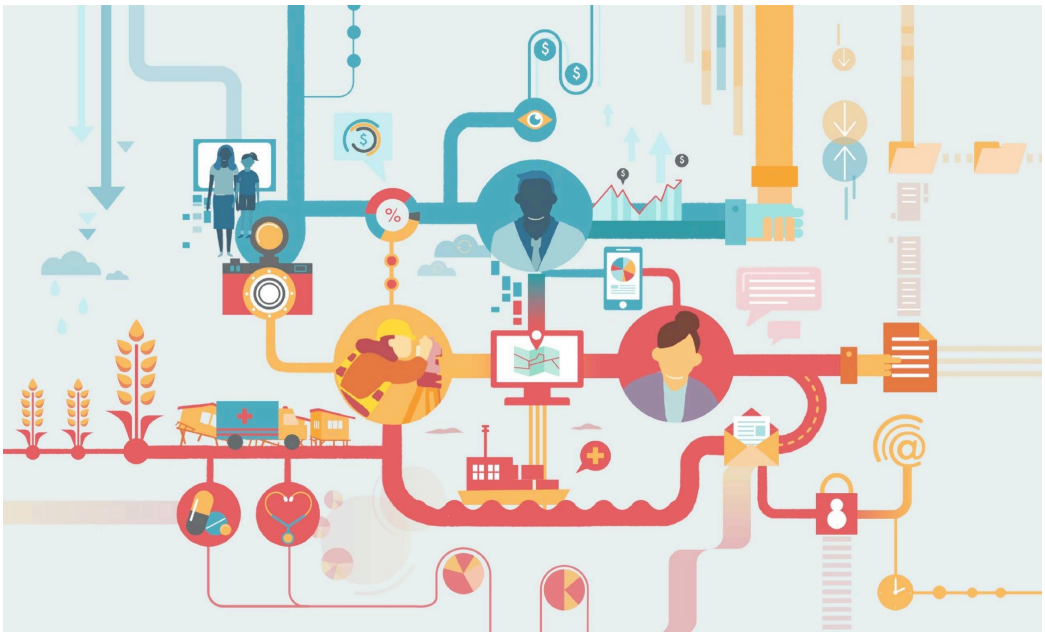
Humanitarian Data Exchange - Data Labs:

Creating space for local data collaboration and innovation



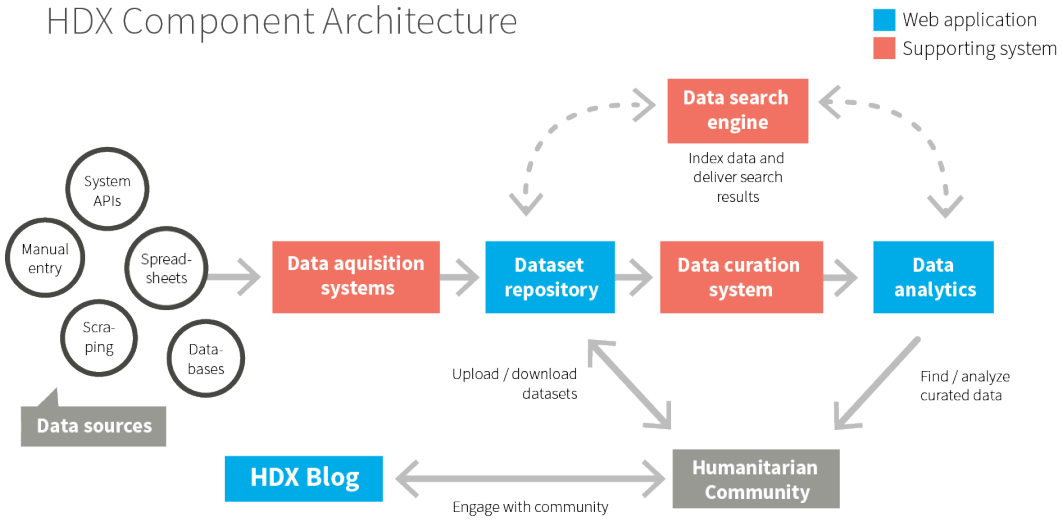
A visual of the humanitarian data network from an upcoming HDX animation.

Introduction

The goal of the Humanitarian Data Exchange (HDX) project is to make humanitarian data easy to find and use for analysis. The project was created in late 2013 with support from donors to pilot a data platform in three countries. Over the course of 2014, the HDX team will be working with OCHA staff and partners in Colombia, Kenya and Yemen to introduce the software and services of the HDX platform and connect local data ecosystems with a global one.

The project has three technical components:

1. Creating a dataset repository for sharing community data spreadsheets;
2. Bringing together a Common Humanitarian Dataset that can be compared across countries and crises; and
3. Agreeing on standards for the exchange of humanitarian operational data (the *Humanitarian Exchange Language* or HXL) across a network of actors.



These technical pieces will be supported by services from the HDX team. This includes data cleaning, analysis and visualization of local datasets as well as global outreach and advocacy to rally volunteers and new partners to the work of transforming the humanitarian data landscape.

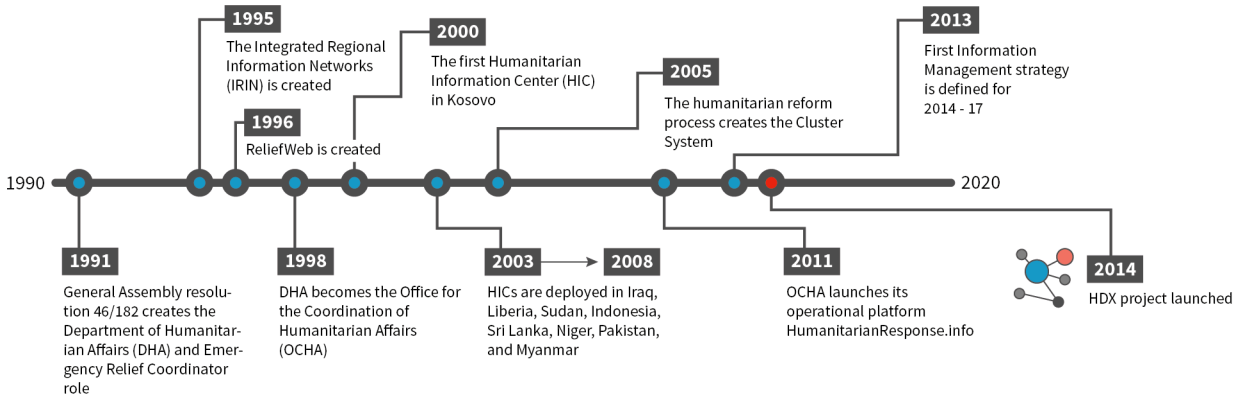
When we were designing the HDX project, we thought deeply about mitigating risk for such an ambitious undertaking. We were often reminded of the high percentage of technology projects that have failed in the past and were witness to plenty of local data projects that began in good faith and then lost momentum as the local catalyst moved to a new duty station. Conversely, we knew that headquarters-driven initiatives were often greeted with resistance by the field. As we dug deeper and also looked at the already overstretched capacity of OCHA and partner offices, we realized that the project required a prolonged, local presence in the pilot offices to connect geographic locations, ensure local buy in, build capacity, and support the data transformation process on its way to a more sustainable footing.

We propose that this in-country engagement be powered by HDX Data Labs. Initially piloted in Nairobi, Kenya, the Data Labs will create a neutral, physical space for humanitarian partners,

government officials, technologists, universities, and international stakeholders to collaborate on all things data. The Data Labs will serve as a link between field users, the global community and the emerging HDX platform. The Labs will also provide the opportunity to find new ways of working together on humanitarian data, an issue area that is as challenging as it is compelling.

Background

OCHA has been working on information management since its creation (see timeline of information management milestones below). The Department of Humanitarian Affairs was created in 1991 through General Assembly resolution 46/182. In 1998, DHA became known as OCHA but the mission remained the same: bring together humanitarian actors to ensure a coherent response to emergencies. OCHA delivers on this mission through five pillars: coordination, advocacy, policy, funding, and information management.



The criticality of information management to effective coordination was apparent from the get-go. In 1995, OCHA created a news services - the Integrated Regional Information Networks (IRIN) - in response to the gap in humanitarian reporting exposed by the Rwandan genocide and its aftermath. Not long after, in 1996, OCHA created ReliefWeb, a website for sharing humanitarian information products. The General Assembly recognized the importance of having reliable and timely information during humanitarian emergencies and endorsed the service one year later. Both services are still operating twenty years later.

As crises came more often and at an increased scale, Humanitarian Information Centres (HICs) were created as a way to work together on information management in the midst of a large response. The first HIC was set up in 2000 in Kosovo. Many more HICs were deployed in the years after. This demand for local exchange of operational information led to the creation of country-based HumanitarianResponse.info websites in 2011, which are now available in 20 locations.

The HDX project was a natural progression to these earlier initiatives. Data was starting to become more available and more important to day-to-day operational decisions and needed focused management. OCHA leadership and staff were looking at how the organization and, by extension, the humanitarian system could adapt. Interoperability and innovation became strategic objectives in OCHA's Strategic Framework for 2014-17 and these sensibilities were echoed in OCHA's first SMT endorsed Information Management strategy. At the same time, we were seeing amazing innovations come out of the humanitarian system, led in part by the work of the UNICEF innovation

team[1] and their network of innovation labs. And so entered the idea of HDX Data Labs.

The HDX Data Labs Concept

The mission statement for the HDX Data Labs is to create space for local data collaboration and innovation that is connected to humanitarian decision making and a global data network. The HDX Data Labs would be managed by OCHA but in close partnership with the local humanitarian community, government and private sector partners. They should serve as a magnet for data enthusiasts, allowing OCHA to channel support and private sector know-how to the field.

The physical space will be a co-working environment that draws in the target user groups with friendly and experienced staff, fast Internet, comfortable chairs, large white boards, printing facilities and the best coffee in the area. The space should facilitate creative collaboration and avoid a standard office mind-set while allowing for a range of group activities and events.

The Data Labs should bring to life the design principles of the overall HDX project:

- Co-creation – working collaboratively to identify needs and implement solutions.
- User-centered – putting users at the centre of systems and services.
- Interoperable – using open source technology and designing for integration.
- Simple – focusing on simple solutions that can scale.
- Sustainable – creating a data system and culture that is viable for the long term.

The specific activities of each Data Lab needs be determined locally and after conversations with partners about what is most important given the circumstances and resources available. As an example and based on substantial research, the following work streams could be included: 1) building baseline and humanitarian data; 2) user testing, training and outreach; 3) data standards; and 4) data innovations.

1. Building Baseline and Humanitarian Data
Activity: Collect, collate and clean baseline (also known as preparedness or pre-crisis data); aggregate and process humanitarian operational data; develop a local data infrastructure that serves as a center of gravity for humanitarian data.
Deliverable: Release of data via public repositories and through the HDX platform.

2. User testing, training and outreach
Activity: Conduct on-going user testing of HDX platform technologies and services; offer training programs and events to increase awareness of open data principles, the ethical use of data and to build the capacity of local actors to work with data. This could take the form of user experience clinics, active learning sessions and practical experiments around data-driven decision-making.
Deliverable: Improved data capacity and awareness of government and local aid community; local target audiences find HDX platform and community data tools intuitive to use.

3. Data standards
Activity: Apply shared data and interoperability standards throughout a network of aid actors using agreed standards from the Humanitarian Exchange Language (HXL) and the International Aid Transparency Initiative (IATI) and using shared data building blocks such as geographical codes, organization identifiers, and sector/cluster and beneficiary-type codes.
Deliverable: A shared technical infrastructure and tools for the exchange of humanitarian and

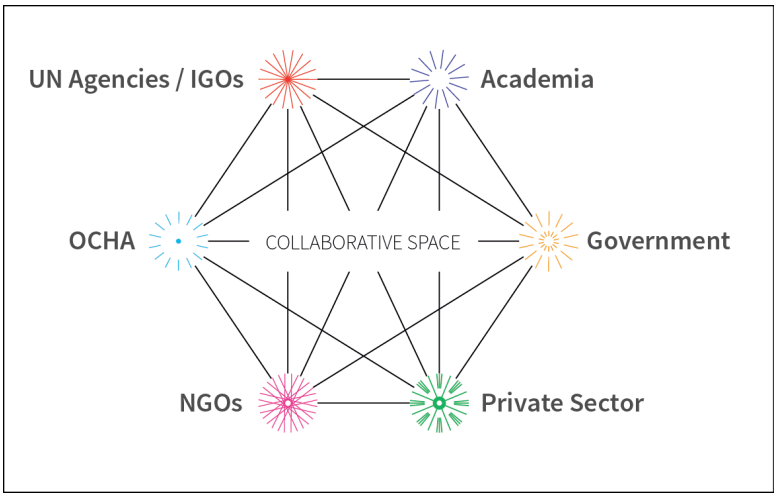
[1] http://unicefstories.org/2012/11/06/unicef-innovation-lab-do-it-yourself-guide/

development data with public distribution of the collected data through APIs.[2]

4. Data innovations
Activity: Host research and community projects such as the work being undertaken by the Qatar Computing and Research Institute on analyzing social media data, Global Pulse and Flowminder on analyzing mobile phone data, and OpenStreetMap on community open-source mapping, among others.
Deliverable: Integration of new practices and new data sources into formal structures and through the HDX platform.

Data Labs Partnerships

As we have learned from our colleagues at UNICEF innovation (visual below adapted from their labs guide book), a lab is nothing without partners. The Data Labs will live or die by the partnerships that are created around them. The HDX team has been cultivating partnerships to advance the goals of the project since mid 2013. Our initial strategic partners include the governments of the UK, Sweden and Luxembourg as well as the Humanitarian Innovation Fund. We will soon begin a partnership with Frog Design to create the user experience and interfaces for the HDX platform. And since launching the project publicly through hdx.rwlabs.org, we have had a number of new partners ask to collaborate. We have also had over a dozen people ask to volunteer for the project.



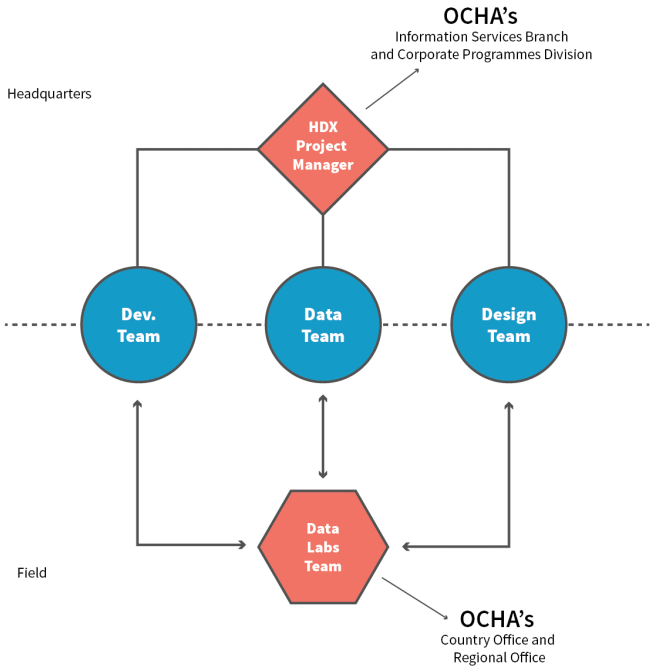
As the project builds momentum, the HDX team is reaching out to a number of additional partners including: Global Pulse, Flowminder, Qatar Computing and Research Institute, Seed Scientific, the World Bank, the Global Facility for Disaster Reduction and Recovery, and Ushahidi, among others. These partnerships are designed to leverage OCHA's position at the nexus of humanitarian information streams to build on what has already been done and to create better ways to share, discover and analyze humanitarian data.

The Data Labs partners may be from the local chapters of the organizations listed above or be a new mix of local actors that would emerge as a physical space is created. We would welcome both traditional and emerging partnerships to the lab environment.

Data Labs Structure

As mentioned above, the Data Labs would be managed by OCHA and therefore reside within its structure. As a hybrid of both HQ and field work, the Data Labs would be part of the HDX project team and report to the local OCHA Head of Office (see visual below). This structure would be an innovation in itself and may need to be refined as the pilot takes shape.

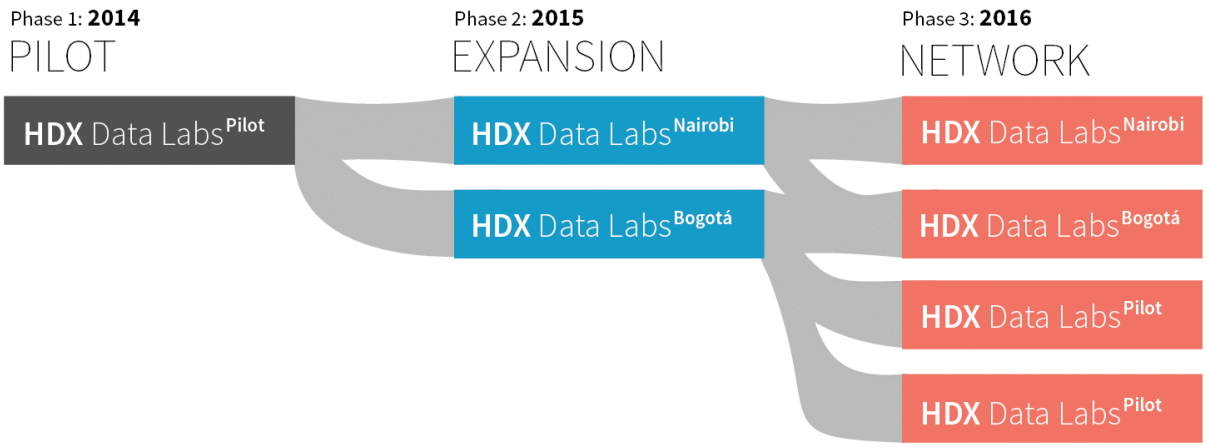
[2] Application Programming Interfaces (APIs) are mechanisms used to transfer data between computers. APIs are considered the gold standard of public data sharing.
[2]



Data Labs Progression

We believe that the integrated package of a physical co-working space, the Data Labs partners, the HDX team and the HDX platform will catalyse a new set of behaviours around data sharing and use within the humanitarian community and beyond. But we know that we need to start simple and go from there.

For this reason, we propose starting with a single pilot lab in Nairobi, Kenya for 2014. From there, we would look to create a fully functional lab in Nairobi and expand to an additional lab location, such as Bogota, Colombia. If successful, it may be possible to have a network of labs operating by 2016. Of course, by then they could be called something slightly different but we hope that local data collaboration and innovation connected to a global data network would persist through a managed process.



The Data Lab Nairobi

The Data Lab Nairobi would start incrementally. We propose that the HDX project manager and the global Lab Manager undertake a research mission in May 2014 to scope out where a physical space could be created, what local capacity could be hired, and what the lab work streams should narrow in on. The first critical hire will be a local Lab Manager. He or she would be able to co-locate with the OCHA Nairobi office (within the UN compound) for a few months until a more permanent space is secured. Its possible that co-location with an NGO or private sector group is more suitable than a renting a new office but being outside the UN compound will be important.

In addition to the Lab Manager, the local team could include a community outreach focal point and a data team (developers, data managers, analysts). Secondments or in-kind support from partner organizations would be welcomed.

Data Lab Nairobi Timeline

Activity	Date
Research mission	Third week of May
Refined Data Lab Nairobi TOR	June
Local Lab Manager in place	July
Local Lab team in place	August
Data Lab Nairobi launch	September
Review and lessons learned	December