As several sector players failed to accept our requests for interviews, not all information could be triangulated for debate and confirmation - particularly on the donors' side.

- The scope of data management being more formalised on the humanitarian side than on the development side (c.f. Section 2), there is a bias on the availability of secondary data in each type of context. An effect reinforced by the fact that the authors of this study, more accustomed to working in humanitarian contexts, may have had more difficulty in questioning certain results in a development context.

- Due to major opposing views on the scope of data management and limited existing literature on the topic, we have been obliged to include documentary sources covering a wider scope than originally desired[2]. We have de facto allowed ourselves to extrapolate the conclusions of certain documentary sources.

- To finish, a red flag should be raised, given that all of the data was collected before the COVID-19 crisis, which effectively turned the HAID sector upside down.

To offset these limitations and improve the reliability of the analyses, the key results of the study were presented and discussed prior to publication during a day of exchange with seventeen organisations, during which no significant bone of contention was uncovered. Moreover, proofreading completed by the Groupe URD made it possible to confirm the findings covered in this study.

Updating process: the procedures for updating this study, or even the feasibility of so doing, had yet to be fully defined as of the date of publication. Nevertheless, please do not hesitate to send your comments or feedback to the following e-mail address: renforcement-osc@cartong.org to ensure they are taken into account in a possible forthcoming edition.

2. Inclusion of studies that address "ICTs for development" (c.f. next Section) or surveys including responses from International Organisations (not just CSOs).

2. HOW CAN WE DEFINE PROGRAM DATA MANAGEMENT?

2.1 HISTORIC ORIGIN OF THE TERM

It is first of all important to mention that the expression program data management (or *Gestion des Données Programme* in French) is little used in the HAID sector, given that it was created in early 2019 by our teams as part of a project supporting the publication of this study. Indeed, if the term Information Management (IM) is relatively well-known and used in English[3], its literal translation into French is, in CartONG's fifteen years of experience, a lot less understood and used by francophone HAID actors. By introducing the expression program data management, we hence sought to put forward an alternative terminology to facilitate our French-speaking interlocutors' comprehension and to clarify the scope of study. While this expression is questionable, it does have the advantage of making the subject more tangible, especially to audiences unfamiliar with data and (new) technology issues. In this study, it will therefore be understood that these two terms (program data management and Information Management) are interchangeable.

> IN THIS STUDY, IT WILL THEREFORE BE UNDERSTOOD THAT THESE TWO TERMS (PROGRAM DATA MANAGEMENT AND INFORMATION MANAGEMENT) ARE INTERCHANGEABLE.

The term Information Management can be said to have increasingly been used since the year 2000. This period, which marked the beginning of standardization of IM practices, also corresponds to an increasing digitisation of HAID activities in the field, with the arrival of smartphones and the development of Mobile Data Collection (MDC) from 2009-2010. Concurrently, a trend emerged with the development of IMO (Information Management Officer) positions within international organisations in the field - an approach gradually taken up by a few francophone humanitarian CSOs from the years 2010 onwards.[4]

New components of IM have since been added to sector jargon such as responsible data management or data literacy to which we shall return in following sections.

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3. Such "Information Management" category has existed on the humanitarian reference site Relief Web: https://reliefweb.int for many years

4. For instance, an IMO position was created in the Quality Department of Terre des hommes in 2015.

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Establishment of a working group
bringing together different humanitarian
organisations (including CSOs): the *Global
Information Management Working Group
(Global IMWG)*[6]

2006

2002

Ten guiding principles for IM
defined at the *Symposium on
Best Practices in Humanitarian
Information Management and
Exchanges*[5]

2008

Formalisation of the IASC
reference document: *Operational
Guidance on Responsibilities of
Clusters/Sectors Leads & OCHA in
Information Management* (2008)[7]

Finally, while the concept of IM is relatively widespread in the humanitarian sector, its use is far less widespread, if non-existent, in the development sector. The latter indeed generally favours the broader notion of (New) Information and Communications Technologies for Development (N-ICT4D), which we will address more fully below. Also known as Tech4dev or ICT4D in English, this concept has likewise spread for some 20 years[8] within development CSOs.

2.2 A "PORTMANTEAU" WORD LEADING TO A LACK OF OWNERSHIP OF THE CONCEPT

Despite the terms IM or program data management being unevenly used in the HAID sector, they are not unknown: in that respect, in the online survey, only a handful of CSOs indicated having never used them. The scope of Information Management, however, remains very vague for many interlocutors - including in English despite its much older usage, and encompasses a broad variety of understandings. Many organisations thus recognise that the term is "vague and difficult to define"[9] and that, therefore, they use it little in their daily exchanges. Moreover, according to the interviews and the survey, these terms often commingle with three other concepts: Knowledge Management, Information and Communications Technologies for Development (ICT4D) and Information Systems.

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5. "Symposium on Best Practices in Humanitarian Information Management and Exchanges", OCHA (2002)

6. "Global Information Management Working Group", OCHA (2006)

7."Responsibilities of Cluster/Sector Leads and OCHA in Information Management", IASC (2008)

8.As the focus of this study does not specifically concern ICT4Ds, we have chosen not to detail their history.

9. In this study, all quotations derive from the semi structured interviews conducted with twenty-five people as well as from the survey having harnessed fifty respondents, as noted in the Methodology section. Occasionally, the author of the quotation and the organisation for which he/she works are mentioned, because he/she has agreed to such use. By default, the other quotations used have been anonymised.

> *Data management: we don't actually even call it by name [here at ACODEV]! Justine Ferrier, PCM Manager at ACODEV*

> *In any event, there is a lot of confusion surrounding the definitions [of data management] - Cécile Vilnet, Microproject Manager of the European Guild*

Indeed, located at the crossroads of many professions and fields, Information Management / program data management should as a term be clarified and better defined. The consequences of this semantic blur are:

- A lack of ownership of IM-related stakes by CSO governance bodies (see following sections),

- Regular concerns regarding the scope of responsibility and interaction between functions, creating daily conflicts - within CSOs or between CSOs - or, on the contrary, shortfalls in decision-making.

- In the long run, a lack of recognition and visibility of IM-related professions, notably curbing the development of skills needed in the sector (lack of almost any dedicated training courses, etc.).

DATA is a set of facts (or values). Therefore, it is a raw, uninterpreted, and non-contextualised element. Data can be vastly different in nature: qualitative, quantitative, structured, unstructured, and derived from different sources.

INFORMATION is a set of contextualized data, which is categorised, analysed and organised so as to have structure and meaning.

KNOWLEDGE is formed by a combination of data and information with expert opinions, skills, learning and experience.

These complex terms have many definitions in literature. The above definitions are those that were selected during a collaborative working session organised by the Francophone Information Management Community of Practice attended by Action against Hunger (Action Contre la Faim - ACF), CartONG, Groupe URD, Humanity & Inclusion (HI), Doctors of the World (Médecins du Monde - MdM), Solidarités International and Terre des hommes (Tdh).
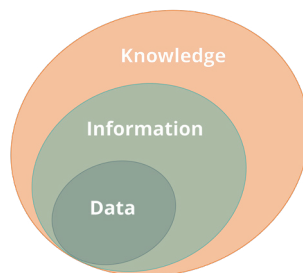
2.3 A FIRST DEFINITION

Information Management has numerous definitions, and while there is no dominant definition in the HAID sector, all agree on the following key elements: Information Management (i) is based on a multi-step data management cycle (see illustrations below) and (ii) is aimed at improving decision-making and the quality of HAID actions.

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Figure 3: Data Management Cycle
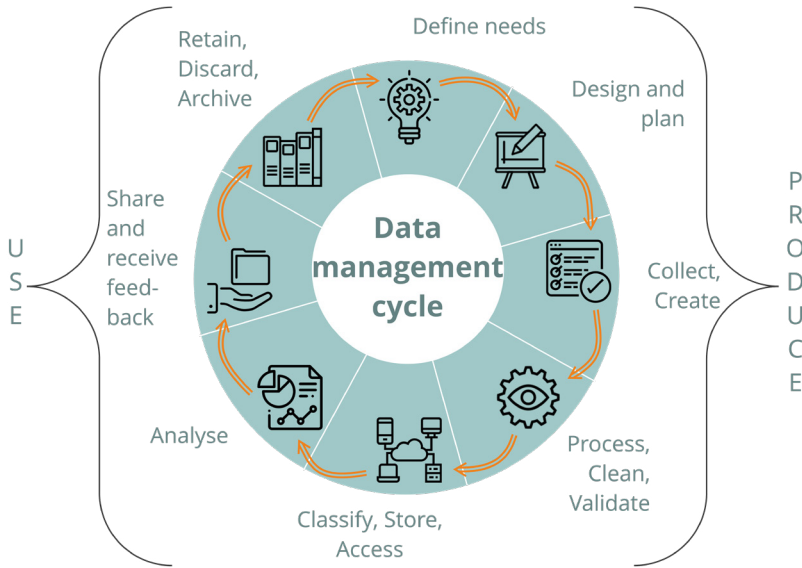
DATA MANAGEMENT VS. INFORMATION MANAGEMENT
The two terms are close, but organisations often prefer the second, because it implies an analytical approach to data management, which is then used to support decision-making and learning. It thus goes beyond an approach where data acquisition and processing are an end in itself.

One of the most widespread definitions, which we will use here, is that of the IASC[10], which states that: "IM is the systematic process for the collection, collation, storage, processing, verification, and analysis of data and information from one or more sources, and the dissemination of relevant data and information to sector participants, to support effective and timely action. It enables situational understanding, coordination, strategic and operational decision making, accountability, advocacy, and fundraising. It also allows sense-making and the production of knowledge".

A more accessible alternative definition proposed by MapAction might be that "IM is how people make decisions through data."

Information management is thus made up of flows (i.e., the circulation of data[11] from one point to another within an organisation or software), tools (usually technological solutions called software or platforms, whether in the cloud or offline), devices for storing, transmitting or processing data (paper file, smartphone, computer, etc.), and information management products, i.e. the elements that are distributed at the end of the data cycle (either a map, a dashboard, computer graphics or an analysis report). Information management also builds on methodologies (methodology for the creation of mobile survey forms or semiology for

10. "Report on the Outcome of the IASC Task Force on IM Workshop", IASC (2011)

11. Given that said circulations can occur at the same speed or not, this then introduces the notion of synchronous or asynchronous flows.

map-making) and processes (in the sense that many steps and activities are correlated and intertwined during data processing), often formalised within CSOs in the form of procedures describing who is responsible for what step and how it should be accomplished. Lastly, it is regulated by principles that are internal to the organisation or sector-specific - the IASC thus defines 10 principles[12] such as interoperability, objectivity, inclusion and confidentiality - and is included in one or several data ecosystems[13] at both international and local levels.

FIGURE 4: Main components of Information Management
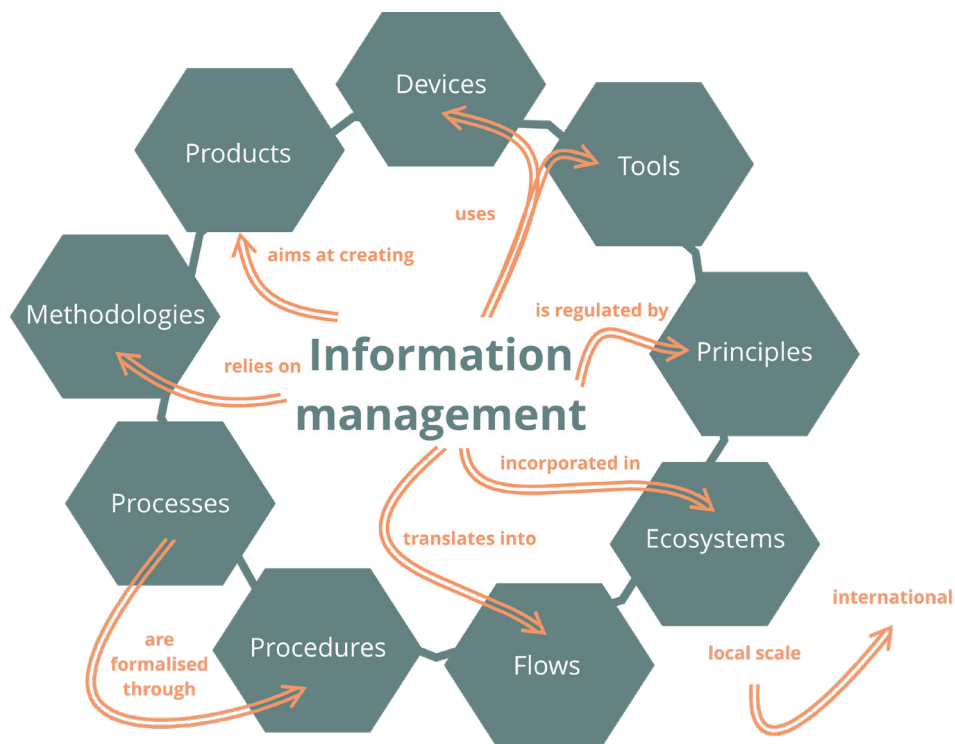
Finally, while information management can theoretically cover any type of CSO data - including administrative, financial, logistical or HR-related - it appears that in the vast majority of cases, the term IM makes more extensive reference to data required to implement and steer operations than to data contributing to the overall management of an organisation across support and operations departments. This limitation of the scope of IM is mainly explained by the fact that:

12. "Responsibilities of Cluster/Sector Leads and OCHA in IM", IASC (2008)

13. The concept of ecosystem is a recurring thread among many sector players such as ACAPS, DIAL and the Centre for Humanitarian Data. Borrowed from natural sciences, it is intended to recognise that CSOs operate in complex and open, interconnected, and decentralised systems that constantly adapt and change due to external and internal inputs. Each local data ecosystem is made up of national and international organisations, a multitude of data sources, a range of data management tools, practices, and standards.

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- IT solutions for financial or HR management, amongst others, have been established, standardised and mature for many years in CSOs, as opposed to solutions dedicated to operations that are abundant and - depending on the nature of the activities and contexts - not easily standardised.

- Specialised expertise in data management from support functions already exists outside the HAID sphere (via HR information systems specialists for instance), yet this expertise does not yet exist in a formalised manner in terms of HAID operations.[14]

In this study, we have opted to limit our approach to information management to operational data: i.e. to data collected by CSOs in the context of their interventions. Indeed, we consider that the sector is not mature enough to contemplate a coordinated and multisectoral approach to managing all of an organisation's data - as certain CSOs might wish - and that a clarification and optimisation effort at operational data level is necessary above all.

2.4 TRANSVERSALITY AND DISTINCTION FROM OTHER TERMS

To clarify its often poorly defined scope, it is important to distinguish Information Management from the following sectors and expertise:

Information Management vs. Knowledge Management

Information Management is one of the upstream components of knowledge management, which aims to organise, develop, memorise and share the knowledge of an organisation's members. Knowledge Management (capitalisation, sharing and reuse, etc.) therefore encompasses and goes beyond Information Management.

Information Management vs. Monitoring and Evaluation (M&E)

IM and M&E have the same purpose: to help operational teams achieve the best possible data quality for appropriate decision-making that ensures the smooth functioning of a project (steering, learning, and accountability). However, these two sectors do not address data management in the same way. M&E thus mainly concerns the methodological support necessary for the continuous and ad hoc measurement of changes to which the programmes must contribute (formulation of indicators and their measurement modalities, choice of collection methods, assessment design, learning processes etc.), while IM focuses on the organisation of data processing procedures (notably through the use of specific IT tools and methodologies). As a result, M&E and IM are complementary and interdependent: for example, both fields are required to design a comprehensive survey protocol.

Information Management vs. IT infrastructures

Information Management relies among other things on IT infrastructures and services (servers, networks, security systems, media, software, etc.) whose management is incumbent upon teams – and/or external providers – having technical skills that are significantly different from those required for IM. A lack of sufficient IT infrastructures would thus hinder the growth of IM. It is however important to ensure that these infrastructures also adapt to the needs of IM (new technical solutions do not always fit into established IT organisational schemes).

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14. In the words of the market sphere, there is no equivalent yet for "Business Analyst Marketing" at the level of HAID operations such as: https://www.apec.fr/tous-nos-metiers/commercial-marketing/marketing-business-analyst.html

Information Management vs. Information Systems

Information Management is integrated in a CSO's global information system, particularly in the computing and data centralisation dimension. Nevertheless, an approach by so-called information systems tends to promote a systemic view of data management, that is to say at organisational level (and thus rather top down) and over long periods of time, whereas operational information management focuses on business-wide needs (and thus rather bottom up) and relatively small timeframes – with a solution generally needing to be found quickly in order for projects not to be blocked.

Information Management vs. ICT for Development

As discussed earlier, the concept of ICT for Development (or ICT4D) is widely used in some organisations, especially in the development sector. The American CSO CRS, which initiated the largest international conference[15] on the subject, defines it as "the practice of using technology to assist poor and marginalised people in developing communities. [ICT4D is] an information and communications technology used during interactions with - or directly by - beneficiaries, with the technology helping to manage key information related to those interactions".[16]

This vocabulary can be found from relatively similar perspectives, including:

- Many anglophone CSOs such as Oxfam and its *ICT in Programme*[17] approach, MercyCorps[18] or Plan International[19]. On the francophone CSOs' side, the approach is often less prominent, but nevertheless CSOs, such as Gret[20] for instance, have positions with such responsibilities.

- Some network heads such as DIAL via the *Digital Development Ecosystem*[21].

- Many donors such as the Belgian Development Cooperation (D4D[22] approach), the DDC (Switzerland)[23], DFID (United Kingdom - *Doing development in a digital world*[24] *approach*) or USAID[25]. On the AFD side, despite the word used not being the same, the approach seems identical.[26]

All of these ICT4D-type approaches have the following main characteristics:

- Being geared towards external end users (service users, beneficiaries, medical practitioners, farmers, etc.) as opposed to IM, which is limited to the scope of the organisation.

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15. To go further: https://www.ict4dconference.org/
16. L'ICT4D, outil essentiel pour l'aide humanitaire", CRS (2018)
17. "ICT in programme" at Oxfam (2020)
18. "Technology" at Mercy Corps (2020)
19. "Digital development" at Plan International (2020)
20. ICT for Development Project Manager positions
21. "DIAL Baseline Ecosystem Study", DIAL (2018)
22. "Digital for Development" within the Belgian Development Cooperation (2016)
23. "Tech4Good" at DDC (2020)
24. "Digital Strategy 2018-2020", DFID (2018)
25. "Digital strategy", USAID (2020)
26. "Numérique et Innovation", AFD (2020)

- Having a vocation for the digitisation of business processes beyond the data management cycle (e-health; e-education, e-agriculture, e-governance, etc.).

- Including, for the most part, digital inclusion dimensions (via the development of Internet connections or ownership of telephones) and economic growth (support for local start-ups, among others).

The ICT4D approach is thus often considered broader in terms of methodology than IM, which is simply aimed at improving data management for better strategic control of operations. The graph below, which presents a typology of ICT4D procedures created by DIAL, makes it thus possible to identify IM as one of the components of ICT4D.

FIGURE 5: Information Management and ICT4D - Adapted from the DIAL 2018 Publication

Internal focus				External focus
Reality of ICT4D for the majority of the stakeholders				**Global narrative on ICT4D**
Finance Human Ressources Grant tracking	Monitoring & Evaluation Project management	Registration of beneficiaries Cash transfer delivery Logistics	Guidance to community health workers Weather information shared with farmers Self-administrated data collection	Cash transfers paid by mobile money Collecting community feedback Direct messaging apps

Information Management

The existing confusion between ICT4D and IM could also be explained by the fact that, although encompassing both the internal and the external, "digital development engagement in terms [of ICT4D] is still internally focused (i.e., support enterprise or program operations) (e.g. monitoring and evaluation)".[27]

Moreover, because ICT4D often captures more attention and resources within CSOs – due to its more innovative nature – than IM, several CSOs have reported a certain degree of rivalry between these two approaches, when they cohabit.

27. "DIAL Baseline Ecosystem Study", DIAL (2018)

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The relevance of distinguishing these two fields continues to be debated, without there being a consensus. Some CSOs interviewed thus in no way intend to distinguish ICT4D from IM, while other actors insist upon the fact that "data management is essential but separate from digital development"[28] for several reasons:

- Information Management systems are not – and probably should not – be fully digitised.

- The use of NICTs will not fully address poor quality issues or non-use of data or the risks that these could well generate for populations. As a result, multi-sectoral data-driven approaches remain necessary.

While digitisation, technologies, and data management are obviously intimately linked, we feel the approach promoting the distinction between the boundaries of ICT4D (both internally and externally focused and digital inclusion) and IM (solely internally focused and related to data issues, whether digital or non-digital) is more appropriate for the reasons mentioned above- it will therefore be the one used in the remainder of this study. It is nonetheless likely – especially as a consequence of the evolution of technologies – that this dichotomy will decline over time, as IM and ICT4D increasingly feed into each other.

FIGURE 6: Simplified diagram of the place of Information Management vis-à-vis related topics
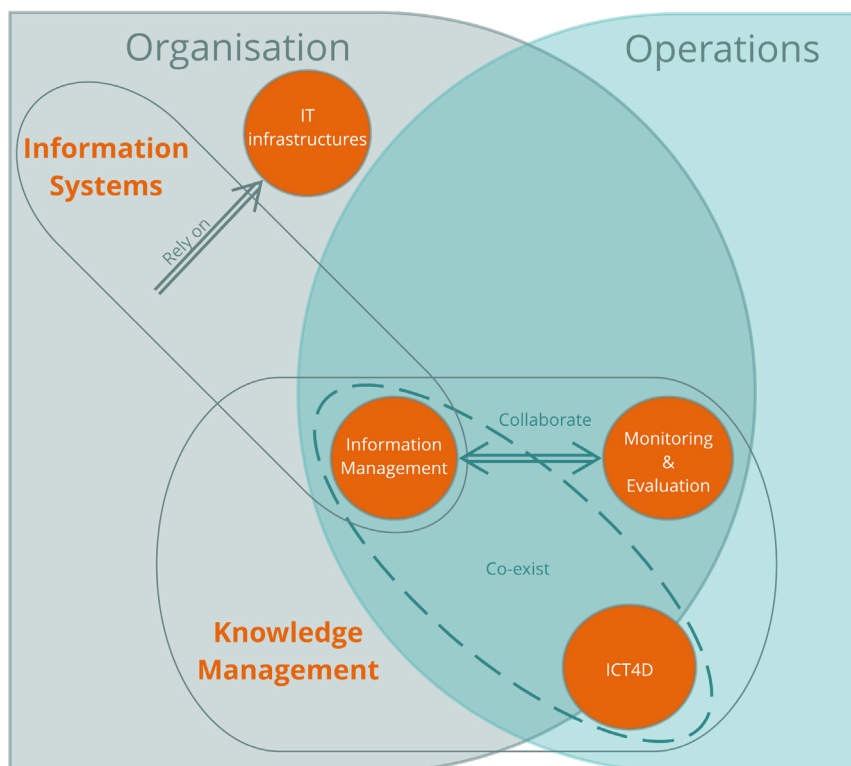
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In conclusion, the notion of program data management and by extension here, of Information Management, is understood as follows in this study:

- Data management refers to the full range of processes, methodologies, and tools required for the various stages in the data analysis chain, i.e. from their collection to the decision-making process to which said data contributes.

- Program data refers to all operational data related to needs analysis, implementation and monitoring & evaluation of field activities until they are consolidated at CSO headquarters level.

- IM is primarily intended for internal use by the organisation and therefore does not include in its scope the use of ICT for external purposes (with users of CSO services, supported practitioners, etc.).

MERL Tech discussion spaces
One of the other terms sometimes associated with IM and not yet mentioned in this chapter is MERL Tech. Initiated in 2014 by American practitioners (and moreover still today very little used by French-speaking CSOs), it corresponds to a space for discussion and reflection around the use of digital technologies for Monitoring, Evaluation, Research and Learning. It therefore covers a field very close to that of IM, although the exact approaches and boundaries differ (MERL Tech having a stronger focus on the technologies themselves). It materializes in practice as conferences held annually in Washington (and occasionally elsewhere), a community of practitioners and also some resources, which can be found at: http://merltech.org/

3. DOES DATA MANAGEMENT REALLY SERVE PROJECT QUALITY?

As part of this study, we asked sector players about the expected benefits of good Information Management. According to their feedback, the direct benefits sought by CSOs seeking to improve their IM are:

- A deeper understanding and vision of a situation or context, and a more precise identification of the needs of populations, or of the elements necessary for advocacy.

- A more rigorous identification and selection of people or population groups to be included in a project.

- An easier and more agile management of operational programmes and strategies, with interventions adjusted if necessary through better informed decision-making processes, including by:
  - More easily following the implementation of a project's activities.
  - Verifying that services are delivered according to the technical or quality standards in place.
  - Monitoring over time the people or populations receiving a service.

- Better monitoring and understanding of project quality including:
  - Greater objectification of the results and effects obtained.
  - Better tracking of contextual trends.
  - The ability to measure and prevent potentially unwanted risks and effects.

- Faster donor and internal reporting and accountability to donors that is more easily traceable or demonstrable.

- Easier external communication, especially when searching for funding.

Indirect benefits, for their part, are as follows:

- Facilitated organisational learning processes through easier internal sharing and reduced data loss through appropriate storage.

- Improved efficiency in the sector as a whole, by limiting duplication of data collection.

- An opportunity to improve accountability and communication to impacted populations through more readily available elements for feedback.

- Risk reduction for populations through more rigorous management of their personal and sensitive data.

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While all of these objectives seem, at first glance, to be logical and related to IM, we have tried, based on the survey data and available literature, to objectify them as much as possible so as to determine whether these were theoretical or actually observed benefits. This exercise was actually quite difficult, and all of the benefits expected by CSOs could not be cross-referenced in the facts below. Interestingly, while IM actually brings efficiency benefits, the link between project quality and IM (beyond facilitating the provision of better data) remains, owing to a lack of research, poorly demonstrated to date. Incidentally, none of the indirect benefits could be formally confirmed.

3.1 Data management as, first and foremost, a token of efficiency and effectiveness

It is first of all important to note that the impacts of good data management on the effectiveness and efficiency of operations, in terms of time and budget, appear to be corroborated by the various sources of information analysed. In one study, Oxfam points out that "ICTs [have] proven to save time [which is the most commonly cited benefit], promote accuracy and ensure responsive use of data across multiple humanitarian processes".[29] In a previous study, Tdh and CartONG also indicated that if "interviewees found it difficult to precisely quantify the impact MDC could have in terms of time efficiency, data accuracy or cost, all of them reported that the benefits of implementing MDC significantly outweighed the initial costs".[30]

The same is true of the link between IM and data quality, as confirmed by many sources. Oxfam thus observed, as early as 2015, that "using digital surveys also improves the quality of the data collected, which means that the time required for data cleaning is also reduced" and that the use of certain IM solutions "supports the use of data-quality checks that improve the accuracy of data".[31] CRS also notes that "when asked about the degree to which digital tools benefit certain aspects of aid and/or development programs, [respectively] 82% of respondents rated timely data and 81% rated higher quality data as very important".[32]

3.2 Data management at the service of CSO orientations

Some actors have noted the positive effects of IM on decision-making and project adaptation. They thus point out that good information management makes it possible "to have a holistic view of the small pieces of the puzzle [...] and fewer gaps in understanding a situation"; that IM "makes it possible for a program to be modified at the right time rather than six months too late" but also "to be as efficient as possible by accessing data easily - when the connection is available [...] - and thus save time to focus on other subjects". It appears IM would also allow for "more intelligent and solid communication on tangible results, that are not just hot air" [...] making it, at times, possible to go against the injunctions of donors", and finally, "to have readily accessible data on the achievements and thus dig deeper - at last - into the "impact" dimension of the projects".

29. "Les TIC dans les interventions humanitaires", Oxfam (2017). It should be noted that the ICTs mentioned in this study are almost exclusively ICTs used according to an IM approach.
30. "Lessons learned paper from five years of Mobile Data Collection at Tdh", CartONG, Tdh (2019)
31. "Going digital: Using digital technology to conduct Oxfam's Effectiveness Reviews", Oxfam (2015)
32. "DIAL Baseline Ecosystem Study", DIAL (2018)

These observations should, however, be nuanced. Indeed, in the respondents' view, program data collected by CSOs are not often used in the field for decision-making: frequent use is reported by less than 30% of respondents and one-time use by less than 50%. Similarly, less than half of them consider that the collected data makes it possible to measure and demonstrate the impact of projects.

The response on data usage that is most often selected is even, conversely, that data is "mainly used for donor or contractual reporting". This trend, which could have resulted from the fact that the respondents are mostly working from headquarters, is however confirmed by various documentary sources such as the DIAL study which states that "NGOs predominantly use digital data for monitoring and evaluation, and that this is predominantly used for reporting to donors"[33] and by participants in a recent humanitarian conference pointing out that "field staff don't feel that the data collected is for them to use, but for donors".[34] Similarly, it should be noted that some CSOs interviewed see IM as a competitive advantage vis-à-vis other CSOs, because a data management system "looks more serious vis-à-vis the donor" or "provides visibility and gives an impression of professionalism".

As one CSO interviewed summarises, this "disproportionate use of data for reporting over project management" can no doubt be explained by the fact that there only exists, despite popular conceptions, a "tenuous link" - in the words of a John Hopkins University researcher[35] - between the quality of operational decision-making and the quantity/quality of data made available and/or IM products (such as maps and dashboards). In 2019, this same researcher recalled that "there is actually very limited evidence on how existing global health dashboards are used and if they actually influence decision-making".

THERE ONLY EXISTS, DESPITE POPULAR CONCEPTIONS, A TENUOUS LINK BETWEEN THE QUALITY OF OPERATIONAL DECISION-MAKING AND THE QUANTITY/QUALITY OF DATA MADE AVAILABLE AND/OR IM PRODUCTS.

ALNAP also sought, in a recent study,[36] to better understand decision-making mechanisms in humanitarian operations. While the study does not draw clear conclusions about operational decisions (much less in the context of development), it nonetheless shows that, "while decision makers value the use of information, no relationship between increased information collection and the perceived quality of the decision was found". The "operational decision-making would ultimately be largely social, with 81% of decisions involving consultation or a group process (with colleagues, reliable informants and so on)". Hence, "few decision makers explained the quest for information as being about making a better-quality decision", but rather that the information "gave them confidence and was helpful in their ability to justify decisions made". It is further noted that the information "improved the decision-makers' situation awareness and understanding of what decisions would be an appropriate fit" and that "the most rigorous, structured and evidence-led decisions were those about need and targeting, where there were established processes for gathering and making use of information through assessments and monitoring" - it has not however been possible to know whether this was due to more formal information management processes existing and to the latter being taken into account or not. As is acknowledged by the ALNAP study, more research on the subject would be needed to clarify the quality of the information sought, the types of information that can support the different types of decisions made by humanitarian actors and how this

33. "DIAL Baseline Ecosystem Study", DIAL (2018)
34. See: https://twitter.com/AliceObrecht/status/1225054624819961859
35. "The Global Health Dashboard Epidemic", Aung, T. (2019)
36. "Beyond Assumptions: How humanitarians make operational decisions", ALNAP (2019)

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information could come into play at different points in the decision-making process.

Without more evidence, it is obviously difficult to have a clear and rational view of the exact value of good data management on project steering. In the present state of knowledge, it is only possible to encourage HAID actors to design their information management to meet the expected objectives, by better addressing the needs of the various stakeholders in their design, by giving more frequent feedback on their use, and so forth. The main challenge still being to prevent targets considered as priorities from being departed from in favour of purely upward accountability, i.e. primarily for donors and line managers.

Two main benefits of IM thus emerge: efficiency gains and facilitation of reporting and accountability work. The resulting time savings can be used for a variety of purposes, including improving the quality of HAID actions, by enabling project teams to spend more time on the ground, developing more participatory approaches with populations, etc. By contrast, a CSO can also decide to reinvest these gains by using the available time to reduce its costs. Similarly, reporting and accountability efforts can be directed solely towards donors or aim to make actions transparent to all stakeholders, including recipient populations. IM thus serves the overall strategic direction of the organisation: it is, ultimately, just a tool!

4. ARE CSOs MATURE ENOUGH IN TERMS OF DATA MANAGEMENT?

4.1 CLASSIFICATION OF CSOs IN TERMS OF DATA MANAGEMENT

While it is difficult and somewhat of an oversimplification to classify CSOs, it nonetheless seems possible to distinguish, the following categories (taking an empirical approach based on findings):

- Some CSOs' have an organic growth of information management initiatives: driven by the expectations and initiatives of their field actors, the headquarters of these CSOs have progressively formalised and coordinated approaches around data. This institutionalisation of IM, through the selection of standard solutions, the provision of harmonised data models, homogeneous procedures and training modules, nevertheless remains only partial at this stage. It comes most often in reaction to the emergence of needs rather than within the scope of a proactive approach. In fact, headquarters' takeover of field initiatives can often be traced to a need for efficiency (prevent each operation from developing an autonomous approach without the possibility of reproducibility, encourage the most reluctant to take the plunge, etc.) but also for control, in order i.e. to ensure practices comply with a number of principles (data protection among others). The majority are large CSOs working at least partially in a humanitarian context.

- Only a few CSOs have placed information management at the heart of their modus operandi by making massive investments in a solution, such as WaterAid[37], which uses the mWater tool on an exceptionally large scale. This type of organisation is generally predominantly specialised in one sector and works in a development context.

- In another dynamic, some CSOs have multi-year, ambitious, broad and organisation-wide digital transformation plans. The majority have some aspects of IM more or less visibly integrated, with due recognition of the lack of clarity around the definition of this concept. These CSOs are of all sizes, but on the whole rather large, with a management team wishing to invest heavily in the broader digital realm and/or those who above all need to digitise their support functions (administrative management, fundraising, logistics, etc.).

- Some CSOs[38] also admitted to using IM approaches mainly under pressure from donors seeking to digitise aid activities, and thus to limiting said use to specific processes for the time being.

- Other CSOs do not have a standardised or coordinated approach at organisational level but follow from a distance the ad hoc IM improvement initiatives; initiatives that are mostly carried out by individuals, on the ground, towards possible incremental progress. The majority of these are medium-sized CSOs that generally work in a development context.

37. We are currently unaware of any such francophone CSOs, but several could come close.

38. Despite this aspect being mentioned by only a few CSOs and us having a hard time providing elements of clarification, we did deem it interesting to report.

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- Lastly, there are CSOs that use virtually no IM approach and that have implemented more or less no initiatives. The majority of these are small CSOs. A 2017 study by CartONG on behalf of the AMP[39] had thereby already established that only 12% of small HAID CSOs used IM tools at operational level.

FIGURE 7: Classification of CSOs and their relationship with Information Management

1 Organic growth of IM initiatives
Large size
Humanitarian

2 IM at the heart of the modus operandi *rare*
All sizes
Development
Specialised in one sector

3 CSO's digital transformation plan *rare*
All sizes (mostly large)
Mixed
Strong will to invest

4 Use of IM for specific processes *rare*
All sizes
Mixed
Driven by donors

5 Ad-hoc IM improvement initiatives
Medium size
Development
Driven by the field

6 No initiative to use IM
Small size
Mixed

It should be noted that none of the CSOs interviewed or having responded to the survey, even among the anglophone organisations, consider having complete control over the operational data chain (as may be the case for financial or logistical data for instance) and all of the CSOs that may be considered advanced on the subject made a point of emphasising that their approach remained too partial.

4.2 OVERVIEW OF THE TECHNOLOGICAL SOLUTIONS USED

As we have seen, information management cannot be reduced to purely technological solutions. An analysis of the tools used by CSOs, however, provides a clear picture of the situation, without it nonetheless being possible to prejudge the quality of the methodologies used or the consistency of the processes implemented in support of the solutions deployed.

The most common tools within the majority of CSOs are thus for the collection of primary data

39. "Les NTIC dans le cadre des microprojets de développement", AMP (2017)

in a traditional way (via paper surveys or telephone calls) and offline Excel-type databases. More than 70% of respondents reported having used this for at least one project.

The most unequally used tools within CSOs are Mobile Data Collection (MDC) such as KoBoToolbox or ODK - used for at least one project by the majority of large and medium CSOs, yet by less than 50% of small CSOs; simple mapping such as Google Earth or uMAP (with a similar ratio to that of MDC); online databases such as Google Sheets or Office 365 (similar ratio to MDC) and Business Intelligence (BI) tools such as PowerBI or Tableau. These are used by most large organisations but by scarcely any small or medium CSOs.

The tools more marginally used by all CSOs are data collection via SMS or instant messaging applications (used by 20 to 40% of respondents with no significant trend in CSO size) and satellite or drone image analysis (similar ratio). Geographic Information Systems (GIS) such as QGIS or ArcGIS, and data consolidation software, such as AidImpact or TolaData, are used by less than 50% of large and medium-sized organisations and by no small CSOs.

Finally, newer tools such as voice recognition and the use of biometric data, Artificial Intelligence or algorithms were mentioned by almost none of the organisations interviewed.

TABLE 2: Technological solutions used by francophone CSOs

Data collection process	Large budget	Average budget	Small budget
Paper collection	+++	+++	+++
Dematerialised collection on mobile devices (smartphone or tablet)	+++	+++	++
Collection via SMS / instant messaging applications / social networks	++	+	++
Collection via satellite imagery and/or drones	+	-	+
Collection of biometric data	+	-	+
Collection via speech recognition	-	-	-
Data processing and analysis	Large budget	Average budget	Small budget
Offline databases such as Microsoft Excel, LibreOffice Calc or Access	+++	+++	+++
Online databases such as Google Sheet or Office 365	+++	+	++
Simple map visualisations via tools such as Google Earth or uMap	+++	++	+
Geographical Information Systems	++	++	+
Sector data software such as mWater for water point monitoring, DHIS2 for patient monitoring or RedRose for cash transfers	++	+	+
Dashboards via Business Intelligence tools such as Power Bi, Qlik or Tableau	+++	+	-
Online data consolidation software customised to the needs of the organisation, such as AidImpact, TolaData or ActivityInfo	++	+	-
Use of algorithms / artificial intelligence tools for decision making	+	-	-

Incidentally, the majority of CSOs interviewed foresee a wider use of new information management processes in the coming months, with - unsurprisingly - priorities relatively similar to those mentioned above:

- Mobile Data Collection and offline databases come first

- online databases, mapping and GIS are mentioned by a third of respondents

- business intelligence and data consolidation solutions are only contemplated by medium and large organisations

- other technological solutions remain an exceedingly small minority

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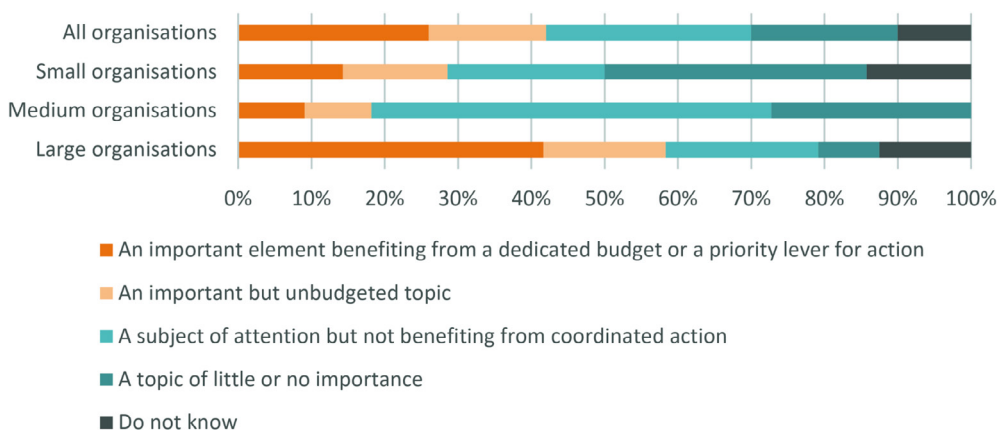THE SILVER BULLET OF THE HUMANITARIAN AND DEVELOPMENT SECTORS?

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Survey results therefore clearly show a certain interest and enthusiasm of CSOs regarding these topics, even for those having so far invested very little in this area. It is also worth noting that there is a significant gap between the solutions that francophone CSOs use or plan to use in the near future, and those that are trendy and figure prominently in current sector debates, which include, among others IVR (Interactive Voice Response), machine learning, Big Data, the Internet of Things or sensors. Whether this approach relates to actual pragmatism on behalf of the CSOs interviewed - that reportedly perceived the interest in these trendy technologies as being uncorrelated to their potential impacts[40] and more of a race for innovation – or to an inability of the latter to project themselves in the use and mastery of such solutions is however impossible to determine.[41]

4.3 CSOS ARE INADEQUATELY PREPARED TO FACE DATA MANAGEMENT ISSUES

In general, HAID CSOs seem to express difficulties in taking up the topic of information management. Nearly 90% of survey respondents felt that their CSO was "not at all" or only "partly" ready to accommodate the specific challenges posed by information management[42].

Similarly, close to a third of respondents (see detail below) stated that the governance bodies of their CSO did not consider IM to be an important topic or seem to have a clear stance on the issue[43]. Less than a quarter of respondents indicated that their CSO dedicated any budget to IM, and a vast majority of these were large organisations. No noticeable distinction on the subject emerged between humanitarian and development actors.

FIGURE 8: The role of Information Management in CSOs

- An important element benefiting from a dedicated budget or a priority lever for action
- An important but unbudgeted topic
- A subject of attention but not benefiting from coordinated action
- A topic of little or no importance
- Do not know

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40. See: "Humanitarian Technology Hype", Johnson, S. (2018) on overhyped technologies.

41. Other existing studies on the practices of francophone CSOs - such as FHI 360 in Asia-Pacific - cover much broader perimeters for any relevant comparison to be attempted.

42. None considered their CSO to be fully ready and only 6% of respondents considered it to be "mostly" ready

43. The "do not know" responses have been interpreted as a lack of clear positioning as these are unknown to respondents.

Whilst IM cannot be confined to the digital question, it is still interesting to note that the latest edition of the Solidatech barometer on the use of digital technology in the French associative sector places HAID[44] associations as substantially less mature from a digital standpoint - all uses combined - compared to other associations, particularly cultural or environmental associations.

Finally, a large number of CSOs stressed that structures with training capacities, such as the coordinating organisations on which they depend or network heads, were not mobilised on the issue. Most of the network heads interviewed indeed confirmed that IM was thus far not high on their agenda, mainly because CSOs themselves were not seeking their advice on the topic. The coordination structures closest to small CSOs even considered that - given their low maturity on broader topics, such as project management or M&E - IM remained at this stage "the icing on the cake" of CSO capacity-

> "NGOs are the poor relations in terms of digital technology [...] they have trouble keeping up with this revolution and the changes that they should make in a year take five to ten." - Thierry Barbaut, Digital Director of the Guild
> "Associations feel they need to delve into the digital topic and are aware that they are handling a lot of data, yet they have difficulty understanding the issues and acquainting themselves fully with the subject." - Vincent Bergeot, entrepreneur within Collectif Tiriad

building, or "a field of exploration". The same is true of francophone donors - with the exception of the Belgian cooperation - who are considered by CSOs to be rather inactive on these subjects.

In my opinion, my organisation is not ready for this transition at all. It may not take place operationally, but it should be a catalyst for partners, and provide guidance on these themes that they do not necessarily even think about - A CSO working in a network at different scales.

Digitally immature and not very proactive with regards to IM, will HAID CSOs manage to rise up to the challenges posed by 21st century data? The issue has in any event been raised by several interlocutors who believe that "the longer CSOs wait, the more difficult it will be to realize the transition [towards a suitable IM solution]" and that the "continued existence of some may be threatened" in the event of failure to respond swiftly to related challenges – whether vis-à-vis donors or legislators.

Whilst it remains difficult to express a categorical opinion, given the scattered observations collected in the context of this study, it nevertheless appears that more effective support for CSOs on the subject of information management is deemed necessary by all actors of the Humanitarian Aid and International Development sector.

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44. The humanitarian category of the study including, from our understanding, all HAID associations, see: "La place du numérique dans le projet associatif", Solidatech, Recherches & Solidarités (2019)

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5. WHAT ARE THE CURRENT AND FUTURE DATA MANAGEMENT STAKES THAT CSOs

Selected excerpts of reported problematics

- An apprehension about speaking of and sharing data: "[CSO members may] be afraid of the data and its implications, [it's complicated] to get people to talk about their difficulties" Katelyn Rogers, Data Literacy Co-Lead at the Centre for Humanitarian Data

- A technological prism: it is all too often assumed that "if you build a dashboard it will solve all the problems, while in fact it only enables you to have conversations" - Ric Tighe, Global Advisor in the ICT in Programme at Oxfam

- Ineffective approaches: "Improving IM can require much energy for an outcome that is not always conclusive" - Testimony of a CSO

- A lack of process structuring: "Data [is] too often with one person/laptop only, rather than with a proper architecture & workflow at organisational level." - Head of training and learning at MapAction

- A lack of shared vision: "We have no common foundation or collective vision. The often-discussed prism is the integration of new technologies." - Testimony of a CSO.

- Difficulties in developing a rational approach to digital tools, the cause of many failures: "Some [CSOs] are in dire straits, with [selected] software that is not sustainable." - Thierry Barbaut, Digital Director of La Guilde

- Project leaders who are losing interest in the topic: "program data management is increasingly neglected by Program Managers, not all of whom are interested or even competent in this field, which has evolved considerably over the last decade." - Testimony of a CSO

The problem areas that we will get into below are not new and will probably not surprise connoisseurs: the challenges that surround program data management are indeed abundant and manifold. However, we believe that most of the difficulties encountered seem to be connected to six major interrelated issues detailed in the remainder of this chapter. They are accompanied by six other issues that we regard as secondary, not that they are less important, but because it would be illusory to want to address them effectively without having fully resolved the first six.

5.1 Insufficient data literacy

A few observations

All stakeholders interested in IM in the HAID sector agree that the data literacy[45] - and indirectly the digital literacy - of sector actors is not up to par with their needs. For example, survey respondents and interviewees almost unanimously felt that sector players have a very insufficient or partial data literacy.[46] A DIAL survey on the digital ecosystem of HAID organisations reaches the same conclusion: "NGOs, funders and governments all face low levels of digital literacy within their organisations; there is sometimes little understanding of what is possible through digital solutions".[47] Going beyond just the HAID sector and more systemically, Solidatech's study of the French associative sector concludes that "in only one out of ten associations, one can refer to shared digital literacy".[48] This issue is thus a characteristic of the CSO sector in general. This low level of data and digital literacy results in a "lack [or difficulty] of understanding of the IM subject", as has been repeatedly reported. It is also behind the partisan or biased views of certain policymakers that merit the qualification of "techno-solutionists, tech-optimists"[49], or conversely, "techlash".[50]

> Having **DATA LITERACY[51]** means having the skills and tools necessary to be able to use data effectively in day-to-day work. This includes:
> 1. A comfort and fluency in terms and concepts related to data - how you get, clean, analyse, and use data.
> 2. The ability to ask the right questions, particularly to put into perspective and/or raise potential technology risks.
> 3. The ability to read, work with, analyse and argue with data.

In HAID CSOs, this situation stems mainly from the fact that their members[52]:

- Too often, and wrongly, consider "that data management is a highly specialised domain, one in which they play only a tangential role" and, more generally, underestimate their level of interaction with the data. In the survey on data literacy carried out by the Centre for Humanitarian Data in 2019, which interviewed two hundred aid workers, "98% of respondents reported using data all or some of the time. However, [...] we keep hearing the refrain *I am not a data person*".

- Are still "not conversant in basic terminology around data and are therefore hesitant to engage in conversations with peers, colleagues and staff around data use".

45. As noted above, while digital, ICT4D and IM remain separate fields, they are intimately linked: because IM uses many digital solutions, it requires this dual culture of data and digital.

46. Only a few respondents were positive on the subject (two respondents considered their CSO literacy to be "sufficient") and mentioned "that most members of their organisation [...] understand the issues and risks associated with them".

47. "DIAL Baseline Ecosystem Study", DIAL (2018)

48. "La place du numérique dans le projet associatif", Solidatech, Recherches & Solidarités (2019)

49. "Tech-optimism or – solutionism – is the idea that technology will bring advantages and solutions to major problems – it is found in the humanitarian sector as well as in society in general" – "The humanitarian 'digital divide'", ODI (2019)

50. Negative impact due to the dominance of technology companies.

51.Definition by CartONG adapted from different sources including: "Data Skills for all Humanitarians" and "We are all Data people», Centre for Humanitarian Data (2019)", The humanitarian 'digital divide'", ODI (2019)

52. The points below are derived from "Improving Data literacy in humanitarian action" and "We are all Data People", Centre for Humanitarian Data (2019)

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- Are not equipped to tackle the topic because they "have not received formal training or guidance to support their work with data".

Since 2018 and the introduction at European level of the General Data Protection Regulation (GDPR), there has nevertheless been a growing awareness - albeit timid, but growing - on the part of francophone CSOs. This has led to data-related debates in many organisations[53] and there is an emerging demand for skills improvement from some players, as evidenced by the first training on data literacy for CSOs organised by the associative sector and the Tiriad collective in 2019.[54] According to respondents, however, this awareness remains largely confined to headquarters, with few initiatives observed on operational ground to date.

In parallel with this movement, it is to be noted that many anglophone actors offer CSOs resources on data literacy, such as the School of Data[55] or the Data Consortium[56] which brings together dozens of actors (including notably the International Federation of Red Cross and Red Crescent Societies (IFRC) and its data playbook[57] and OCHA's Centre for Humanitarian Data , which has made it one of its priority areas).[58] On the francophone side, however, it appears - with the notable exception of trainings carried out by the Tiriad collective - that very few resources exist to date on the subject.

> ON THE FRANCOPHONE SIDE, IT APPEARS THAT VERY FEW RESOURCES EXIST TO DATE ON THE TOPIC OF DATA LITERACY.

A few lessons learned from the HAID sector

" *To unlock the power of data, we need to become conversant and make it core to our work – Centre for Humanitarian Data*[59] "

Most sector actors agree that data literacy- and indirectly digital literacy- should be included in the core competencies of HAID CSO members, and most particularly of management teams. This involves:

- Thinking on the scale of the organisation, by developing an "organisational data literacy" that would allow "everyone to see how they fit into, contribute to, and affect the organisation's use of data"[60].

- Going beyond the usual approach of specialisation and concentration of skills within a few specific functions to favour a cross-cutting approach to the data. As Katelyn Rogers, Data Literacy Co-Lead at the Centre for Humanitarian Data , sums up: "Large organisations may not have as strong a grasp of data as one might think. They do not necessarily have

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53. "There is broad consensus that the date of application of the GDPR has been an opportunity to review organisational data practices" – "CSO and GDPR Compliance: Challenges, Opportunities, and Best Practices", OSF (2020)
54. For more information: http://tiriad.org/mouvementassociatif/.
55. For more information: https://schoolofdata.org.
56. Consortium on data literacy: http://dataconsortium.net/.
57. "Data Playbook Toolkit", FICR (2020)
58. For more information: https://centre.humdata.org/data-literacy/.
59. "Improving data literacy in humanitarian action", Centre for Humanitarian Data (2019)
60. "We are all Data People", Centre for Humanitarian Data (2019)

a broad range of IM capabilities. They will often have a few technical specialists (ICT, security, M&E, etc.) rather than a generalized data culture".

- Developing training, awareness-raising or other initiatives, tailored to each profile and giving priority to those who do not have so-called technical training.

5.2 Fragile and often inconsistent strategies

A few observations

The strategic component of IM currently suffers from a prioritisation, investment and standardisation deficit within francophone CSOs. For example, our survey has highlighted that only 25% of CSOs in which respondents work currently have a strong institutional framework in terms of IM, i.e. institutional policy, strategy and/or training.

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This is consistent with the fact that less than 50% of survey respondents view their organisation as fairly or completely proactive in IM, and in a similar proportion capable of strategic and ethical hindsight on the issue. Concomitantly, less than a quarter of respondents feel that their CSOs are sufficiently investing in the topic. This is all the more worrying because – even where investments were made in the past – less than 50% of respondents believe that significant progress in IM resulted from the effort. Barely half of respondents thus consider their organisation to learn enough or fully from its IM errors.

It should be noted, however, that attempts are being made, particularly within medium and large organisations, since 50% of survey respondents said that institutional projects had been launched to improve information management within their structure, a dynamic that has yet to be observed in small CSOs. Similarly, while one-third of CSOs seem not to have any procedures and even fewer technical solution standards in-house, many of them still initiate first level IM process formalisations. In the end, whilst a commitment to change in terms of IM is apparently ongoing, it seems that the initiatives taken by CSOs for now are not always appropriate and lack consistency.

This is due primarily to a lack of reflection and thus a "weakness of strategic vision" in IM leading to a "lack of autonomy of actors, regarding subjects like data protection, and a cross-sectoral vision on the topic of data". This observation is considered a "major risk" by many of the respondents.

Another striking example of this lack of reflection and the ability of CSOs to pull back and assess can be found in the sector's reactions to the entry into force of the GDPR in 2018. The latter has indeed led to several cases of far-reaching compliance (or over-compliance). This somewhat mechanical adaptation to the GDPR thus denotes a lack of reflection and contextualisation-it might have enabled a more pragmatic approach to gradual reaching of compliance adapted to the issues, the topics covered, and the means of entities concerned.[61] Lastly, it is interesting to note that the IASC was already pointing a finger at this issue in 2011,

61. "CSO and GDPR Compliance: Challenges, Opportunities, and Best Practices", OSF (2020)

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which therefore does not appear to have been resolved: "Increased understanding, recognition and political support is required, at the highest levels, for the important contribution that appropriate IM makes or can make to delivering effective and timely humanitarian action".[62]

This can also be explained by overly partial organisational approaches focusing on either a single stage of the data cycle – CSOs often concentrating their efforts on data collection rather than data cleaning and analysis; or only on the deployment of new technological solutions, without taking into account upstream and downstream stages (such as needs

> "Many of the issues raised [by the survey] have never been addressed within our organisation, which suggests that we have not anticipated these issues until now, even though we have the will to move forward and make headway." - Testimony of a CSO

analysis, change management through training, etc.). A situation worsened by the amount of operational data that CSOs now have to manage.

> " Many CSOs know or feel the need to dedicate resources to information management, but there is a conceptual and technical lack of knowledge about how to implement such a process within the organisation - Elizabeth Flores, Capitalization, Studies and Data Exploitation Manager at FORIM "

One can also deplore the fact that approaches such as projects or undertakings – and thus one-off by definition – rather than sustainable approaches, whereas IM requires long-term investment to avoid "setbacks the minute investments slacken" as observed by certain CSOs. These undertakings are rarely consistent or well-integrated into other development strategies of the entity. This silo-based approach may be due to a lack of CSO resources, but it also reflects a certain perception of IM: i.e. that of a topic considered as an innovation, among others, that should be tested without necessarily having to allocate resources over time. Similarly, some respondents indicated that IM spending was among the first to be reduced within their respective structures in the event of budget cuts. Moreover, this project-type approach is also often cosmetic, in the sense that the latter reflects a desire for external visibility vis-à-vis the general public or donors, whereby "many [CSOs] embrace technology in order to be seen at the forefront of testing new technologies".[64]

Lastly, IM investments are still much too limited in the eyes of all the stakeholders interviewed, above all with regard to the allocation of human resources (HR). This reported lack of investment is largely corroborated by the existing literature. Hence, according to the 2019 Data Literacy Survey, "Heads of offices and country directors perceived comparatively low levels of investment in data. In a subsequent question, they also reported relatively high challenges securing investment for data activities".[65] Similarly, the survey conducted by DIAL in 2018 specified that "Funding for [...] capacity-building to enable organisations to use new digital solutions, is in low supply and few organisations reported to have core funding to do either".[66] Again, it is interesting to note that the IASC was already pointing its finger at these

62. "Report on the Outcome of the IASC Task Force on IM Workshop", IASC (2011)

63. This point has not only been repeatedly raised by CSOs but is also confirmed by DIAL, which notes that "Despite organisations using digital data, there is still work to be done to analyse and visualize this data". - "DIAL Baseline Ecosystem Study", DIAL (2018)

64. "The humanitarian 'digital divide'", ODI (2019)

65. "Datapack: results and analysis from the data literacy survey", Centre for Humanitarian Data (2019)

66. "DIAL Baseline Ecosystem Study", DIAL (2018)

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financing issues in 2011: "Increasing the financial resourcing of IM in humanitarian crises is of critical priority. IM is still too often under-resourced, relative to other activities within humanitarian action, and in consideration of the important contribution it can make".[67]

A few lessons learned from the HAID sector

Based on available literature, to be effective, IM initiatives and strategies should be multi-faceted, i.e., simultaneously act on:

- Data management and governance with mandatory involvement of the decision-making body
- Technological solutions and Information Systems
- Human capacities
- Organisational cultures (see previous challenge for more details)

> *Investing in "teams not programs" when it comes to digital is the way to generate consistent technical progress - DIAL survey*[68]

In addition to this multi-sectoral approach, the following aspects are also important:

- IM policies must be designed not only so as to be consistent amongst themselves - to limit siloed policies, but also in an articulate fashion, with ICT4D strategies on the one hand and M&E strategies on the other [69], in order to have a real impact on project quality and not just serve the interests of reporting - as discussed earlier.

- IM investments, like those of M&E, must be designed to last, without expecting immediate returns. Though the use of external support or a launch investment may be necessary, it is important that the organisation also plans to finance over the long term the life of processes, in other words human capital, the cost of solutions or the constant strengthening of skills, and for IM to thus become a full support function like others such as logistics or HR. Linda Raftree summarizes the situation: "ICTs are not a quick-fix to improve evaluation. Rather, incorporating ICTs into M&E requires long-term commitment and evaluation capacity development".[70]

- The deployment of new solutions or processes should not be seen as an end in itself, but rather as an opportunity to change the overall approach to project steering and quality management. In this perspective, the deployment of an MDC solution should therefore be systematically accompanied by training on data analysis.

- Although this has not been discussed in detail with the interviewees, it is also vital, from our standpoint, for the sector to invest in institutional and sectoral learning, in experience sharing and in the assessment of IM initiatives to promote collective learning and limit the repetition of errors internally, or from one CSO to another.

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67. "Report on the Outcome of the IASC Task Force on IM Workshop", IASC (2011)

68. "DIAL Baseline Ecosystem Study", DIAL (2018)

69. "It is fundamental to understand that data processing tools do not replace M&E, nor skills and rigor in research [...] to be effective, they must be associated with quality programs, efficient configurations and skilled personnel, so that data is used rigorously". - "Les TICs dans les interventions humanitaires", Oxfam (2017)

70. "Do ICTs Make Evaluation More Inclusive Or More Extractive?", Raftree, L. (2016)

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As we have seen, the issue of IM funding is a key aspect. It is, however, legitimate to ask what level of priority IM should have in relation to other substantive sector-related issues, particularly in a context where CSOs have trouble finding funding. The latter have limited resources for a range of subjects all requiring significant investments such as protection from sexual abuse and exploitation (PSAE), gender mainstreaming, accountability and participation of populations, etc. Moreover, it is not illegitimate to wonder whether the additional costs generated by IM would not themselves be too high compared to the CSOs' primary missions.[71] Donors obviously have a decisive role to play on this issue, particularly with smaller CSOs, which do not necessarily have the means to carry the issues on their own. It is also relevant to stress here that the few donors who agreed to be interviewed indicated that it would be good for CSOs to bring IM into the talking points between CSOs and donors.

5.3 A LACK OF LEADERSHIP AND POORLY DEFINED RESPONSIBILITIES

A few observations

For many of our interlocutors, the lack of investment and the implementation of inappropriate approaches – mentioned above – would be due, amongst other things, to a lack of leadership and a fragmentation of responsibilities on IM issues.

First and foremost, this lack of leadership on IM logically stems from the fact that it is a new topic for the sector. It is also due the fact that CSO governance bodies - leaders as much as decision-making bodies such as an office or executive boards - "do not feel concerned [and are] not sufficiently aware of [IM] issues". Another aspect also found in the literature: the French association barometer[72] points out that "elected officials [in executive boards or offices] do not seem to have [a] great legitimacy on the topic [of all things digital]". A situation that is rather more pronounced within HAID associations, as only 8% of them involve them in the subject, while the overall average of associations is 18%. "Developing this knowledge about data and technology, practical application of NICTs within the senior leadership of an organisation is essential"[73].

RESPONSIBILITY FOR IM IS NOT OFFICIALLY ASSIGNED TO ANYONE IN MORE THAN 50% OF SMALL AND MEDIUM-SIZED ORGANISATIONS.

71. For example, GDPR compliance is "resource-intensive. This may result in resources being diverted from programmatic work. This is particularly difficult for civil society organisations, which must minimize overhead costs in relation to the money they spend on the achievement of their mission". - "CSO and GDPR Compliance: Challenges, Opportunities, and Best Practices", OSF (2020)

72. "La place du numérique dans le projet associatif", Solidatech, Recherches & Solidarités (2019)

73. "Data Skills for All Humanitarians", Centre for Humanitarian Data (2019)

There is also a real fragmentation of IM-related responsibilities within CSOs. For example, according to survey respondents, responsibility for IM is not officially assigned to anyone in more than 50% of small and medium-sized organisations[74]. When this responsibility is assigned to one or more positions – as is the case for the majority of large organisations – the latter are at a decision-making level only in 10% of cases. According to data from the survey, it is very difficult to draw up a typical profile of people responsible for IM, but it is clear that they often have other roles alongside their IM caps: program management, M&E, IT, knowledge management, and so on.

> *You often don't know where IM is in the organisation! The Training and Learning Manager at MapAction*

In many organisations, the skills and responsibilities related to IM are both completely diffuse and, at the same time, completely compartmentalised – notably due to too great a specialisation of functions, each person having extensive knowledge of one topic (IT server management, Mobile Data Collection, data protection etc.). This compartmentalisation inevitably generates a "lack of cross-sectoral vision" and "disorganisation" of IM, perhaps even a form of "competition" between IM sub-themes. This is not helpful to the CSO because everyone then tries to have their own "tool" financed, and training actions are limited to a profession or responsibility, whereas they could benefit a broader set of people.

To conclude, it is at this juncture very difficult to find a person with all the necessary skills to occupy a position in IM in the absence of a dedicated professional field (directly observable by the lack of dedicated training - especially among the francophone community). Indeed, such a position requires not only data and digital expertise, but also in HAID programmes, ethics, M&E, and so on. These sets of skills are found in a wide variety of profiles, limiting the possibility of consistency in recruitment and giving rise to a real difficulty in deploying consistent organisational approaches over time. Entities remain highly dependent on individual skills.

Skills of individuals responsible for IM
According to respondents, less than a quarter of people responsible for IM within their CSO detain all or part of the competencies required for the positions they occupy. Respectively, 20% and 50% of respondents consider that the person responsible for IM does not have the necessary skills or is only partially qualified. According to our survey, the gaps reported in teams responsible for IM are of various types: methodological, technical and strategic. The most notable include assistance in selecting technical solutions, data protection, the ability to train colleagues, database design and management, and lastly, data analysis.

74. This fact is confirmed by the Solidatech barometer, which positions HAID associations with the highest percentage of associations having no one involved on the digital component (9% of HAID associations versus 1% in the environmental sector, for example). "La place du numérique dans le projet associatif", Solidatech, Recherches & Solidarités (2019)

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A few lessons learned

While it is important that the IM topic be broached transversally by CSOs and appropriated by all its members – from the governing bodies to the project teams in the field – as we have seen in challenge number 1, this does not mean that the topic should not be equally assigned to and embodied by one or more people. The CSO can thus choose to opt for a point-of-contact reasoning (at headquarters and/or on each project location). In this case, IM approaches should be borne by individuals capable of working closely with programme and M&E teams.

For CSOs with a certain degree of maturity in IM, it is instead recommended to deploy an internal working group approach that would bring together the different IM skills into a coherent set. That was the choice made by Oxfam: "It is the combination of technical experts from IS or MEAL in collaboration with programme experts that has proven to be the most effective team set-up. It is important that ICT does not automatically fall into the MEAL remit and is owned in programme teams when their use is connected to programme delivery".[75] In both cases, the IM subject can thereby be effectively and sustainably carried in-house, notably within an ambition to conduct change management missions with non-technical profiles: at least via training and awareness sessions in data literacy, workshops allowing the appropriation of new technologies, etc.

Outsourcing expertise, the solution for IM?
More than half of CSOs contacted within the framework of our survey - mainly medium and large-sized organisations - work with partners who are specialised in IM. The latter are mainly Support NGOs but also the broader research community, both public and private. It is interesting to note that the interviewees seem to agree that outsourcing is not a solution in itself - beyond ad-hoc support or on technical, very specific methodological and strategic points. Indeed it limits internal ownership and generates a lack of autonomy for CSOs on strategic topics.

75. "Les TIC dans les interventions humanitaires", Oxfam (2017)

5.4 An inadequately controlled technology environment

A few observations

In the survey, one of the main challenges raised by CSOs concerns the difficulty of selecting a technical solution adapted to their data management needs. 60% of respondents[76] even shared having had to face a situation at least once where they were not able to find a technical solution to their data management problem. This is confirmed by the literature: "All key informants cited capacity to select and use technology as one of most significant challenges they face"[77] reports DIAL, and Oxfam adds that with the "lack of ICT capacity among their organisation's staff, it is not surprising that robust analysis and selection of tools is difficult".[78]

This may seem surprising given the diversity of existing solutions on the market, but in reality many CSOs often find themselves with options that are not tailored to their needs. Indeed, it is difficult to take into account the many criteria required for selection, especially when it comes to estimating the sustainability of the solution provider, assessing the functionality against current and future needs, as well as weighing the various costs and human resources, or the issue of integration into the existing information system. On the one hand, this stems from a complex solution market and, on the other, from a lack of expertise within CSOs in the assessment of IM needs and solutions.

On the solution provider side

The CSO solution providers' sector is overabundant and fragmented, with around 40 tried-and-tested Mobile Data Collection solutions that are widely used by HAID CSOs worldwide. New IM solutions for CSOs are born and die every month, leading to feelings of submersion and distress

> "Many CSOs often suffer either from the "beautiful platform syndrome" which does not produce the result that it should [...] or from the "gasworks syndrome" that just cannot be used" - Testimony of a CSO

in some CSOs. This market volatility is due to many factors, such as:

- The race for innovation, which is partly encouraged by donors[79] ,though everyone agrees that the sector "does not need more technology, [and] rather, that there should be greater focus on scaling existing solutions and investing in the integration and interoperability of existing solutions".[80]

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76. Cette situation est significativement moins reportée par les petites OSC (30%), ce qui pourrait indiquer qu'elles font face à des besoins plus simples.

77. "DIAL Baseline Ecosystem Study", DIAL (2018)

78. "Digital Development: What is the Role of International NGOs?", Oxfam (2017)

79. "Donors do not appear to have a coherent objective and tend not to take full advantage of a pilot project

80. "DIAL Baseline Ecosystem Study", DIAL (2018) before moving on to other initiatives"., DIAL (2018)

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- Widespread absence of a viable economic model of solutions. Two of the most commonly used MDC solutions by CSOs, KoBoToolbox and SurveyCTO, have the same problem but approach it from a different angle.
  - KoBoToolbox, a free solution, thereby is seeking to invent a new governance model in order to reduce dependence on donors – who often have inadequate funding models[81] – and better integrate the needs expressed by CSOs.
  - Other actors, like Dobility[82] – a SocialTech company offering the commercial software SurveyCTO – refutes the industry's still-too-widespread idea that "development practitioners really shouldn't have to pay for technology". Hence, by only supporting supply (that is, the development of new free solutions) rather than demand (by including sufficient amounts in CSO budgets to resort to quality solutions), donors "continue to prop up a fundamentally unsustainable and dysfunctional system [leading to] market failure fostered and perpetuated by the donors themselves".

> " *"When a local project or organisation can't afford chairs for their office, do donors fund an industry to build chairs and leave them out on street corners so that project teams can just swing by and pick them up [...] No, of course not: appropriate funding is provided for grantees to buy chairs, cars, fuel, and all the rest. Why not technology?" - Christopher Robert, Founder of Dobility, Inc. (SurveyCTO)[83]* "

- The industry has too few technical standards: XLSForm, used by MDC solutions, could be considered a standard – yet dozens of solutions used by CSOs do not rely on it. This lack of standards, compounded by donors' lack of interest in the subject, leads to significant issues of interoperability[84] of tools, making it difficult for a software brick approach that meets the data exchange needs between headquarters and the field, as well as between CSOs (in the case of a consortium, for example).

- Despite their substantial number, the proposed solutions do not yet fully meet the needs expressed by CSOs, despite popular conceptions because:
  - They are often not modular enough to respond to the different contexts of CSOs that have to resort to various solutions for similar needs.
  - Often adapted from the private sector or initially intended for donors or foundations, they do not always take into account the constraints associated with CSOs, such as low connectivity on the ground, power outages, age of the equipment, etc.
  - This may seem surprising, but some of the basic needs of CSOs are still not adequately covered in accessible solutions, such as[85] case management, the integration of data from mobile collections into more global data compilation platforms, qualitative data collection tools, etc.

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81. "The funding cycle, in its current form, does not provide for the maintenance, monitoring, support or iteration of digital development projects or products. [...] In general, funding tends to be short-term, with little interest or funding for platform development or scaling". DIAL (2018)

82. "Hope for a post-ICT4D world", SurveyCTO (2019)

83. "Hope for a post-ICT4D world", SurveyCTO (2019)

84. "Technology specialists also noted challenges related to the basic infrastructure needed [to] make technologies interoperable. This includes common standards and protocols to allow for different programs to exchange and interpret data [...] the work that's been done in this area is insufficient, in part because these solutions are considered less "sexy" by donors". DIAL (2018)

85. "Lessons learned paper from five years of Mobile Data Collection at Tdh", CartONG, Tdh (2019)

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On the CSO side

CSOs, frustrated by tool selection processes, sometimes make their choice more by opportunism - recommendation of a donor, a counterpart, a salesperson, etc. - than on the basis of thorough consideration. This can be explained by several factors:

● Although this is slowly changing (thanks to the work of organisations like DIAL[86] and FHI 306[87]), there is a lack of support vis-à-vis CSOs to accompany them in their choice: lack of decision-support tools but also of benchmarking of solutions capable of meeting the needs of the sector.

● Due to a lack of data literacy, CSOs do not yet sufficiently understand the importance of devoting time and energy to technology selection processes: they often express the wish for "the choice to be made quickly". This situation is exacerbated by the fact that people with non-technical profiles suddenly feel out-of-date and thus do not get involved in the choice of solutions, even when the long-term stakes for the organisation are so high. One reason for this disengagement is that "the pace of change of technology is too fast for organisations to consider the policy implications, [...] leading to digital approaches being siloed in organisations, particularly in ICT teams or innovation hubs".[88]

● Similarly, CSOs have not necessarily understood the reality and technical complexity of the solutions and have limited personnel with this type of knowledge. De facto, they still issue requests that are completely out of step with digital realities, leading to requests for a tool that is "not only easy to learn, but also visual, dynamic, that works offline, is multilingual, secure enough to manage personal data, and easily connected to other tools, as well as being scalable and, if possible, very affordable". Add to that the "fantasy of the perfect tool that will come out next month," mirroring our society, which tends to think that technology can solve all problems. Finally, the issue of free software should be better understood by CSOs (see dedicated insert) and several amongst them find that a "better understanding of key topics such as open source, open standards, etc. to help practitioners make the most suitable choice of technology for their situation" [89] is necessary.

● CSOs have not yet understood that high-quality technology solutions have a (very) high cost, they are consequently still often looking for the free tool that will meet their needs, which hardly ever exists. Instead, they should change their approach and be willing to invest substantially more in tools. It also means that they should now plan – as with a non-technological project – to analyse the return on investment of some of these tools in the short and long term, in order to be better equipped in their subsequent choices.

● CSOs insufficiently take into account local digital habits and contexts in their technological choices. A clear example of this is the leapfrogging phenomenon observed in Africa[90], where the direct transition to smartphones occurred much more smoothly than in European-based CSOs, still working mainly on computers. Moreover, few consider the possibility that the sought-after technological solutions could come from southern countries,

86. "DIAL Online Catalog Supports COVID-19 Response", DIAL (2020) : https://registry.dial.community/

87. "Digital Technology for Resilience Planning and Due Diligence Tool", Rockefeller Foundation, FHI 306 (2018) : https://sites.google.com/view/digitaltech4resilience/tools

88. "The humanitarian 'digital divide'", ODI (2019)

89. "Digital Development: What is the Role of International NGOs?", Oxfam (2017)

90. Leapfrogging is the "jumping phenomenon of technologies [...] to directly transition to more modern tools" - "Les NTIC dans le cadre des microprojets de développement", AMP (2017)

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owing to the dominance of northern technology companies. In the end, "the evolution of technology start-ups and innovators in developing countries and crisis-affected regions is under-recognised [by CSOs]".[91]

> ### Open Source
> According to the Solidatech barometer, HAID associations are among the lowest users of free software (34% versus 63% for example from the environmental associations' side[92]), despite the critical issues which lie behind this aspect. The latter include matters of (i) technology transfer to CSOs in the South and, more broadly, partnerships between CSOs - disregarding licensing issues, (ii) ethics, data protection, and, more broadly, neutrality vis-à-vis private actors (iii) efficiency of the sector – by limiting competitive investments in solutions with the same features and private standards. While this complex topic has been the object of heated discussions in CSOs for several years now,[93] we believe it is important to emphasize two elements:
> - HAID CSOs often have more complex and specific needs than those of other CSOs and are less covered by traditional open source communities to date.
> - There is a misconception among CSOs around "open source in international development"- Open source is not free, it can be expensive. To have a well-working open source solution you need to spend a lot [...] to configure it. Then you need to spend money to maintain it"[94], often making debates biased in CSOs where free software is only approached from the "free of charge" perspective.

A few lessons learned from the HAID sector

With regards to data collection, CSOs often look for "a single tool [that] can be used for multiple applications and contexts", whereas in reality, Oxfam recalls, "there is no one-size-fits-all. [...] With realisation of the growing number of discrete tasks, more work is needed on integration of different tools and interoperability of data sets to bring these functionalities together [...] allowing for an interoperable toolkit".[95] Wanting to bring the different needs into a single tool runs the risk that CSOs will likely fall short of their teams' needs.

In contrast, CSOs sometimes also tend to want to introduce advanced data analysis tools such as "SPHINX, SPSS and Qlik Sense, but the high skill requirements and costs of using these tools mean a common default is to use Excel".[96] It therefore often seems preferable to stick to more easily accessible and thus more easily transferable tools – even if they are more limited in terms of features - such as Microsoft Excel. Implementing a tool, even free of charge, takes time across an organisation, as does initial and potentially ongoing training, especially when taking into account the strong HR turnover context that characterizes the sector.

91. "The humanitarian 'digital divide'", ODI (2019)
92. "La place du numérique dans le projet associatif", Solidatech, Recherches & Solidarités (2019)
93. For more information: https://grotius.fr/lemergence-dun-humanitaire-open-source-2/
94. "DIAL Baseline Ecosystem Graphic", DIAL (2018)
95. "Les TIC dans les interventions humanitaires", Oxfam (2017)
96. "Les TIC dans les interventions humanitaires", Oxfam (2017)

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> **Trendy technologies**
> Whilst francophone CSOs seem to show marginal interest in the issue (c.f. previous section), and that the latter is more related to ICT4D challenges, it is important to stress that many technologies could upset IM. The use of biometric data and digital identities could make it easier to track services to populations, and big data and algorithms could be used for profiling and prediction or, more simply, the use of call detail records (CDR) could improve population movement tracking. Two aspects surrounding these issues are worthy of mention:
> - On the one hand, it is important to consciously assess the actual impact of a recent technology before taking possession of it on a large scale and investing in it, especially where the foundations of IM are not yet present in an organisation. Without data literacy, investing in big data is useless. Similarly, Simon Johnson's analyses remind us that we should be wary of media trends and that some technologies may be falsely overhyped (while many unsung heroes exist, like Open Street Map (OSM), or the Humanitarian eXchange Language (HXL) among others).[97]
> - On the other hand, the chance is great that CSOs will have to take a quick stand on these technologies – without the possibility of avoiding them – not least because of the ethical challenges they raise. Thus, to our knowledge, no francophone CSO has yet taken a clear stand the way Oxfam has on biometrics[98] (moratorium initiated in 2015), nor engaged in proactive reflection on these issues in the HAID sphere (like The Engine Room[99] on digital identities).

5.5 THE HAID SECTOR IN THE AGE OF INFORMATION OVERLOAD

A few observations

Mirroring society, HAID players have for several years now been facing an increasing amount of data to handle as well as a growing predilection for quantitative data, at the expense of qualitative data. Both issues were almost unanimously raised by survey respondents, with the notable exception of respondents from small organisations who probably – still – collect too little data. Many now speak of "information overload" and "data saturation"; others point to "the risk of overall bias towards quantitative data and mono-methods of data collection"[100].

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97. To go further: "Humanitarian Technology Hype", Johnson, S. (2018)

98. "To use or not to use biometrics ?", Oxfam (2017)

99. "Understanding the Lived Effects of Digital ID", The Engine Room (2020)

100. "Do ICTs Make Evaluation More Inclusive Or More Extractive?", Raftree, L. (2016)

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This can be explained by:

- A tendency to want to generate far more data than required by the analysed or monitored situation, for fear of not collecting enough data and thus of having to organise a second collection. So, as one CSO points out: there is in terms of collecting and analysing data a tendency to "make things too complex, with multiple dimensions for something that requires a much simpler answer".

- Duplication of data collection efforts within organisations due to: (i) a lack of transversality of the IM approach in-house leading to the collection of very similar data, where, for example, donor and internal reporting are not harmonised, (ii) inadequate CSO tools that do not allow teams to sustainably store data collected on their projects and share it with all levels of the CSO.

- A lack of quality (and traceability) of the data collected: sparse documentation on the methodologies used or information on bias is thus observed. "Assessing and improving the quality of data is one of the most commonly reported challenges"[102].These gaps generate both: (i) doubts regarding the analyses and/or aggregations carried out - and thus potentially low use of the latter (see section 5) and minimal sharing externally, (ii) indirectly, duplication of efforts to attempt to (re)collect better quality data.Une numérisation des systèmes d'information qui demeure encore peu compatible avec des données qualitatives.

- A digitisation of information systems that still remains incompatible with qualitative data.

- A strong need for upstream reporting to aggregate macro data, a process that can only be achieved automatically with quantitative data.

As a result, many CSOs now fear that analysed data from IM processes are biased, and that, ultimately, "they fail to identify the need or the problem". This feeling of uncertainty is compounded by the digitisation of the processes mentioned above which allows: (i) "analyses to be done from afar by experts who have a limited understanding of the local context"[103] and (ii) that also lead to a "false sense of data reliability". In the end, the risk is that CSOs will not "pay close attention to the quality of the data at the source" and not devote enough time to data cleaning processes.

101. Revue COSSI (2013)

102. "Datapack: results and analysis from the data literacy survey", Centre for Humanitarian Data (2019)

103. "Do ICTs Make Evaluation More Inclusive Or More Extractive?", Raftree, L. (2016)

A few lessons learned

It seems important to do everything possible to get out of this vicious cycle of poor quality and overload of data that leads to their non- or under-use as well as of analyses of dubious, if not biased quality. At this juncture, CSOs seem not to have succeeded in solving this equation. HAID actors nonetheless agree that it is necessary to:

● "Develop more robust IM processes and better articulate qualitative and quantitative components" (Katelyn Rogers, Data Literacy Co-Lead at the Centre for Humanitarian Data), so that the qualitative is better illustrated with numerical data and, conversely, to better support quantitative data through qualitative reflections and analyses.

● Develop a culture of data-sharing, as encouraged by ACAPS it in its analyses[104] and limit the analyses carried out in silo.

5.6 ETHICS AND RESPONSIBILITY: THE 'FORGOTTEN ONES' OF DATA MANAGEMENT

Responsible data management issues are crucial for CSOs, as much from a compliance standpoint with the laws to which they are subject (GDPR and national laws), as from contractual (donors), ethical (respect for the rights of the people and populations supported) and technical (data security) standpoints. While the subject is likely to be more strongly linked to humanitarian CSOs, given the sensitive contexts in which they intervene, development CSOs are not excluded. They often work with stigmatised populations (HIV/AIDS patients, homosexual populations, former child soldiers, etc.) and with a greater number of third parties (private partners, local authorities, etc.).

> "**RESPONSIBLE DATA** is the duty to ensure people's rights to consent, privacy, security and ownership around the information processes of collection, analysis, storage, presentation and reuse of data while respecting the values of transparency and openness." - The Engine Room[105]

Since the subject is highly debated and the literature relatively prolific on the subject, mainly on the humanitarian side,[106] the following analyses are primarily based on the latter.

> *Governments and humanitarian actors are collecting, storing and using increasing amounts of personal data about crisis-affected and vulnerable people, including biometric, demographic and socioeconomic information. However, many governments and humanitarian actors lack the technical expertise required to ensure data protection - IARAN / CALP Study*[107]

104. "Yemen analysis ecosystem", ACAPS (2019)

105. "Hand-book of the modern development specialist", The Engine Room (2016)

106. With a view that the issues between humanitarian and development sectors were similar, we have taken the liberty of extrapolating the conclusions.

107. "The future of financial assistance: an outlook to 2030", IARAN, CaLP (2019)

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A few observations

First, from a legal viewpoint, the number of contexts with data protection legislation is increasing yearly.[108] Furthermore, compliance is a complex subject that requires time, money and very often external expert support.[109] It is also interesting to mention that several respondents indicated that their CSOs were focusing on the legal compliance of European citizens' data but did not use GDPR as a lever to improve how data is used in the field, which implies a misunderstanding of the opportunity that this European regulation represents.

> *The protection of personal information, once collected and analysed, is an issue for the humanitarian sector. Is biometric data recorded primarily for the benefit of refugees who are fleeing a conflict? Action Against Hunger[110]*

In addition, on the populations side, the ever-greater use of IM practices, including digital ones, increases the risk of intentional and unintentional damage to affected populations. These risks can be classified into two categories: (i) "the (mis)use of data or digital technology by State and non-State actors [and (ii)] the behaviour or practices of [HAID] actors that enable increased exposure to digitally-related risks (e.g., through mishandling of information and personal data)."[111]

The risk at CSO level is no longer a myth, and "whether it's from state-backed spies or extortionists injecting ransomware, the non-profit sector is already a target and not immune from the breaches and bugs that affect governments and companies".[112] More and more examples are disseminated through mass media[113] and the figures available in the UK and the US on the subject show relatively similar rates of attacks between CSOs and the private sector.[114] As such, the NGO Think Tank category was the third most targeted sector for cyber-attacks in the first half of 2019, according to the Crowdstrike Barometer.[115]

THE RISK OF CYBER-ATTACKS AT CSO LEVEL IS NO LONGER A MYTH.

CSOs have not yet fully understood the issues behind IM and technology (c.f., in particular, issue 5.7.1 related to data instrumentalization). One of the strongest examples of this situation is the establishment of social registers promoted by governments and donors. "Single or social registries [...] have the potential to improve analysis and programme delivery, but they also have risks for vulnerable populations who may be subject to persecution on the basis of their identity or other statuses".[116]

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108. C.f. compilations of national laws: https://papers.ssrn.com/sol3/cf_dev/AbsByAuth.cfm?per_id=57970

109. "CSO and GDPR Compliance: Challenges, Opportunities, and Best Practices", OSF (2020)

110. "Le nécessaire arbitrage entre potentialités des NTIC et utilité pour les populations", ACF (2018)

111. "Digital risks for populations in armed conflict", ICRC (2019)

112. "Aid policy trends to watch in 2020, Parker B. (2020)

113. For more information see: https://www.thenewhumanitarian.org/in-depth/humanitarian-technology

114. Unfortunately, such figures are not available in France: "but 22% of charities in the UK identified leaks or attacks in 2019" "Cyber security breaches report 2019", UK Department for Digital, Culture, Media & Sport, 2020) and "21% of [philanthropic organisations in the US] have suffered a security breach over the past two years. ("2018 State of Philanthropy Tech", Technology Affinity Group, 2018)

115. "Observations from the front lines of threat hunting", Crowdstrike (2019)

116. "The future of financial assistance: an outlook to 2030", IARAN, CaLP (2019)

However, the limited nature of HAID players' practices are known to the sector, particularly with regards to data protection. However, there is a certain "wait-and-see" attitude, each awaiting a major scandal to actually begin changing its practices. "The proliferation of ICTs [...] exposes critical, unaddressed gaps in the legal and ethical frameworks that have traditionally defined and governed humanitarians' professional conduct. These gaps are an open secret, as is the lack of professionalisation around data protection and ICT use. Increasingly, they are a disaster waiting to happen".[117]

> *We are all waiting for the big data breach, that will probably be due to a human error and not a technological one and will create a reputational risk [that] will make [the entire sector] notice - Testimony of a CSO*

Lastly, the sector's approach is not yet coordinated on this issue. For example, "there is no established mechanism in the humanitarian community for reporting evidence of potential risk from an activity, platform, or application, let alone documenting when harm occurs".[118]

A few lessons learned from the HAID sector

It is interesting to note that the gaps identified on the data protection side are very much the same as those observed on the IM side in general. With the wind in its sails, data protection can thus be an opportunity for IM in general: by addressing more responsible data management, CSOs would thereby reinforce their IM practices. In that respect, the ICRC - one of the sector's most mobilised actors on these issues - identifies 5 main gaps[119] that we have slightly adapted below:

- A skills and literacy deficit in responsible data management, for which actors should "seriously invest in the development of digital literacy programs and education in digital risks". An observation that is shared by other sector players: "Protection of personal data has received increasing attention in recent years. [...] However, the associated risks [...] are often overlooked and poorly prevented or mitigated. The sector needs a theory of harm showing the causal connection from data management decisions, to risk, and ultimately to harm for affected people or other stakeholders".[120]

- A knowledge gap both from the research and the practical resources viewpoint. Nathaniel Raymond further notes a "lack of well documented case studies of critical incidents related to the use of ICTs in humanitarian operations".[121]

- A deficit of ethics and reflection: actors should reconsider what the "do no harm" approach means in the digital age. They have to "stop experimenting with new technologies in their interaction with affected populations without having put in place necessary safeguards and conducting proper risks assessment".

- A deficit in governance at sector-wide level, which lacks "professional standards for digital risks" but also at the level of organisations that need to develop real strategies for cybersecurity and responsible data management.

- A budget deficit in terms of data protection investments: "While [a limited budget] cannot be an excuse to disregard their obligation to put in place the necessary policies, guidelines, safeguards and processes to limit the exposure to digital risks for affected populations,

117. "A l'ère du "numérique humanitaire", lever le voile de la nouveauté", HHI (2018)
118. "A l'ère du "numérique humanitaire", lever le voile de la nouveauté", HHI (2018)
119. Adapted from " Digital risks for populations in armed conflict", ICRC (2019)
120. "Data responsibility in humanitarian action: from principle to practice", Centre for Humanitarian Data (2019)
121. "A l'ère du "numérique humanitaire", lever le voile de la nouveauté", HHI (2018)

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the humanitarian sector should seriously reflect on ways to provide expertise and support to organisations with more limited resources".[122]

THE GAPS IDENTIFIED ON THE DATA PROTECTION SIDE ARE VERY MUCH THE SAME AS THOSE OBSERVED ON THE IM SIDE IN GENERAL.

5.7 OTHER RELATED STAKES

In addition to the 6 main and priority issues for CSOs, six related issues were identified. These are only briefly addressed here and would merit further development in a future study.

5.7.1 MANIPULATION AND POWER GAMES AROUND DATA

"Data has an air of neutrality that veils the deep structural biases and inequities that give rise to our data-related challenges. The reality is that our data governance challenges are symptomatic of much deeper problems. But talking about "data" is easier than talking about power, inequality, exploitation, predatory business practices, democracy, racism, and misogyny, among other issues".[123]

Overview

A few interlocutors note that "the data are sometimes used to make them say what "needs to be said", rather than to describe the actual reality". Quantitative data, moreover, are often perceived as more objective, giving them by extension an official edge (even when they are not provided with an explanation of the methodology employed and the biases thereof). As a result, they are more difficult to challenge by other stakeholders, whether project partners, local actors, or donors, who lack the expertise to challenge biased approaches. Moreover, it is important to remember that data are "political objects" and that it is therefore "necessary to know who controls them" – i.e., who produces them and verifies their quality – so that one may challenge how they are used. Such is particularly the case when data from different sources describing the same fact do not match. In some contexts, the mere possession of data by an organisation may also be sufficient to create a competitive advantage in terms of funding and positioning. Some interlocutors now even use the term "data warfare" to describe a situation where actors use strategic data-gathering activities (for example, registering new beneficiaries) as a "weapon in the positioning and search for financing".

5.7.2 OPEN DATA

"Open data is data that can be freely used, re-used and redistributed by anyone – subject only, at most, to the requirement to attribute and sharealike." - Centre for Humanitarian Data[124]

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122. "Digital risks for populations in armed conflict", ICRC (2019)

123 "Distracted by data", Renieris, E. (2019)

124. "Open Data Handbook", Open Knowledge Foundation (2020)

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Overview

Open data is an important topic in the field of Humanitarian Aid and International Development: for it to be efficient, it is important to promote data sharing and reuse among actors, in order, among other things, to limit duplication of efforts and encourage cross-analysis. These practices are encouraged by a great number of actors including donors,[125] and data-sharing platforms are multiplying. Nevertheless, the majority of francophone CSOs seem to have a hard time taking the leap[126] : only a few reported having made their data available. The opening-up of access to data indeed raises numerous questions, any of which might prove real barriers or ready-made excuses for CSOs:

● Data protection: how to share personal and/or sensitive data without putting populations or organisations at risk?

● Data quality: how to describe the quality of collected data so as not to be responsible for misuse or bad decisions by other actors?

● Interoperability: how to make data compatible with the various open data platforms and/or other data sets or software?

● Loss of control: how to minimize the risk of distortion or politicisation of the data we share?

● Data ownership: how to open data when other partners and donors are involved[127] ?

● Multiplicity of delivery platforms: how to choose the most suitable sharing platform?

5.7.3 TECHNOLOGICAL SUSTAINABILITY AND LOW TECH

"The concept of low tech embodies the contrast with high tech, corresponding to technologies that are continuously made more complicated. [...] Low tech is the technique that is useful, sustainable and accessible/easy to appropriate. Some also add that it is sober and uses local materials[128]". There have been a lot of semantic debates around these concepts, but a "convergence of terms"[129] between Green IT, sustainable digital and digital sobriety can be noted.

Overview

The environmental dimension and, more generally, sustainable development issues are unevenly taken into account by CSOs according to their sector of intervention. Humanitarian CSOs are poorly equipped to prioritise the topic in relation to their mission, primarily focused on speed and efficiency, when other CSOs –of which there are much fewer in the HAID sector – place them at the heart of their approach. It thus comes as no surprise that the issue of the environmental and societal impact of CSOs' digital activities is still rarely considered across the sector, with the exception of a few actors such as RITIMO and its special issue on low tech.[130]

125. Belgian and British cooperation strategies include the question of open data: "Digital for Development", Belgian Development Cooperation (2016) and "Digital Strategy 2018-2020", DFID (2018)

126. As with the rest of the sector, given that out of fourteen humanitarian operations, only 54% of relevant crisis data are available. "The state of open humanitarian data", Centre for Humanitarian Data (2020)

127. The topic is deceptively simple, especially in relation to the sources of funding; some donors at times considering themselves as co-owners of data.

128. "Low tech : face au tout-numérique, se réapproprier les technologies", Ritimo (2020)

129. "La société s'empare de la sobriété numérique", Bordage, F. (2018)

130. "Low tech : face au tout-numérique, se réapproprier les technologies", Ritimo (2020)

That being said, CSOs increasingly use new technologies, which means that they, like any other actor, have a responsibility to reflect on the direct and indirect consequences of this digital revolution. They should take into account the potential adverse effects of their decisions on technologies such as uncontrolled mining, carbon footprint[131], increase in electronic waste, and destruction and pollution of ecosystems.

5.7.4 RISK OF DEHUMANISATION OF HAID ACTIVITIES

The risk of dehumanisation of activities through mass digitisation is an emerging issue within CSOs. Slightly less than half of survey respondents rated this risk as a "medium or high" priority, and specifically more than 80% of small CSOs.

> *A proliferation [of IM] products, too many proportional to the number of people actually working with vulnerable populations [can make people lose] sight of the job at hand - Testimony of a CSO*

Overview

With regard to technology, the use of mobile devices for surveys or cloud-based solutions to share needs or requests may be seen as creating an added barrier with supported populations. They may feel less listened to, which may affect their willingness to share their needs or give feedback to CSOs. On the other hand, it is also important to note that these technologies are starting to be widespread in the fields of intervention, and that the use of digital devices can be a means of attracting new participations. Coincidently, the ever-increasing recourse to quantitative data can affect the relationship with beneficiary populations who are subjected to multiple closed surveys, rather than using open qualitative data collection mechanisms. CSOs also do not coordinate enough their collection work on these same groups of beneficiary populations, who hence find themselves over-solicited. This situation is further exacerbated by the fact that CSOs frequently do not share the findings of their surveys, yet "there should be a level of disclosure to the community to understand what is being done with the data"[132] and to promote trust between CSOs and populations. To conclude, as the representative of a donor confided, CSOs should be vigilant not to "become clinical in how they manage data" vis-à-vis communities.

> *If we only pay attention to our 'savoir-faire' (knowing what to do) and lose sight of our 'savoir être' (knowing how to be) and become more interested in data and figures (and money) than in real people, then we have lost our soul – Koenraad Van Brabant[133]*

131. According to researchers at McMaster University, the share of information and communication technologies in greenhouse gas emissions could reach up to 14% of total global emissions by 2040. "Assessing ICT global emissions footprint: Trends to 2040 & recommendations", Lotfi, B. et Elmeligi, A. (2018)

132. "DIAL Baseline Ecosystem Study", DIAL (2018)

133. "Bring humanity and dignity back in the relief industry", Van Bradant, K. (2019)

Does Our Data Revolution Dehumanise People? Some thoughts from the Alliance for Empowering Partnership inspired by the Rohingyas refugee crisis.[134]

"Evidence based decision-making is sensible. We do more surveys now of crisis-affected populations [...], at least in high-profile and better resourced crises responses. However, is there a risk that their involvement becomes reduced to answering survey questions determined by others, whose results are not shared back? [...] For feedback and complaints mechanisms, technological solutions are being sought, that allow the quick determination of patterns and trends across messages received. But do we, as customers, want our complaint only treated if it is part of a significant pattern? [...] And can we assume that people will communicate sensitive issues to someone they do not know at the other end of a hotline, or a passing aid worker who immediately enters their complaint into a tablet? The much abused and highly dependent Rohingya don't. Would you?"

5.7.5 DIGITAL DIVIDE AND EXCLUSION

The term "digital divide" refers to the gap between individuals, households, businesses and geographic areas at different socio-economic levels with regard to both their opportunities to access information and communication technologies (ICTs) and to their use of the Internet for a wide variety of activities.[135]

Overview

Although "the offline population remains disproportionately poor, rural, elderly, and female"[136], issues related to telephone and Internet connectivity and the illiteracy of supported populations are regularly underestimated in technology-based CSO programmes. While this issue mainly concerns ICT4D approaches, on account of their direct interaction with supported populations, it also affects the IM dimension, specifically on the internal use of IT tools in data management processes. In a manner similar to the phenomena observed on the ground in recruiting investigators for Mobile Data Collection, IM positions are, to the best of our knowledge, mostly staffed by men. Moreover, the latter mainly come from urban areas and do not always have a good understanding of the contexts in which the projects intervene (rural settings, marginalised spaces, camps...). The digital divide therefore actually increases the risk of bias not only in the implementation of HAID projects in general, but also in IM activities - from data collection to data analysis.

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134. "Bring humanity and dignity back in the relief industry", Van Bradant, K. (2019)
135. "Understanding the Digital Divide", OCDE (2002)
136. "The future of financial assistance: an outlook to 2030", IARAN, CaLP (2019)

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On another note, it is important to recall that "the application of technologies often amplifies existing inequalities of power and influence, and newer technologies can be inherently excluding"[137]. Humanitarian Aid and International Development actors are becoming increasingly aware of the risks that the rising use of ICTs poses to the beneficiary populations, as illustrated by the emergence of new concepts such as "forced inclusion"[138] or "pervasive digital divides"[139].

5.7.6 RELATIONS WITH THE PRIVATE SECTOR

Partnerships between CSOs and the private sector are becoming ever more numerous and encouraged by donors. When these partnerships involve data, whether through the provision of technological solutions or through support for data exploitation,[140] they pose multiple ethical questions.

Overview

While many actors agree that working with the private sector is important and a source of progress, others point out that "a more nuanced understanding is also needed"[141] to limit risks. Beyond a reputational risk to the CSO, these risks are of a different nature:[142] risks on the actual effectiveness of the technology proposed by the private actor, risks of disagreement on the use and sensitivity of the data, risks of uncertainty over the real added value from the private sector's proposed new data sources, risks of disagreement about intellectual property rights, and risks of dependence and imbalance of power. This is particularly the case for new and complex approaches to data that are still under-mastered by the HAID industry, such as big data, telecoms operators' metadata, or biometrics. Sometimes, "despite the risks, tech companies have pushed to introduce technology where there is potential rather than evidenced misuse".[143] Respondents also shared that CSOs still do not have sufficient control over the rules of the game, particularly in terms of adequate contractualisation with private actors, for these rules to guarantee the protection of the rights of the populations they seek to support. In certain situations, for example, "peoples' digital identities are being monetised by private sector actors [...]. This commoditisation is occurring without communication to users about the potential value of their personal digital information".[144]

Whilst it is important for private actors and CSOs to get to know each other better, it is also important that CSOs fulfil their duty of care vis-à-vis supported populations by establishing an ethical framework adapted to the digital challenges.[145]

137. "The humanitarian 'digital divide'", ODI (2019)

138. "Questionable practices in terms of informed consent for the acquisition of biometric data arguably constitute a form of forced inclusion." - "New technologies are changing humanitarian action, but don't assume they're inclusive", ODI (2019)

139. "The humanitarian 'digital divide'", ODI (2019)

140. "The most common types of [partnership] in this area involve financial contributions, supply of technology, technical services in kind, advisory support, joint technological development, data sharing and collaboration". - "Data responsibility in PPP", Centre for Humanitarian Data (2020)

141. "Digital Development: What is the Role of International NGOs?", Oxfam (2017)

142. Adapted from "Data responsibility in Public-Private Partnerships", Centre for Humanitarian Data (2020)

143. "The humanitarian 'digital divide'", ODI (2019)

144. "The future of financial assistance: an outlook to 2030", IARAN, CaLP (2019)

145. Reference may be made to the work conducted by the Centre for Humanitarian Data: "Data responsibility in Public-Private Partnerships" (2020)

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The six main stakes in Information Management

	Solid and coherent strategies	
A strengthened data literacy		Clear leadership and accountability
A mastered technological environment	From infobesity to infosobriety	A responsible data management

and its six related stakes

	Open Data	
Data objectivity		Technological sustainability
Relations with the population	Digital inclusion	Relations with the private sector

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6. WHAT DIFFERENCES IN APPROACH EXIST BETWEEN CSOs?

We have seen this on several occasions in this study, there is a different integration of IM issues depending on the type of CSO. In this section, we return to four reported differences: the type of CSO, their size, their area of intervention and their sphere of origin.

6.1 HUMANITARIAN CSOs VS. DEVELOPMENT CSOs

It would appear from the collected data that the differences between CSOs are generally more related to their size (section 8.2) than to their sector of intervention. In other words, while our sample of respondents is relatively small, there is evidence that small and medium-sized CSOs, involved mostly in development work, face more difficulties. This seems to be mainly due to their size rather than to the type of projects they implement.

The substantive approaches between both sectors, however, are relatively different: development CSOs generally prefer a comprehensive approach of the ICT4D type (see section 2.4 on ICT4D), while humanitarian CSOs use more internal IM logics. This difference is reflected, for example, in the fact that "the digital divide [...] has already been recognised and studied in the development space; [while] in a humanitarian setting, [technology opportunities and risks] have not been explored so fully [perhaps because of] increased vulnerabilities and pressures to intervene quickly"[146]. The IM professional field is more mature on the humanitarian CSO side, the latter no longer reluctant to claim that "for each camp manager, there should be a data manager. [...] For every logistics manager, we need a data analyst mapping how misinformation spreads, and a data visualizer making sense of factual information for everyone's consumption."[147] - a claim that does not exist on the development side.

> DEVELOPMENT CSOs GENERALLY PREFER A COMPREHENSIVE APPROACH OF THE ICT4D TYPE, WHILE HUMANITARIAN CSOs USE MORE INTERNAL IM LOGICS.

This difference in approach is no doubt also connected to the fact that - from our understanding - at present, development CSOs:

- Tend to rely less on harmonised approaches than humanitarian CSOs. The systematic recourse to a highly contextualised approach reduces the CSO's incentive to deploy standardised and generic information management solutions (such as MDC, which is widely used by humanitarian workers).

- Prioritise qualitative over quantitative approaches in the management and monitoring of their project. However, the latter, as we have previously seen, is still largely incompatible with current technological solutions.

- Have different project implementation timeframes than those of humanitarian CSOs. As a result, they require less time-efficient data management and associated M&E processes.

146. "The humanitarian 'digital divide'", ODI (2019)
147. "A way forward", H2H Network (2020)

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- Have different coordination and funding procedures than humanitarian CSOs. The latter as a matter of fact need structured IM, among other things, to send frequent and aggregated reports to their clusters and donors.

However, despite these substantive differences, the two sectors are faced with the exact same problems on the 6 fundamental issues identified by this study, particularly the lack of digital literacy and inconsistent data strategies, and thus have similar progress to make.

Focus: where do local partners fit in?
It is interesting to note that development CSOs, working mainly in support of local partners, have often expressed little interest in (i) primary data collection processes - which are the responsibility of their local partners - and (ii) data protection issues, being themselves only marginally involved in the management of personal databases. In contrast, many have expressed a need to consolidate their partners' data as well as a need to develop mechanisms for data collection and aggregation. This situation presents two major issues:

1. Development CSOs, by not having full command of primary IM issues and processes themselves, cannot reasonably support local CSOs on these issues, and as such do not fully fulfil their mission. "If we ourselves do not know how to correctly collect data on a smartphone or how to secure a password, how can we help our local partners?" wonders a CSO.

2. By focusing on data consolidation needs, Northern development CSOs risk finding themselves in a prescribing position vis-à-vis their local partners. In other words, by imposing formats, tools, and reporting processes on their partners, they mirror a pattern that they often criticise with their donors. It would be preferable for development CSOs to further place themselves in a position supportive of their partners. A change in positioning and practice that would involve, according to an CSO, "the elimination of top-down solutions and organisational standardisation in favour of fostering the solutions that resonate most at local level".

6.2 DIFFERENCES LINKED TO THE SECTOR OF INTERVENTION

It emerges from this study that some sectors have greater use and greater need for certain types of solutions. A particularly noteworthy example is the use of GIS by environmental NGOs or NGOs working in risk prevention because of the strong spatial component of their activities. Similarly, it appears that some sectors such as health, agriculture, and microfinance have historically more structured data and collection processes[148] than others, and that the use of IM processes[149] is easier for them than for other sectors (protection, social, human

148. Some argue this structuring could be linked to the fact that certain Sustainable Development Goals (SDGs) have been more standardised, with a spill over effect on data management. This assumption is difficult to assess, because a more mature approach to data might also have helped to better define these SDGs.

149. It should be noted that these are also sectors where ICT4D approaches are strong (e-health, e-agriculture, etc.).

rights, etc.). Caution however should be used here, because, despite being brought up by many interlocutors, these two observations could not be formally confirmed due to a very limited sample.

CSOs further agree that a sectoral approach - as opposed to a generalist approach - allows an organisation to be more consistent in its approach to IM. For example, an NGO implementing water-related projects needs to develop a data model and procedures on only one type of data, which allows it, by extension, to develop a more advanced IM approach.

Lastly, the stereotypical assumption that urban approaches are more conducive to IM – owing to the volume of data to control, to the need to work at more micro-level, and the competency level of teams – could not be confirmed. On the contrary, many counterexamples exist in rural areas, particularly because the density of activities (infrastructure, services, users, etc.) often being lower, the situation is more conducive to initiating IM structuring projects.

6.3 A QUESTION OF SIZE

The size of organisations is from our standpoint the main factor in differentiating IM practices between francophone CSOs. In general, as seen above, small CSOs (less than €2 million in annual budgets) have, compared to their larger counterparts:

- IM practices which could be described as less advanced with few tools in place, little standardisation and framing of practices within CSOs, etc.
- A seemingly smaller amount of data to manage reflected in the fact that none reported facing a situation of information overload.
- Simpler IM issues exemplified by the few situations where they failed to find a technical solution meeting their needs.

Some network heads even have very strong views and believe that small CSOs "do not address data and digital issues at all".

THE SIZE OF ORGANISATIONS IS FROM OUR STANDPOINT THE MAIN FACTOR IN DIFFERENTIATING INFORMATION MANAGEMENT PRACTICES BETWEEN FRANCOPHONE CSOS.

The fact that they currently have simpler IM needs does not necessarily mean that small CSOs do not face the same challenges as medium and large CSOs: their responsibility from an ethical point of view, or the need to integrate a greater data literacy to better understand the challenges of the 21st century as CSOs, remain the same! But, as some small CSOs summarise, "our size does not allow us to face these challenges". Several elements can explain this situation:

- First, IM maturity is naturally linked to the integration of M&E and project management issues in general. While there is no accurate data on this, we do believe that smaller CSOs have less advanced and less structured M&E processes.

> *As long as there is no talk of project steering or measures of change, it is necessarily difficult to speak of data - Testimony of a CSO network head*

- Organisational and investment capacities are necessarily linked to the size of CSOs. It is more difficult for small CSOs to launch data process structuring approaches, to take the leap and invest in a potentially costly tool, and even more to devote time to these issues, with their number of members having already been reduced. In addition, smaller CSOs often also face greater digital hardware constraints: older equipment, lower quality Internet connections in the field, etc.

- The use of less specialised HR profiles in small CSOs: there are often "multi-role" positions, more part-time staff working in parallel in another sector of activity, etc. The sometimes-increased involvement of volunteers within small structures also brings specific challenges, particularly in terms of new technologies. Several CSOs have reported that the more advanced age of their members made it more difficult for them to get a grasp of these new technologies, and that the turn-over rate of volunteers was not always compatible with the adoption of complex IM tools. A point corroborated by the AMP/CartONG study[150], which mentions that "demography and members' levels of training could have a damping effect on the integration of these technologies into the daily work of [small] structures".

However, several actors point out that small size can also be an asset:

- According to MapAction, "small CSOs have the ability to adapt their practices more easily" being often more agile owing to a smaller scale of intervention, both geographically - with a limited variety of contexts - and from a sectoral perspective, with a lesser diversity of needs to take into account.

- The greater proximity to project sites and their constraints could limit the number of strategic IM errors (bad choice of tool, etc.).

- The deployment of a data literacy program also appears to be more realistic because of a smaller number of members and greater pre-existing transversality (limited specialisation).

- Lastly, several actors emphasise that for small CSOs, IM can also be an opportunity to "catch up on M&E".

> **Medium-sized CSOs**
> It is interesting to note that it has often been difficult in our survey to draw conclusions concerning medium-sized CSOs (from 2 to 10 million euros of annual budget), the latter having very contradictory results from one question to another. This is probably due to the small size of our sample, but it is worth noting that, according to some actors, a medium size would be ideal to run projects around data and digital domains given that these CSOs have enough resources to move forward and, at the same time, a lesser degree of organisational rigidity or complexity than larger organisations.

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150. "Les NTIC dans le cadre des microprojets de développement", AMP (2017)

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6.4 ANGLOPHONE VS FRANCOPHONE SPHERE OF INFLUENCE

As mentioned in the rationale and methodology, the secondary objective of this study is to assess the stereotypical assumption that francophone CSOs are lagging behind their Anglophone counterparts.

It remains difficult to compellingly assert that anglophone CSOs are more advanced in IM than their francophone counterparts. While field practices are likely to suffer from a less marked lag than some interlocutors might have suggested, there are, however, several elements that suggest that a strategic lead exists among anglophone CSOs:

- A pragmatic observation shows that there is a difference in the availability of IM skills in the francophone sphere: "it is much more challenging to recruit a francophone IM advisor than an anglophone one". The same finding applies to resources: "there are fewer IM resources available online in French than in English" says Stuart Campo, Team Lead, Data Policy at the Centre for Humanitarian Data.

- Investments in IM - particularly in HR - have been made in the anglophone sphere for several years on the subject, which have not been made on the francophone side. Despite there being no evidence of the budgetary amounts committed, it is easy to see that Oxfam was capable of carrying out a "learning review [of ICT integration] of a three-year, five-country programme" as early as 2017 – a study for which there is no equivalent in the francophone sphere. Data and digital issues are thus sufficiently mature to be brought to the fore as a transversal approach by certain anglophone CSOs, on the same level as accountability or scientific research.

- The anglophone side has very strong stands on issues such as the ethical dimension: a CSO like Girl Effect for instance had already taken a significant interest in the subject in 2016[151]. At the same time, data literacy-building programmes are being implemented, such as Mercy Corps since 2018[152].

- Several formal inter-NGO working groups on these topics, notably driven by the British Bond Network, were mentioned by CSOs in the survey and in interviews, with no equivalent found on the French side.[153]

SEVERAL ELEMENTS TEND TO SHOW THAT A STRATEGIC ADVANCE EXISTS AMONG ANGLOPHONE CSOs.

These differences in approaches can be explained in several ways:

- A more proactive orientation of anglophone donors (DFID, USAID, etc.) on these topics as well as of foundations who fund anglophone CSOs. "Grants from Hewlett, Rockefeller, etc. have put more emphasis on data, and this has been the case for some years" thus notes a network head.

- Funding of anglophone CSOs increasingly linked to project performance.[154] While this approach may be questionable in some respects, it has the advantage of requiring more rigorous data management and traceability.

151. "Posts Tagged 'Girl Effect'", Raftree, L. (2016)

152. "Building a Data Culture", Data Literacy Consortium (2019)

153. Beyond the informal francophone IM community of practice, which comprises only ten or so CSOs, mostly of substantial size.

154. See for instance: https://www.gov.uk/government/publications/dfids-strategy-for-payment-by-results-sharpening-incentives-to-perform

- Greater awareness of IM issues on the anglophone side arising from both a stronger interest on behalf of the authorities - the percentage of CSO cyber-attacks is not available in France, whilst it is available in the United Kingdom and the United States, for example.

- But also, from the existence of CSOs having gathered expertise on the subject, like the Engine Room for instance, which has no francophone equivalent.

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7. WHAT TYPE OF SUPPORT AND RESOURCES ARE NEEDED FOR CSOs?

In addition to identifying the major IM issues facing the sector and taking stock of the major trends emerging between types of CSOs, this study aims to clarify the needs of francophone CSOs in terms of IM support.

Surprisingly, we have observed two major, rather contradictory, trends among our interlocutors. Some point to the fact that there is "far too much information" and that there already exist a lot of resources, but that they are just "insufficiently known". Others, instead, insist on the lack of key resources that they see as "a real problem [especially] with a lack of a dedicated platform". Interestingly, the first feedbacks come exclusively from organisations that have little control over IM issues and thus may feel quickly overwhelmed by existing resources, whereas the second – within which category falls CartONG – come from far more advanced organisations that, after studying the existing resources, are not necessarily further along to meet their needs or to address issues affecting the sector.

7.1 CONDITIONS OF SUPPORT AND TYPE OF RESOURCES

In general, CSOs expect "multi-modality" support to cover a wide range of audiences and needs. Such support includes both written documentation of the practical kind (tutorials, checklists, templates and examples, etc.), also allowing to capitalise and take a step back (studies, feedback, etc.), and training (in-class or remote i.e. video / e-learning, at headquarters and on the ground), peer exchange and individualised support (mentoring, hotline). All of the actors agree that a single-modality approach is not appropriate for IM.

Several CSOs stressed the importance of favouring, for a subject as complex as IM, an in-class approach (such as inter- and intra-organisation exchange days) rather than an at-distance approach (such as webinars, e-learning, etc.) that does not appeal to actors who are not especially comfortable with these topics. In the same vein, CSOs already having taken a first step back on these issues mentioned the importance of focusing on practical approaches like learning by doing, making it possible to "get ones hands dirty [...] to understand the stakes".

FIGURE 10: Information Management support modalities expected by CSOs
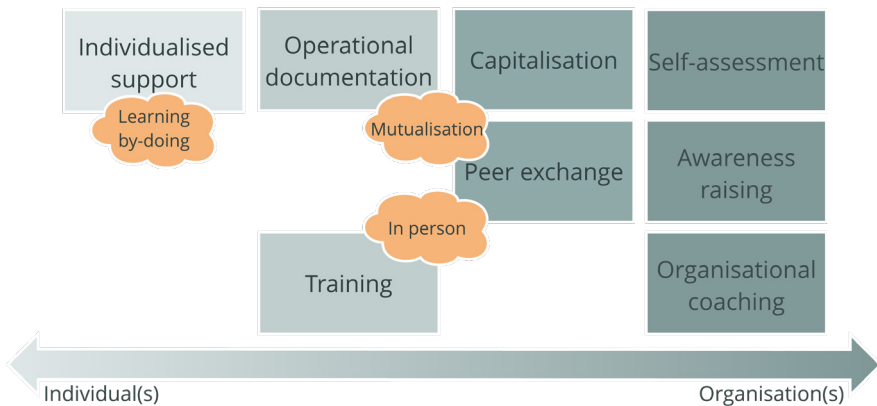
All of the organisations agree on the complexity of the support to be implemented given the need to find different levers depending on the organisations' level in IM. A strong need for "awareness, pedagogy, underplaying", with preference being given to testimonies and experiences from same-size organisations and not just contributions from experts, has thus been raised numerous times. Self-assessment tools or maturity models, have also been mentioned by several CSOs as being good educational tools "enabling organisations to map their current and future states of data responsibility, identify areas of work, assign roles, and triage priorities as necessary"[155]. Similarly, a better exchange of experiences, resources, and practices among CSOs by means of working groups or networks appears to be a major axis of IM development. This approach however remains more appropriate for CSOs with a certain degree of IM maturity, because organisations with low maturity would initially need individualised support, such as organisational coaching.

> ALL OF THE ORGANISATIONS AGREE ON THE COMPLEXITY OF THE SUPPORT TO BE IMPLEMENTED GIVEN THE NEED TO FIND DIFFERENT LEVERS DEPENDING ON THE ORGANISATIONS' LEVEL IN IM.

The question of pooling training between CSOs for efficiency reasons (cost reduction) was brought up on several occasions. In contrast, some mentioned the need to focus on intra-organisational approaches to ensure real ownership and transversality of the subject within the CSO and thus avoid having the same person interested in the subject always participate in the trainings. Sectoral approaches to training allowing to enter via a thematic axis such as water or waste, or ideally through an SDG rather than a tool or stake, would also be favoured. In all cases, it is vital that training courses on the tools not only focus on mastering the latter, but also incorporate a methodological dimension that includes the entire data cycle and associated IM stakes.

To conclude, the need for long-term support seems to be one of the keys to success for CSOs, as it allows for both multidimensional (technical, strategic, etc.) and progressive support, the need for IM acculturation being quite pronounced and unachievable in just one or two days of training.

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155. "Data responsibility in humanitarian action: from principle to practice", Centre for Humanitarian Data (2019)

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Support for CSOs can be accomplished in-house, if they have the adequate HR, but at this time such support often requires the use of specialised external entities, such as Support CSOs. Because the latter often have limited HR capabilities, "train-the-trainer" approaches should be considered. As part of this study, many CSOs finally explored the position of network heads regarding IM issues. It seems agreed upon that CSOs expect the latter to train in order to better support their members in IM and also provide services such as awareness meetings, training, individual coaching, or communities of practice on this subject.

The Centre for Humanitarian Data[156] questioned how to best build data skills. Their answer: 1- Microlearning for specific tasks (how to, quick videos, cheat sheets), 2- intensive training followed by on the job support, 3- exposure to experts in the field. At Oxfam,[157] "a multitude of approaches (webinars, training, workshops, word-of-mouth and case studies) have effectively contributed to learning through inspiration and building staff confidence without needing to start from scratch or being a full technical expert.[...] there is a high recognition of the need for refresher training, especially when there is staff turnover [...] Communities of practice take a great deal of work to keep alive and moderate". According to the conclusions of a multi-player workshop:[158] "When practitioners are afraid to share learnings - especially from critical incidents - they lose out on the benefits of collective action and shared responsibility for failures [...] We need to continue to build trust between parties through dialogue and transparency".

7.2 PRIORITY THEMES FOR CSO SUPPORT

The survey organised in the context of this report has helped establish a number of key thematic areas for which CSOs have indicated needing new resources. This includes, in order of priority, assistance in selecting solutions, responsible data management, data quality control, and data analysis and sharing. Database design and simple map-based visualisation were also mentioned, mainly by small organisations. It is interesting to note that the need for advanced data visualisation resources (dashboard design, infographics, graphics, complex mapping, etc.), was not prioritised at all – which in a sense is reassuring, as it shows that CSOs have identified greater needs ahead of the data cycle.

As part of the survey and interviews, it was also mentioned that:

- The current resources were often "accessible at headquarters level, but [not] suitable for teams on the ground" or "not sufficiently "spoon-fed" or pedagogical".

- Analogously, basic needs such as "building a database in Excel" do not seem currently covered, whereas dashboard design is largely documented.

- A need for support to "get back to the basics [including] the very concepts of data management and information" was shared by several interlocutors.

- Language is a barrier and too few resources exist in French.

156. "Data Skills for All Humanitarians" Centre for Humanitarian Data (2019)
157. "Les TIC dans les interventions humanitaires", Oxfam (2017)
158. "Data responsibility in humanitarian action: from principle to practice", Centre for Humanitarian Data (2019)

- Current resources focus too much on tool approaches and not enough on: (i) the macro challenges that they induce, and (ii) the data chain in which they exist. There should be a need for resources to manage data from water infrastructure in full, from mobile collection to aggregation and mapping, without having to browse a multitude of different tutorials. As a result, there is a need for resources that further link M&E and IM.

- A lack of resources on technological solutions themselves, a lack of objective comparison studies (or ideally catalogues of services), but also of real cost-benefit studies, with the budgetary dimension too often avoided according to some interlocutors.

- Within CSOs, strong difficulties in keeping existing resources up to date as a consequence of the rapid evolution of technologies.

FIGURE 11: The seven priority thematic areas requested by CSOs

1. Selection of solutions
2. Responsible data management
3. Data quality control
4. Data analysis
5. Data sharing
6. Database design
   Requests from small CSOs
7. Simple map visualisation

Mutualisation
All HAID actors agree that "these gaps in organisational capacity [in IM] indicate the need for concerted capacity-building efforts".[159] There is thus "a need for global convening, organising and circulation of learning, so measures such as communications opportunities need to be put in place."[160]

159. « DIAL Baseline Ecosystem Study » DIAL (2018)
160. "Les TIC dans les interventions humanitaires" Oxfam (2017)

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8. RECOMMENDATIONS

As we discovered, information management (or program data management) is a key topic for the Humanitarian Aid and International Development sector, without actually being the silver bullet imagined by many. Given its multiple challenges, however, francophone CSOs can no longer ignore the consequences of low-quality information management on the implementation of their programmes. To ensure the sector is up to the task, on the basis of our work, we offer the following recommendations.

For all actors, turn IM into a more accessible and transversal subject:

1. Create awareness of key information management concepts and issues
   It is essential that all players in the HAID sphere better understand what IM really is, what it can or cannot bring to the sector, and the challenges that it has created. It will also enable them to be better equipped in their choice of approaches or tools, thus limiting the strategic and technical errors still too often observed.

2. Develop the information management professional field
   The IM business line is currently in its infancy and insufficiently acknowledged. It is as yet insufficiently structured to allow the sector to have the skills it needs. This branch should be further strengthened, both on the training offer side and on the HR structuring side of CSOs (skills toolkit, coherent position in the organisational chart etc.).

3. Have a collective learning approach to IM issues
   Too few organisations share their best practices or exchange views on the challenges they face. Every HAID actor should take a continuous learning approach and better capitalise on and document their IM successes and failures. More frequent exchanges between CSOs having achieved different degrees of maturity on IM issues should be held to share lessons learned.

4. Develop a pooled and centralised approach to IM resources
   The diversity of the IM field and the rapid evolution of technologies make it almost impossible for a single organisation to produce and maintain documentary resources, even for its own needs. It is therefore essential to pool efforts and hence indirectly centralise resources so that they may be readily accessible.

For francophone CSOs, shake off the "wait-and-see" attitude and proactively invest the IM field:

1. First and foremost, develop the data literacy of organisations' members
   The development of IM skills and knowledge should not be limited to a few positions. Ownership of concepts and good practices - via at least awareness sessions adapted to each profile - should be done at the level of the entire organisation and should, in particular - and above all - directly involve its governance bodies.

2. Integrate IM into operational strategies in a cross cutting and coherent manner
   IM – given the issues that it raises – can no longer be considered a one-off effort or the area of expertise of a few specialists working in silos. It should benefit from a coherent (i.e. acting upon human, cultural, organisational as much as technical dimensions),

robust, long-term strategy and be connected to other fields of the CSO in order to fully respond to the real needs of the organisation (and thus potentially not only in a logic of upward accountability).

3. Have clear leadership and governance on IM
IM – given its strategic dimension – calls for strong involvement of CSO governance bodies. The latter should begin to consider IM as one of the key evolutionary and structural stakes of their organisation. Likewise, IM, involving many members of a CSO, calls for a clear division of roles and responsibilities.

4. Integrate IM as a new support function
IM issues require that it be considered a permanent cross-department support function for the the organisation, on the same level as other support functions. In this sense, it should benefit from sustainable and sufficient investment. The outsourcing of certain elements of this function to other actors should not be a default response but should be done on a case-by-case basis and after mature reflection and impact analysis.

5. Stop being a simple customer of solution providers without obtaining a wider perspective
CSOs should position themselves as market influencers for solutions to better meet their demand. This would require:
  - Integrating sufficient budgets to cover the long-term direct or indirect costs (in the case of open source software) of tools in projects.
  - Taking an in-depth approach to selecting solutions that integrate the needs of all users (from headquarters to the field) and strategic criteria (sustainability, ethics, risk assessment, etc.).
  - Facilitating better coordination between CSOs to create clear standards and frames of reference for solution providers and ensure their interoperability.
  - Investing in supplier relationships so that they better integrate the needs of CSOs.

6. Revisiting the data collection paradigm
For data to be truly useful in the decision-making process, combating information overload, low data quality and the under-utilisation of qualitative data should become priorities in the operational approaches and training of CSO members. A deliberate approach to documenting data collection processes, storing data sustainably, and sharing it with others is also essential to limit duplication of efforts. A stronger link with initiatives of accountability towards populations is also necessary in the context of data collection exercises.

7. Making the ethical dimension a priority in data management and taking a stand on certain approaches or technologies
It is not acceptable for CSOs to wait for the next data-management scandal to act on these issues, at the risk of seriously harming the populations they support. To be consistent with their values, CSOs should not only initiate significant changes in practices within their teams, but also stop considering technology and data as neutral elements; these require stronger stances from HAID CSOs.

For network heads, consider IM as a primary issue:

1. Guide CSOs through the necessary turning point of adopting best practices in IM
Network heads, given their pivotal role in the sector, have a part to play in the consideration of the importance of IM issues by CSOs. They must therefore integrate these issues within their team and suggest initiatives and/or services to their members on said issues

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(training, support, etc.) even if the latter are not directly requesting them. This is particularly necessary for small CSOs that experience more difficulties and need specific support mechanisms.

2. Establish mechanisms to foster dialogue between CSOs

CSOs struggle, unlike with other topics, to work together on IM. Network heads therefore have a key role to play in not only (i) triggering and encouraging feedback between CSOs (ii) developing joint lobbying with donors and possibly even some tool providers on the issue of interoperability, but also in (iii) fostering freedom of speech on certain taboo subjects (including through data-related incident escalation systems).

For CSOs donors, better support for IM development:

1. Subject to having the means to, include IM topics as one of the areas for discussion with CSOs

Donors should play a more proactive role in IM in their dealings with CSOs, by considering IM as a vehicle for improving the quality of projects. Nevertheless, given that the costs of implementing an IM strategy are significant, their expectations should be tailored to the financial means they are also willing to grant CSOs. This also involves funding or planning support modalities, particularly for smaller CSOs, to enable them to effectively address IM issues (trainings, individualized coaching, etc.).

2. Encourage and fund pooling initiatives around IM

For HAID actors having every interest in developing collective approaches on a subject as complex and multidimensional as IM, funding for IM pooling initiatives should be encouraged and facilitated, notably with regard to the production of new resources (for example, comparisons between solutions in high demand by several actors) and support processes. Similarly, donors should fund more research and studies on IM in order to contribute to the sector's awareness and guide its maturation over time.

3. Have a more sustainable approach to funding technology solutions for CSOs

Approaches to financing data management solutions are rarely coordinated (whether among donors or even within a given donor). Donors should take a step back regarding their strategy and analyse their impact on the market. The search for sustainable economic models, and the modularity and interoperability of supplier tools should be among the donors' priorities.

For specialised Support CSOs, better assist CSOs:

1. Provide support and resource development that are more attuned to the various needs of CSOs

Support to CSOs should, as much as possible, promote a multi-channel approach in the assistance provided and on the themes identified as priorities above. Translation of resources into French should also be prioritized.Furthermore, in addition to taking a tools and practices approach, they should be better able to assist CSOs in a cross-cutting manner across all IM dimensions, by better articulating their support to M&E and ICT4D strategies.

2. Help CSOs take a more measured look on the issues
   To do so, specialised CSOs should put into perspective the procedures used by CSOs in order to better understand the issues they face and better take into account ethical and operational quality issues, even if it means calling into question the approaches used by CSOs.

3. Support other actors in the assessment of IM practices
   Analysing the benefits and constraints of IM in more detail would indeed provide the means to increase available knowledge on IM across the sector and to have more tangible elements in the discussions.

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APPENDICES

1.1 - List of graphs & tables

1.2 - List of Tables

1.3 - Bibliography

Available for consultation at the following address: https://cartong.org/sites/cartong/files/ Annexe_1.3_Bibliographie_Etude_GDoP.pdf

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Appendix 1.4 - List of individuals and organisations that were interviewed

Available for consultation at the following address: https://cartong.org/sites/cartong/files/ Annexe_1.4_Liste_personnes_organisations_interviewees_Etude_GDoP.pdf

Appendix 1.5 - Format of the semi-structured form

Available for consultation at the following address: https://cartong.org/sites/cartong/files/ Annexe_1.5_Format_questionnaire_semidirectif_Etude_GDoP.pdf

Appendix 1.6 - List of organisations having responded

Available for consultation at the following address: https://cartong.org/sites/cartong/files/ Annexe_1.6_Liste_organisations_enquete_Etude_GDoP.pdf

Appendix 1.7 - Form used for the survey

Available for consultation at the following address: https://cartong.org/sites/cartong/files/ Annexe_1.7_Formulaire_enquete_Etude_GDoP.pdf

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