



Global
Partnership
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Development Data

ATHENA
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Humanitarian Data Exchange

An open data exchange platform for sharing information across organisations working in humanitarian crises

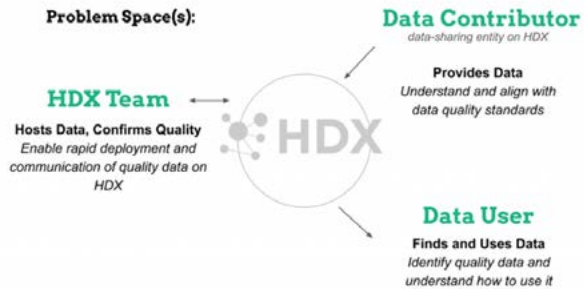
Summary

This case study was developed as part of *Effective Data Sharing: Beyond Platforms*, a study conducted by Athena Infonomics and commissioned by the Global Partnership for Sustainable Development Data. This project was made possible by a grant from Google.org.

The humanitarian sector relies heavily on data to target relief work; humanitarian data is the data about the context of the crisis (damage assessment, geospatial data), data about the affected people and the data on the relief work being done by the various organisations. However, the data in the sector can be fragmented, located with different actors, challenging to find and unreliable. Even when users have access to data, they cannot always be sure of the data source, collection methodology, or when it was updated. While temporary solutions such as data websites or shared drives were used during a humanitarian crisis, these were often left unattended after the immediacy of the crisis was over. Since there was no permanent platform for accessing or sharing data from previous humanitarian crises, access to data was largely dependent on personal connections in the data-collecting organisation.

“We kept hitting the wall of not being able to find the data to do the analysis; if we did find it, then we weren’t sure where it came from.”

Source: Centre for Humanitarian Data



Inspired by the World Bank’s [open data initiative](#), which made paywalled development data publicly available, the United Nations Office for the Coordination of Humanitarian Affairs (OCHA) launched the Humanitarian Data Exchange (HDX). HDX provides an open-source web platform allowing humanitarian data sharing across organisations and crises. On this open platform, any humanitarian organisation can upload its data. The platform was first used to share data globally for the West Africa Ebola Outbreak in September 2014. Since its inception, it has become the standard exchange platform to check data availability on a humanitarian subject. HDX aims to improve efficiency and decision-making within the humanitarian system by making data flows easily accessible to several humanitarian actors.

Facts and figures

Founded: 2014

Sector: Humanitarian

Typology by use: Response Awareness and Monitoring

Geography: Global

Governance Structure: Data Exchange

Number of Member Organisations: 300 organisations (approx.) with over 20,000k datasets.

User Count: 125,000 per month

Ownership: The United Nations Office for the Coordination of Humanitarian Affairs (OCHA)

Key Challenge(s) that the initiative was trying to solve

- Aggregating and maintaining humanitarian data on a platform to assist international and national actors in their efforts to improve response awareness and targeted relief work in a humanitarian crisis.
- Building trust among the organisations to enable easier, secure sharing of humanitarian data.
- Provide reliable data to the users with adequate information on methodology and updates

How are they solving the problem?

In 2013, UN OCHA began to focus on solutions that could make humanitarian data easy to find, accessible and inform decision-making. OCHA began by surveying approximately 3500 people on using humanitarian data and the barriers to accessing it. The survey found that most people use humanitarian data but faced problems finding reliable data for analysis. Keeping these concerns in mind, UN OCHA launched HDX in 2014, an open-source and open-access web platform which allows humanitarian organisations to share data on the platform. Initially, it had the support of five early adopters - UNOSTAT, UNICEF, Internal Displacement Monitoring Center, International Organization for Migration and the American Red Cross. Currently, it has grown to be a network of 300+ organisations. HDX is a data aggregator, which allows easy access to data from different organisations on its platform. However, HDX does not verify the accuracy of the data on its platform.

“We don’t check for the accuracy of the data. We don’t intervene; we let the data be. It can also be the case that both the estimates are valid, considering what methodology they adopted. We provide a good chunk of metadata to allow the users to decide on the datasets to use.”



HDX also assists the visitors in finding insights from the data through its two features – Geo-Preview and Quick Charts. They automatically present data in files into charts on the dataset page.

What were the key considerations in designing the initiative?

1. Putting the user at the centre of HDX design: HDX invested a substantial portion of its first-year budget in understanding the barriers faced in sharing and using the data. Given that previous data-sharing programs in the humanitarian sector had failed, there was scepticism about new data-sharing programs. HDX knew that organisations would only adopt the platform if they delivered a unique, compelling user experience. HDX worked with [Frog](#), a global design firm, to put the user needs at the centre of HDX's design. The team took over one hundred interviews with partner organisations, stakeholders, governments, and within OCHA and conducted field research in Nairobi, Kenya and Bogota. This user information helped HDX develop a user-focussed interface for data sharing. User research has been a consistent focus of the HDX team, guiding new initiatives such as developing the Humanitarian Exchange Language.

2. Ensuring accessibility and interoperability across different datasets: To ensure data sharing on the platform is seamless, HDX supports contribution in any standard data format. However, from the beginning, HDX recognised that some standardisation was necessary to reduce the 'friction of sharing data'. OCHA's original approach to data standardisation required time and technical expertise from the humanitarian organisation. In 2014, HDX rebooted this approach to develop the Humanitarian Exchange Language (HXL). It was clear

that most data on HDX is generated as spreadsheets. The new approach merely required the data generated to include a # against the title of the data field, making it possible to merge the same data field across different datasheets. While there are still challenges to adoption of HXL, studies show that it has greatly improved data use, saved data processing time and driven innovation in data use.

3. Ensuring data protection: Humanitarian data contains information about vulnerable communities and events, which makes it prone to misuse, brings fiduciary responsibility to the data sharing organisation and requires higher review and protection. Recognising the gravity of this, HDX established an advisory board in the first year of its inception. The board included Flowminder, Google, Tufts University, WFP and the World Bank representatives. It helped HDX navigate challenges around data licensing, drafting the HDX Terms of Service, and gaining early adopters. The board also helped HDX in developing its policy for data protection. HDX developed a Data Sensitivity Classification, which classifies data as sensitive, non-sensitive and of uncertain sensitivity. This sensitivity classification triggers protocols for access and sharing of the data. This is not a one-time process, and HDX and OCHA have continued to invest in Data Responsibility Guidelines and innovative ways to protect data. HDX has explored options such as 'querying' the database, which protects the original data but still allows data-based insights to be accessed. Allowing flexibility in sharing protocols that account for the nature of the data being shared is crucial to building a trusted data sharing initiative which values the dignity and safety of its data subjects.

Financial Sustainability of the initiative

Initially, in 2014, HDX received project funding from the United Kingdom's Department for International Development, Humanitarian Innovation and Evidence Programme, the Government of Sweden and the Humanitarian Innovation Fund. HDX relies on donor funding and funds from its growing network of strategic partners. Applying for funding to various donors has allowed HDX to refine the idea and get construc-

tive feedback. Recently HDX has proposed exploring different product models for generating revenue such as a SaaS model for a basic version of HDX, accreditation for its data literacy program, etc.

Lessons Learned

- Focus on onboarding influential partners early. The HDX experience demonstrates that identifying and working with influential early adopters and engaging with them directly on their needs is crucial for uptake and design. This ensures that the initiative's design is compatible with the requirements of its intended users and creates early buy-in for the initiative.
- HDX benefitted from being situated within a UN body. HDX's experience highlights that *trust, not technology, is at the heart of data sharing*. A trust deficit within humanitarian organisations was one of the key reasons for the lack of data sharing. To build trust, HDX conducted extensive user research, built detailed terms of service and a comprehensive quality assurance process. However, it would also appear that HDX's success in securing early buy-ins from organisations such as the World Food Programme was due to institutional trust with the UN. Existing networks within the UN, the push from senior champions within OCHA and the international recognition and faith that a UN body engenders made it easier for the adoption of HDX. HDX could leverage this institutional advantage and bolster it with additional trust-building measures.

Further, HDX is not bound by national or regional data protection legislation due to its location within the UN. The initiative is governed by the Secretary-General's bulletins, the UN Principles on Personal Data Protection and Privacy, the IASC Operational Guidance on Data Responsibility in Humanitarian Action and the UN OCHA Data Responsibility Guidelines.

- Stick to your knitting. HDX has maintained its core focus on making humanitarian data accessible and easy to find; and avoided the temptation to focus on big data, data analytics and visualisation. At the same time, the initiative has invested in communication, research and innovation on humanitarian data through its blog, data fellowships, and research at the Centre for Humanitarian Data. This has helped create a community of engaged users and contributors working with HDX to identify and innovate on bringing together disparate humanitarian data to inform crisis response better.

HDX is a data exchange platform which benefitted from being a part of the UN family. However, it did not restrict its utility to that of merely an exchange platform. It evolved to add features in the platform that served the data-sharing and analysis needs of the users. Studying the characteristics of HDX helps us understand the extra step of facilitation that data exchange platforms must provide for it to onboard partners and succeed in informing decision making.

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Stakeholder Interviews