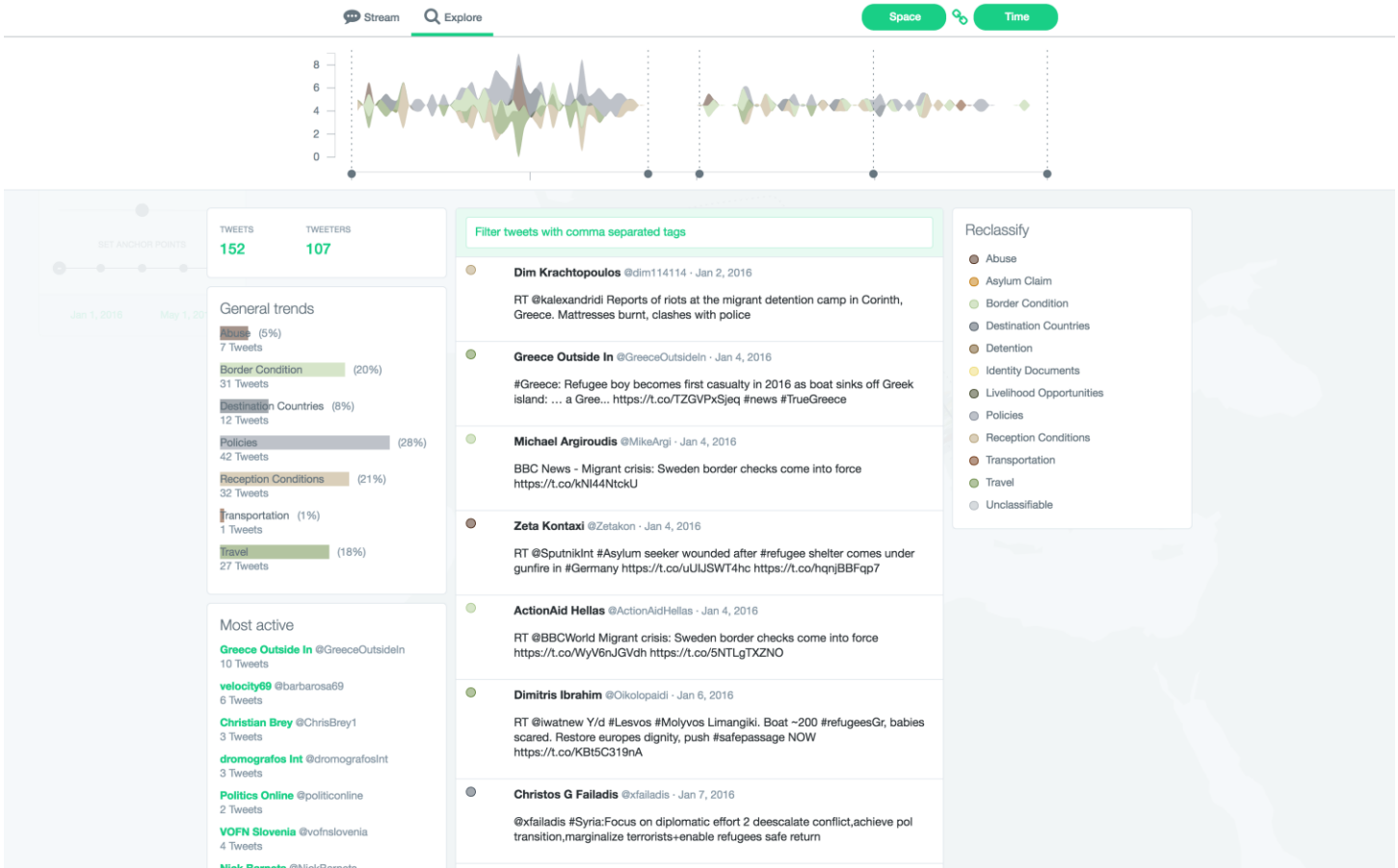
Application developed for UNHCR performing automatic detection, classification, and measurement of anti-refugee xenophonic tweets along potential routes through Europe



Early warning system developed for IOM and UNHCR for automatic recognition of the signatures of refugee rescue events in Mediterranean marine traffic data

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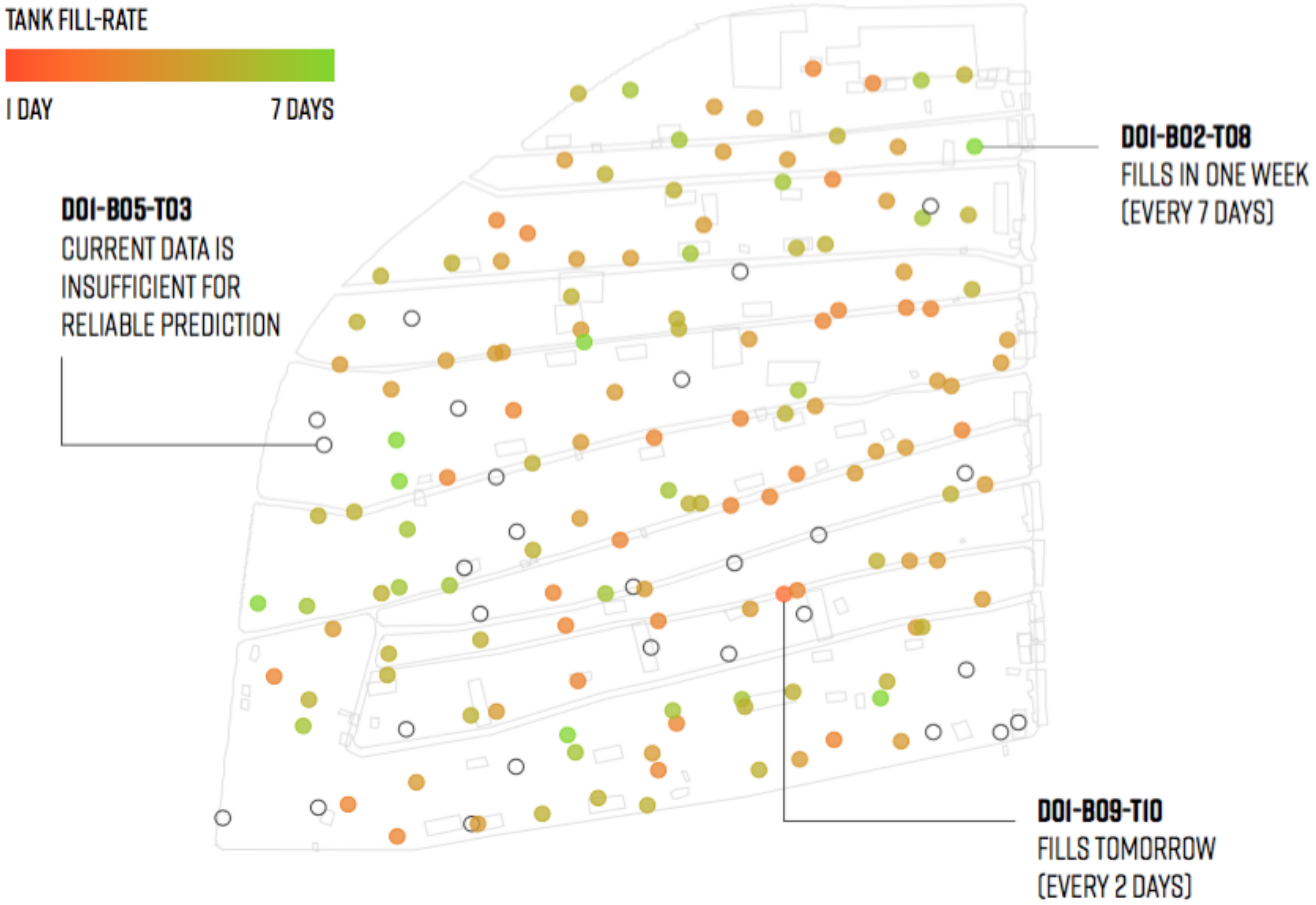
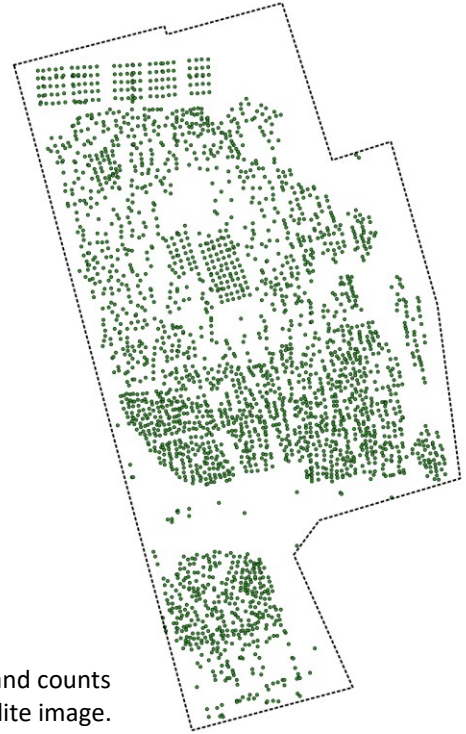
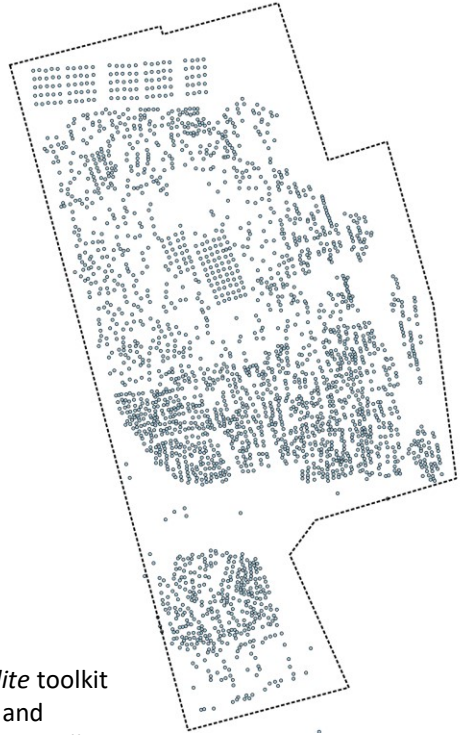
Deep learning for optimization of Za'atari Camp sanitation services



Deep Learning for automated structure identification in satellite imagery: Muna Refugee Camp, Nigeria



Traditional method:
Analyst manually labels and counts structures visible in satellite image.



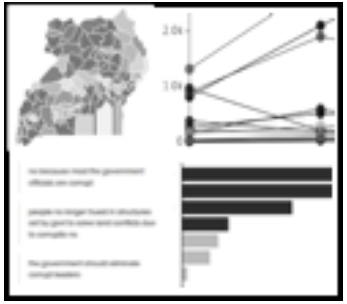
Algorithmic method:
Global Pulse's *pulseSatellite* toolkit automatically recognizes and counts structures visible in satellite imagery.

Understanding Perceptions to a Refugee Influx Through Analysis of Radio Content

Uganda currently ranks among the top three refugee hosting nations in the world. A mass exodus of refugees from South Sudan in 2016 doubled the population to over one million, making Uganda the leading refugee hosting country in Africa. Uganda has one of the most favorable refugee protection environments in the world, providing refugees with freedom of movement, the right to work, and access to social services through a generous asylum policy.

Pulse Lab Kampala was tasked by the UN in Uganda with unearthing the public perceptions with regard to the interactions between refugee and hosting communities. The Lab and partners use the Radio Content Analysis Tool to take the pulse and analyse public discussions aired by local radio stations to support the Government to sustain its refugee open-door policy.

Deep learning system performing real-time data collection, speech recognition and content analysis of rural talk radio programs in indigenous Ugandan languages



Monitoring systems.

What if you could listen to opinions and rumors expressed on radio to monitor evolving contexts?

Hover or touch the orange regions to listen to radio message.

Disease outbreak: A listener participated in a call-in show aired by 106.5FM Kampala (September 2017) talk about his suspicion about a possible anthrax outbreak ("…I was actually tempted to think that the source of the anthrax outbreak in West Nile was due to the animals that entered our country (to refugee settlements) without being screened…".

Big Data can help improve the understanding of evolving context in humanitarian with insights on perceptions, misconceptions or hate speech, that might be of relevance for informing programmes and operations.

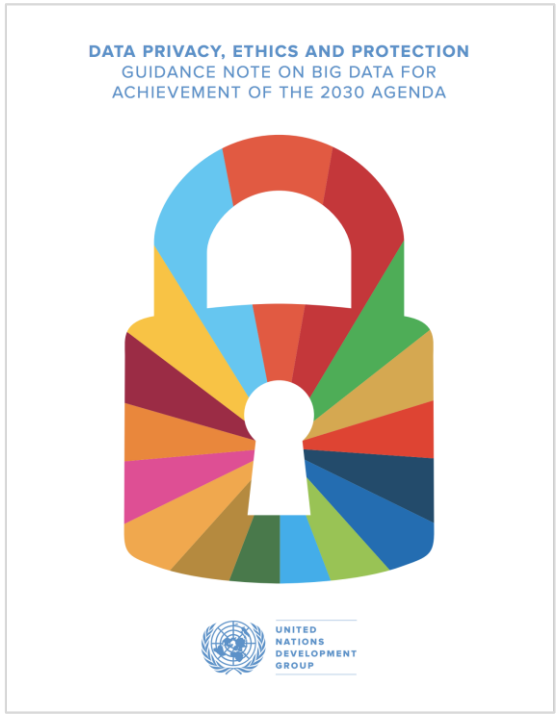
HARMS/NEGATIVE EFFECTS

- ❑ Reputational
- ❑ Economic/financial
- ❑ Surveillance
- ❑ Discrimination
- ❑ Persecution
- ❑ Change of law, norms, ethics
- ❑ Human Rights violations
- ❑ Public Distrust
- ❑ Disadvantage in competition
- ❑ Instability
- ❑ Revelation of state information

INFLUENCING FACTORS

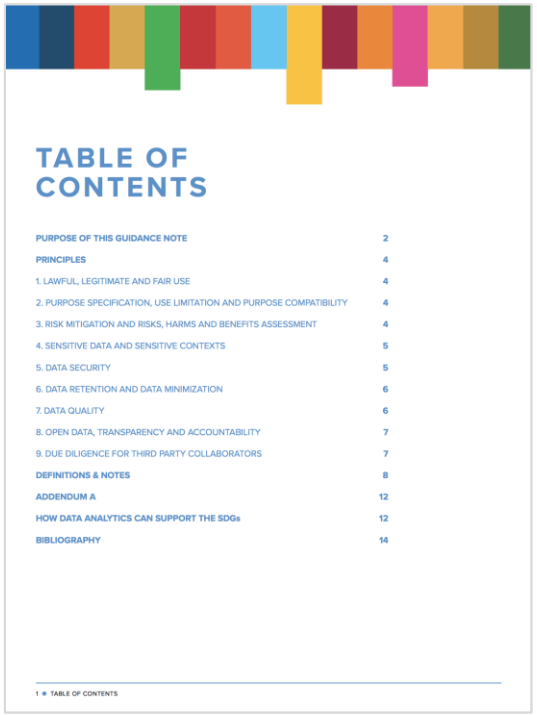
- ❑ Geo-cultural aspects
- ❑ Social, Economic, or Political Instability
- ❑ Legal/Regulatory
- ❑ Use of sensitive data (even if anonymized)
- ❑ Who is conducting the project?
- ❑ What is the purpose?
- ❑ Who will have access to/utilize the results of the project?
- ❑ Who will benefit?

UN Development Group Guidance Note on Big Data for the Achievement of the 2030 Agenda



DATA PRIVACY, ETHICS AND PROTECTION
GUIDANCE NOTE ON BIG DATA FOR ACHIEVEMENT OF THE 2030 AGENDA

UNITED NATIONS DEVELOPMENT GROUP



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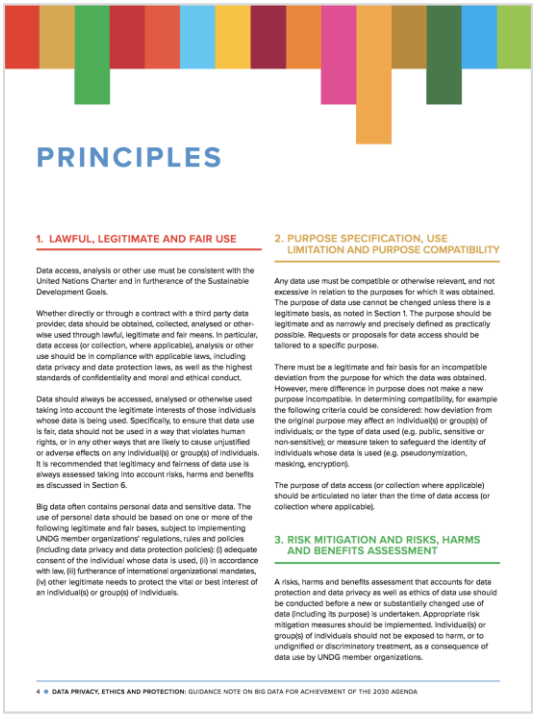

PRINCIPLES

1. LAWFUL, LEGITIMATE AND FAIR USE

Data access, analysis or other use must be consistent with the United Nations Charter and in furtherance of the Sustainable Development Goals.

Whether directly or through a contract with a third party data provider, data should be obtained, collected, analysed or otherwise used through lawful, legitimate and fair means. In particular, data access (or collection, where applicable), analysis or other use should be in compliance with applicable laws, including data privacy and data protection laws, as well as the highest standards of confidentiality and moral and ethical conduct.

Data should always be accessed, analysed or otherwise used taking into account the legitimate interests of those individuals whose data is being used. Specifically, to ensure that data use is fair, data should not be used in a way that violates human rights, or in any other ways that are likely to cause unjustified or adverse effects on any individual(s) or group(s) of individuals. It is recommended that legitimacy and fairness of data use is always assessed taking into account risks, harms and benefits as discussed in Section 6.

Big data often contains personal data and sensitive data. The use of personal data should be based on one or more of the following legitimate and fair bases, subject to implementing UNDG member organizations' regulations, rules and policies (including data privacy and data protection policies): (i) adequate consent of the individual whose data is used, (ii) in accordance with law, (iii) furtherance of international organizational mandates, (iv) other legitimate needs to protect the vital or best interest of an individual(s) or group(s) of individuals.

2. PURPOSE SPECIFICATION, USE LIMITATION AND PURPOSE COMPATIBILITY

Any data use must be compatible or otherwise relevant, and not excessive in relation to the purposes for which it was obtained. The purpose of data use cannot be changed unless there is a legitimate basis, as noted in Section 1. The purpose should be legitimate and as narrowly and precisely defined as practically possible. Requests or proposals for data access should be tailored to a specific purpose.

There must be a legitimate and fair basis for an incompatible deviation from the purpose for which the data was obtained. However, mere difference in purpose does not make a new purpose incompatible. In determining compatibility, for example the following criteria could be considered: how deviation from the original purpose may affect an individual(s) or group(s) of individuals; or the type of data used (e.g. public, sensitive or non-sensitive); or measure taken to safeguard the identity of individuals whose data is used (e.g. pseudonymization, masking, encryption).

The purpose of data access (or collection where applicable) should be articulated no later than the time of data access (or collection where applicable).

3. RISK MITIGATION AND RISKS, HARMS AND BENEFITS ASSESSMENT

A risks, harms and benefits assessment that accounts for data protection and data privacy as well as ethics of data use should be conducted before a new or substantially changed use of data (including its purpose) is undertaken. Appropriate risk mitigation measures should be implemented. Individual(s) or group(s) of individuals should not be exposed to harm, or to undignified or discriminatory treatment, as a consequence of data use by UNDG member organizations.

https://undg.org/document/data-privacy-ethics-and-protection-guidance-note-on-big-data-for-achievement-of-the-2030-agenda/

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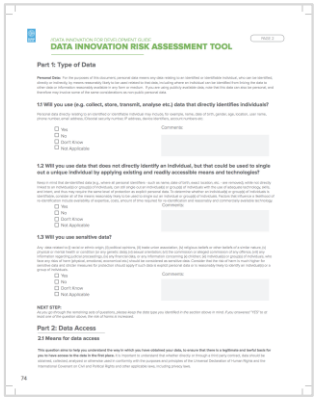
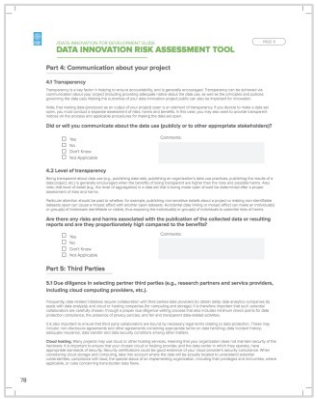
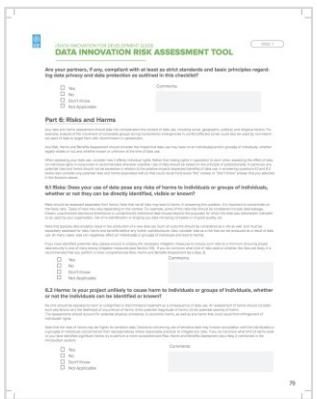
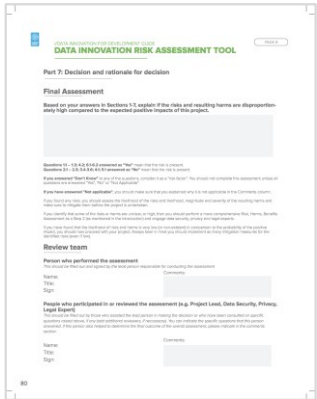
Data Innovation Risks, Harms, and Benefits Assessment









https://www.unglobalpulse.org/privacy/tools

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