Who We Are

DFS is an international NGO based in the United States with a global presence. We improve information management for the humanitarian community to produce better-informed, more targeted decisions.

DFS is the technical supervisor and host of DEEP, the Data Entry Exploration Platform.

Improving humanitarian responses through actionable data
What We Do

Applications
Integrating AI and natural language processing into enterprise data platforms.

Data Review
Fueling real-time, global responses through secondary data review and analysis.

Design
Informing global communities through accessible digital platforms.

Strategy
Ensuring robust humanitarian response through modern data architecture.
How We Support the Humanitarian Community

Digital Innovation

React faster and reach further by automating time-consuming tasks, quickly sharing information and making informed decisions.

The best outcomes happen when technology complements – not replicates – human interaction. That’s why we’re committed to helping our partners find the technology to do more good, for more people, in more places.
How We Support the Humanitarian Community

Design & User Experience

Whether it’s a mobile application or a new website, great design and development complement each other. And it all starts with a solid strategy.

Design is only as impactful as the strategy supporting it. We start by asking a lot of questions, listening, and learning to make sure our ideas take the right shape before they take off. Then, we create a plan that brings engaging messaging, graphics, and functional elements together across every screen size and implement it.
How We Support the Humanitarian Community

Data Review & Analytics

Using secondary and primary data to reveal hidden emerging and historical trends.

Information managers and analysts spend about 70% of their time structuring data, leaving only about 30% of their time for analysis and reporting. Having one space to collaborate and analyze information allows humanitarians to spend more time responding intelligently.
How We Support the Humanitarian Community

Data Strategy

Build a plan to get the most out of your data with the fewest resources.

By focusing on what’s available and what’s needed, we build plans to help humanitarian organizations determine what data gets collected, stored and ultimately made available.
Our Values

Open Source  As a leading global NGO, we are dedicated to keeping our technologies accessible for emergency response and development organizations.

For the Long Haul  We make our projects last by growing capacity and knowledge in partner organizations.

Connect the Dots  We ensure our solutions fit into the bigger picture and do not exist in silo.

Giving humanitarian organizations more time to focus on what matters most.
Our Partners

iDMC
IFRC
UNFPA
UNHCR
GIMAC
UN environment programme
Institute for Public Health Innovation
JIPS
Department for International Development
TRANSPARENCY INTERNATIONAL
iMMAP
UNHCR
DRC REFUGEE COUNCIL
German Red Cross
USAID
IOM UN Migration
H2H Network

DFS is part of the H2H Network, a Geneva-based consortium providing technical support for better humanitarian action.

H2H Network is driving change across the humanitarian system by helping build networks and partnerships among a diverse array of non profits around the globe.

We're excited to be a part of the community and look forward to lending our expertise in designing digital projects and data strategies to both existing and new partners.
Our Teams

The DFS Team comes from all over world

From our 85+ full time staff and contractors there are:

7 in North America
24 in Europe
47 in Asia-Pacific
2 in MENA
1 in Africa
5 in South America
IFRC GO Platform

Centralizing data on IFRC National Societies’ projects

- Improving resource allocation, and supply chain optimization.
- Development of the 3W module
- Development of COVID dashboards for information visualization and decision-making processes
- Platform translation

https://github.com/IFRCGo
IFRC COVID-19 Dashboard

Emergency page for the COVID-19 operation in IFRC’s GO Platform (In Production Soon)

• The amount of information - dashboards and documents on the IFRC GO emergency page are not easy to navigate.

• The covid 19 emergency dashboard on the IFRC Go enable visualizing relevant information in an easy and structured manner, monitoring progress, and supporting decision-making processes during the operation.

https://github.com/matthewsmawfield/ifrc-covid-dataviz
IFRC COVID-19 Dashboard

Total reported cases by IFRC region

- Americas
- Europe
- Middle East and North Africa
- Asia-Pacific
- Africa

Filter by IFRC Region/Country

Cases

Deaths

Vaccine doses administered

IFRC COVID-19 Dashboard

IFRC Coronavirus (COVID-19) Global Overview

- Total reported cases: 186.4M
- New cases: 2.6M
- Total deaths: 4M
- Total vaccination doses administered: 3.4B
- Doses administered per 100 people: 40.3
- 156: Number of WHO approved vaccines in circulation
- 17: Percent vaccine acceptance

Map

Filter by IFRC Region/Country

Cases

Deaths

Vaccine doses administered
IFRC Local Stories

Review of the IFRC Local Data Stories project and provide future recommendations.

• Service provided: Technical review of existing functions/systems and higher level organizational recommendations on how to best integrate and use data across IFRC.

"After piloting a small-scale study to explore the potential for machine learning and AI to help us gather more information on the activities of local branches around the world, we needed a technical partner. That’s when we heard about DFS. We really enjoyed working with them. They confirmed our assumptions about potential data gaps on the digital transformation journey and provided a code review, in-depth research, and recommendations that were used to inform our next steps."

Heather Leson
Data Literacy Lead, International Federation of Red Cross Red Crescent Societies
Complete redevelopment of IDMC’s data infrastructure, modernizing their data collection capacities and interfaces

- Improved usability through user interviews among both analysts and senior stakeholders
- Major improvements to data security and infrastructure

https://github.com/idmc-labs

Access the full case study
IDMC Media Monitoring Platform

A web application for IDMC analysts to monitor news reports regarding armed conflict and displacement.

- It provides map and tabular interfaces for data selection in addition to other graphical visualizations.

https://github.com/idmc-labs
Access the full case study
Development of the NEAT+ web application, infrastructure set up and security related work. As the algorithms built into the MS Excel sheet require using the processing power of the local computer, and the questionnaire can be unintentionally altered easily, a cloud-based tool would present a lighter and easier alternative in situations where internet connection is available.
Nexus Environmental Assessment Tool

URL: https://neatplus.org/
IOM Missing Migrant Project

Developing custom tailored media monitoring and search tool that specializes in news related to missing migrants. Previous media monitoring tools return results in only a few languages, and often return irrelevant reports.

Status: In Production Soon
The Armed Conflict Location & Event Data Project (ACLED) is a non-governmental organization specializing in disaggregated conflict data collection, analysis, and crisis mapping.

• ACLED codes the dates and locations of all reported political violence and protest events in over 100 countries in real-time.

• As of 2019, ACLED has recorded more than half a million individual events across Africa, South Asia, Southeast Asia, the Middle East, Central Asia and the Caucasus, and Southeastern and Eastern Europe and the Balkans.

URL: https://www.acleddata.com/dashboard/
ACLED Conflict Monitoring Dashboard

Nigeria

Summary of Political Violence and Protest

Nigeria

Nigeria has high levels of political violence and present what second most violent state in Africa, accounting for almost 40% of all violence. Since 2003, the main perpetrators of political violence in northern and central Nigeria, who seek to establish their dominance over Muslim and state military forces account for the reported fatalities. In total, 20.4% of all conflict-related deaths occurred in Nigeria. Aside from the conflict between Boko Haram and the government, most violence in Nigeria is related to local and regional communities, especially in the northeastern region, as well as Benue and Cross River. The conflict is a result of ongoing violence by various groups to establish control over the area. The conflict is a result of ongoing violence by various groups to establish control over the area.

Actions by Event Frequency

Nigeria

1. Unknown
2. Military of Nigeria
3. Police in Nigeria
4. Boko Haram
5. Nigerian Army
6. Federal Task Force
7. Nigerian Air Force
8. Nigerian Police
9. Nigerian Navy
10. Nigerian Police

ACLED Conflict Monitoring Dashboard

ACLED
Bringing clarity to crisis
Congo Research Group - Talatala

TALATALA, a platform for Citizens to strengthen Democracy

Transparency is the heart of Democracy, and it must be the top priority for all Governments.

Talatala - which means “mirror” in Lingala - is the very first platform in the Democratic Republic of Congo (DRC) to provide the citizens easy and comprehensive access to insights on the actions carried out by their representatives in the National Assembly of the DRC. It allows the citizens to follow up on the Executive Government’s activities for better Justice, Security, and fight against Corruption.
Congo Research Group - Talatala

URL: https://talatala.org/

Éruption du Nyiragongo : les députés approuvent l'opportunité d'interpellier le ministre José Mpanda

Jacques Djoli : « C'est une priorité de modifier la loi portant statut des anciens présidents de la République »

André Tambwe Katambwe : « Pourquoi j'ai voté contre la proposition de loi portant protection et promotion des droits des peuples autochtones pygmées en RDC »

Gouvernement Sama Lukonde : la part belle aux députés nationaux ?
Congo Research Group - Talatala

URL: https://talatala.org/

Session ordinaire de Mars 2021

Sécurité
Institution de la commission spéciale et temporaire sur l’insécurité dans l’est de la RDC
Lors de sa première réunion, le 7 avril 2021, l’Assemblée nationale a levé l’option d’adopter une résolution portant institution de la commission d’enquête parlementaire sur la situation d’insécurité dans l’est du pays. Elle couvrait huit provinces menacées par des groupes armés locaux et étrangers : Nord-Kivu, Sud-Kivu, Mangina, Haut-Uele, Ituri, Equateur, Haut-Katanga, ...

31 échanges
Christophe Mboro N’Koda
Pvanga
13/04/2021

Organisation du pouvoir
Proposition de loi organique réformant la Ceni
Vingt ans après son dépôt initial le 8 août 2019, la proposition de loi organique modifiant la loi sur la Commission électorale organique indépendante (Ceni), portée par le député Christophe Lutundula a été présentée pour la première fois en plénière. Son auteur a en effet été invité en dernier lieu économique ...

En cours d’examen
17 échanges
Christophe Lutundula Apala Pertiapa
13/04/2021
After years of using a custom built and out of date custom database solution, TI wanted to switch to a more modern and secure solution. DFS led TI through a consultative process interviewing national chapters to derive user requirements as well as technical research on suitable database platforms. Ultimately a new environment was chosen and DFS assisted in the migration process.

URL: internal
Belgian Red Cross - Shelter Database

The Open Shelter Database aims at creating a platform to collect and share data with the widest possible audience, ranging from decision makers to field implementers. Data include key information on humanitarian shelters, including the contacts of the organisations behind them.

URL: https://shelter-database.org/
DFID - Partner Activity Visualization System

An online dashboard for visualization and numerical overview of figures for partner activity for projects funded by DFID Nepal.

Uses Mapbox and other geospatial tools to analyze and visualize information.

URL: https://www.dvs-nepal.org/
DFID - Partner Activity Visualization System

**Health and Social**
- Female Population Aged 5 Years & Above Literacy Rate: 6.3K
- Low Kilocalorie Intake Severity: 0.026
- Number of Female Community Health Volunteers (FCHVs): 8.8K
- Prevalence of Underweight: 0.25
- Total Number of Households: 1.2M
- Households with toilet facility: 816.4K
- Households without toilet facility: 207.2K
- Male Population Aged 5 Years & Above Literacy Rate: 8.1K
- Number of new TB cases registered: 5.7K
- Population Aged 5 Years & Above Literacy Rate: 7.2K
- Prevalence of Wasting: 0.089
- Prevalence of Stunting: 0.40
- Prevalence of Anaemia: 0.11

**Land Cover**
- Agricultural Area: 36.06%
- Barren Area: 1.64%
- Built-up Area: 24.27%
- Forest: 50.70%
- Grassland: 4.51%
- Shrubland: 0.62%
- Snow/Glacier: 9.31%
- Water Body: 0.38%
Catholic Relief Services (CRS) Nepal oversees earthquake reconstruction assistance in hundreds of areas across Nepal. Every month they planned to distribute an information sheet to each area detailing the reconstruction process and providing key contract information. We automated the process of the profile generation using a variety of Python libraries based on designs provided by CRS.
CRS - Field Profile Generation Automation

https://github.com/toggle-corp/palika-profile
https://github.com/bibekdahal/drafter
With the rise of cyberattacks in 2020 at a global level, we have been contacted to carry out black-box security audits for Geneva based IGOs, i.e. attacking their servers as an external attacker would do. Thus, in order to find out and fix the vulnerabilities associated to the servers’ configuration, and the vulnerabilities which are inherent to the infrastructure.
Cybersecurity - INGOs and IGOs (NDA)

Actions for Black-Box security audit

• Implementing back-up solutions for the complete infrastructure,
• Black-box security audit and penetration testing,
• Responsivity within 5 minutes for all audit duration
The client – a Geneva-based IGO (NDA) – got hacked, through a ransomware, with all databases emptied. All their work and production relies on web applications. We had to restore all services with minimal (no) documentation, while improving the infrastructure security in minimum time. A white-box security audit has been carried out.
Cybersecurity - INGOs and IGOs (NDA)

Actions for White-Box security audit

- White-box security audit, to analyze the vulnerabilities within the code, using OWASP TOP10 guidelines,
- Fixing of the vulnerabilities and retesting of the system
DATA STRATEGY, REVIEW & ANALYSIS

DEEP (Data Entry & Exploration Platform)
Data Friendly Space and DEEP

While responding to the 2015 Nepal earthquakes, DFS founders first met and began discussing the need for improved data systems in the humanitarian community...

...and DEEP was born! DFS has been the technical guardian of the DEEP since its inception, for developing and maintaining the application.  

https://github.com/the-deep
DEEP – Taming Data Abundance

How can organizations extract information from qualitative and quantitative sources and synthesize them into a common, shareable analytical frameworks?

Read more about DEEP here on Medium

Access the full case study
DFS focuses on creation of data centric web applications, websites and mobile applications to support humanitarian organizations in extracting actionable insights from their data and execute their missions. In addition to software development, DFS also provides a range of analytical services focused on strengthening data collection and analysis capacities in humanitarian emergencies. DFS also focuses on the intersection between data automation processes powered by Artificial Intelligence and human knowledge, and in particular when one can help the other to execute analysis.

DEEP In A Nutshell

1. Collaborative Projects & Frameworks
2. Flexible Data Inputs
3. Assessment Registry
4. Data Annotation (with NLP)
5. Exports, publicly available API

Access DEEP
Where is DEEP Being Used Today?

- 1,791 Projects
- 2,996 Users
- 1,238 Analysis Frameworks
- 80,652 Sources
- 310,491 Entries
DEEP and the Humanitarian Program Cycle

DEEP is used for projects throughout the Humanitarian Program Cycle.

Access DEEP
DEEP and the Humanitarian Program Cycle

Needs assessment and analysis:

Connect DEEP to any online data source and carry out data collection and needs assessment studies through its AI-assisted secondary data review, and the — coming soon — Kobo integration for primary data collection.
DEEP and the Humanitarian Program Cycle

Strategic response planning

After carrying out needs assessment and analysis, you will be able to access actionable geolocalized data and prepare your response plan. Define country strategy — narrative, strategic objectives and indicators — and cluster plans consisting of objectives, activities and accompanying projects, which detail implementation and costing of the strategy.
DEEP and the Humanitarian Program Cycle

Resource mobilization

Map projects & activities, resources, budgets and beneficiaries reached into a user-friendly interface, and fasten collaboration with your team members. Export data, infographics and maps to present it to stakeholders, funders and donors.
DEEP and the Humanitarian Program Cycle

Implementation and monitoring

Carry out multidimensional analysis to gain real time insights on your response plan, from project and activity mapping to monitoring. Assess targeted and reached beneficiaries. DEEP could be used for activities such as 3W : Who does What & Where, 4W : & When, 5W : & for Whom.
DEEP and the Humanitarian Program Cycle

Operational peer review and Evaluation

Support the enhancement of the collective response and identify good practice & learning to share with other operations: leadership arrangements; key obstacles affecting operational, coordination mechanisms, accountability to affected people, and implementation of the humanitarian programme cycle.
DEEP and the Humanitarian Program Cycle

Preparedness

Anticipatory Actions, using historical data on the impact of crises enable the humanitarian community to better estimate expected needs in case of a crisis event of similar magnitude happening in the future.
Key Projects Involving DEEP Today

- USAID
- UNHCR
- DRC
- iMMAP
- IFRC
- GIMAC
Global Information Management and Analysis Cell (GIMAC)

Joint Situation Analysis, COVID-19 Affected Contexts

The Global Information Management, Assessment and Analysis Cell (GIMAC) is a humanitarian multi-stakeholder initiative, proposed jointly by several United Nations and international NGO partners.

GIMAC aims to coordinate, structure, collate, manage and analyse COVID-19 related information; and to provide technical support and services to prioritized countries and global decision making based on a request.

URL: https://www.gimac.info/
Global Information Management and Analysis Cell (GIMAC)

Description and objectives of the project

The DEEP project ensures the Global Information Management, Assessment and Analysis Cell has access to the minimum amount of data and resources required to achieve its objectives, and provide capacity for data collation, analysis and technical support to countries with low analytical capacities and high-risk impact.
Secondary Data Review and COVID Situation Analysis in 6 countries, project led by IMMAP and funded by USAID.

- Bangladesh, Burkina Faso, DRC, Syria, Colombia, Nigeria
- 17 Secondary Data Review Officers/Analysts
- 12 month project, funded by USAID
iMMAP COVID Situation Analysis

Deliverables

• Hundreds of monthly analysis points at sub-national levels, thematic reports analyzing the evolution of ongoing situations, e.g. quarantine effects, protection concerns, access to basic goods and services, market prices, etc.

• Hundreds of weekly snapshots of available information at sub-national levels summarized visually in dashboards for each country.
UNICEF COVID-19 Intervention Mapping

Analyses and reports equip UNICEF to better understand responses to COVID-19, identifying gaps and capturing lessons learned.
Description and objectives of the project

Structure the information from multiple sources to enable quick & effective analysis that allows the team to confirm if the decisions taken by the Federation positioned the organization effectively to scaleup operations to the crisis, and allowed to rapidly address humanitarian needs in key Ebola-response sectors.

Deliverables

- A comprehensive repository of secondary data for two geographical areas affected by Ebola, categorized as per the commonly agreed analytical framework
- Word and excel exports of the categorized data via the DEEP export module.
IFRC Ebola Outbreak Analysis

Addressing humanitarian needs in Ebola-response sectors

- Enabled rapid analysis of IFRC actions to evaluate crisis effectiveness and scalability
- Developed a comprehensive repository of secondary data for Ebola-affected areas
Population Movement in LAC Region

Description and objectives of the project

Sector and inter-sector situational analysis through structured, systematic, consistent and regular secondary data review for 16 selected countries in the Americas affected by the major situations in the LAC region (Venezuela, Colombia, Nicaragua and North of Central America).

As well as the impact that COVID-19.
Population Movement in LAC Region

Deliverables

Captured and categorized relevant data within DEEP to inform UNHCR Country Operational Plans and programs

Assess quality, depth and representativeness of the available information from needs assessment reports for each country, provide with a consolidated view at country level of achieved needs assessments, methodology, location, sectors and affected groups.
Population Movement in LAC Region

- Sector and inter-sector situational analysis utilizing structured, systematic, and consistent secondary data review across 17 countries in the Americas
- Reviewed and tagged 3,000 documents, generating 30,000 entries over two years.
- Export from DEEP used for RMRP 2019 and 2020 (more than 120 analyses provided)
DEEP has been used to inform humanitarian responses such as:

- **The Venezuela migration crisis where UNHCR used the platform for media monitoring for:** [http://bit.ly/r4vunhcr](http://bit.ly/r4vunhcr)

Application of DEEP for Humanitarian Responses

DEEP has been used to inform humanitarian responses such as:

Interested in partnering with us or just to have a chat? We’d love to hear from you!

datafriendlyspace.org/
partnerships@datafriendlyspace.org