BIG DATA 4 PEACEBUILDING IN SOMALIA

United Nations Global Pulse, the United Nations Peacebuilding and Support Office (PBSO) and partners piloted a digital initiative that gauges public perceptions to support the ongoing peace and state building processes in Somalia.

The experimental prototypes rely on **big data analytics** and artificial intelligence to explore the value of analysing public discussions on social media (Facebook) and radio to support the work of the United Nations and the Federal Government in Somalia.

RADIO AND INTERNET IN SOMALIA

Somalia is a country with a vibrant media output. Radio receivers are small and cheap, making them popular among nomadic populations. Listening to the radio is something people do to pass time whether at home, in a store or coffee shop. It is also a medium used by four out of five Somalis to share news and opinions.

The radio is something that brings people together.

The number of radio stations in the country outnumber all other types of media. Most are privately owned and broadcast out of Mogadishu, covering a wide range of issues. People use radio to share information about opinions or reports on things affecting their communities. In a society built on oral traditions these programs play a critical role in the creation and expansion of social networks.
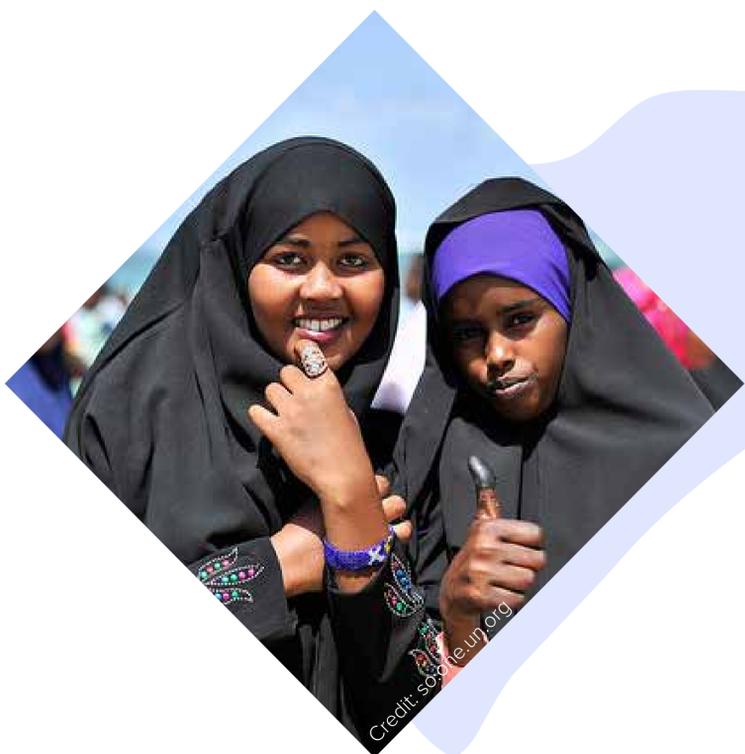
That's why radio, in Somalia, is used media by millions of people.

With 660,000 active Internet users across the country social media is swiftly becoming the second most popular media platform. Internet access in Somalia, like television, is concentrated in urban areas, but while the internet penetration rate is 1.8% it is bound to change, and rapidly.

Therefore, being able to mine social media and public radio content in Somali language results in the availability of large quantities of data (in real-time) for analysis. Not only are these methods faster and simpler than old-school ones, but they lower the security risk to development and humanitarian personnel in countries that experience instability, like Somalia.

Now change makers can get the information they need while staying out of harm's way.

Credit: sos.life.un.org

RADIO CONTENT ANALYSIS TOOLKIT - Building on work carried out in Uganda, the innovative radio prototype mines voices from public radio discussions through automated speech recognition technology developed specifically for African languages. In the case of Somalia, it has been trained to analyse radio content in Somali language. The tool automatically identifies words with 40% accuracy (May 2018).

The **KEYWORD SPOTTER** is the piece that holds the puzzle together, identifying and extracting relevant radio content of public discussions in a handful of African languages.

SOCIAL MEDIA MINING TOOLKIT - Big data is generated every minute over social networks by way of comments, shares, likes, mentions, hashtags, URL clicks, impressions, and new friendships.

The technology prototype for **FACEBOOK MINING** tracks topics of relevance by targeting comments, using keywords that contain predefined Somali words. Once comments have been filtered they can be analysed by other attributes like language, type of post, or gender.

First results from UN Global Pulse technology prototypes generated strong feedback from users and partners. The toolkits have demonstrated how big data analysis provides valuable information in support of peace and state building processes in Somalia.

Along the way, new donors joined the revolution, supporting our efforts in developing the next set of prototypes for the radio. The United Nations Development Operations Coordination Office (UN DOCO) backed tests that determine the functionality of the new radio technology prototype, exploring its use for the refugee response in Uganda.

Credit: djiboutiones.com

The Government of Belgium also stands behind the Lab as we upgrade the radio technology prototype to integrate the keyword spotter algorithm in two new Ugandan languages. We intend to gauge perceptions towards public service delivery in the education and health sectors.

More telling is how international and United Nations organizations (such as the Food and Agriculture Organization (FAO) in Somalia) have requested to use both prototypes to monitor project implementation outside of Mogadishu. UN Global Pulse is collaborating with PBSO on how to upgrade and contextualize both prototypes so they can be used by a multitude of partners in Somalia, and other countries across East Africa.