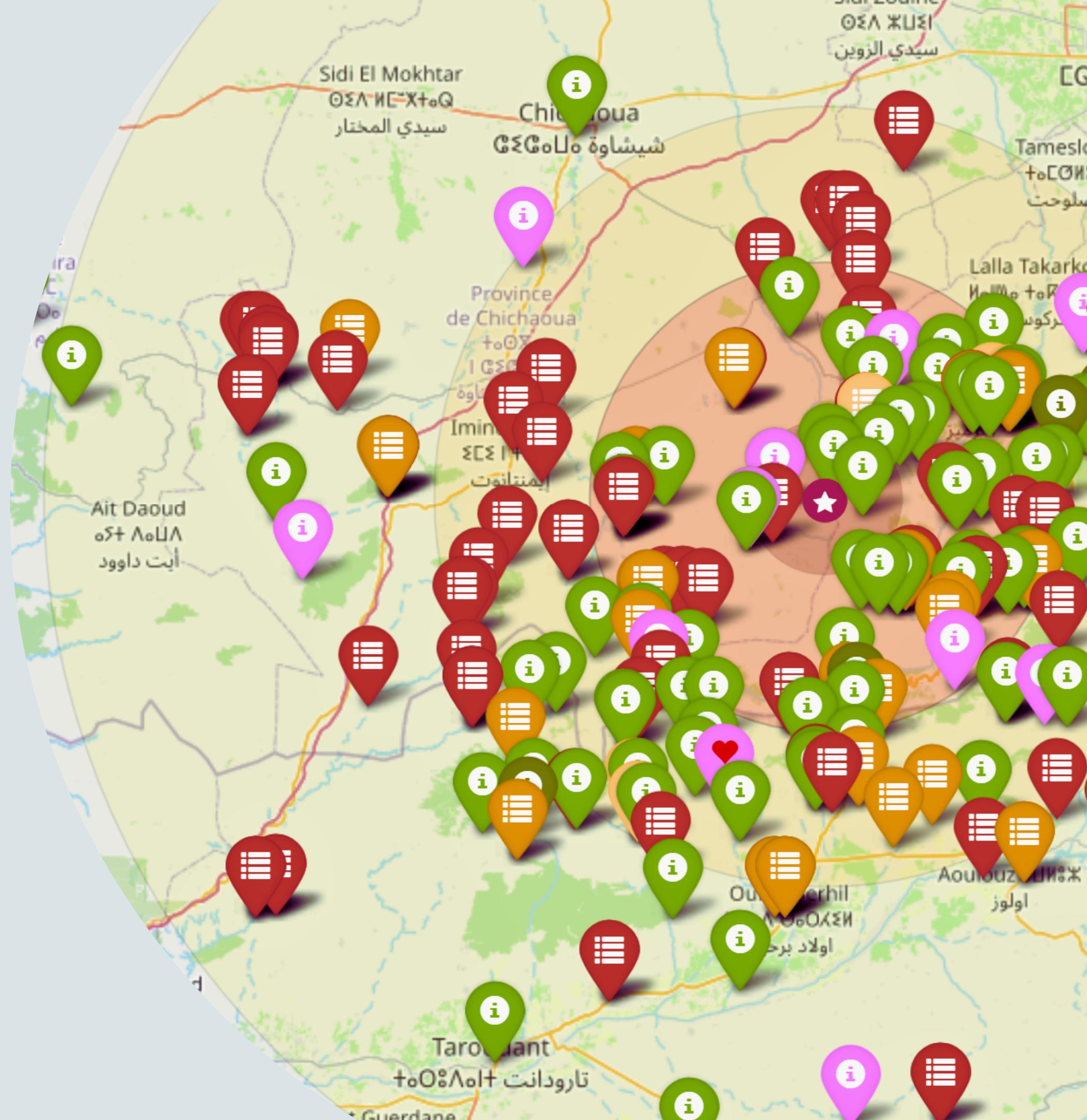




NT3AWNOU

LE DIGITAL POUR LE BÉNÉVOLAT

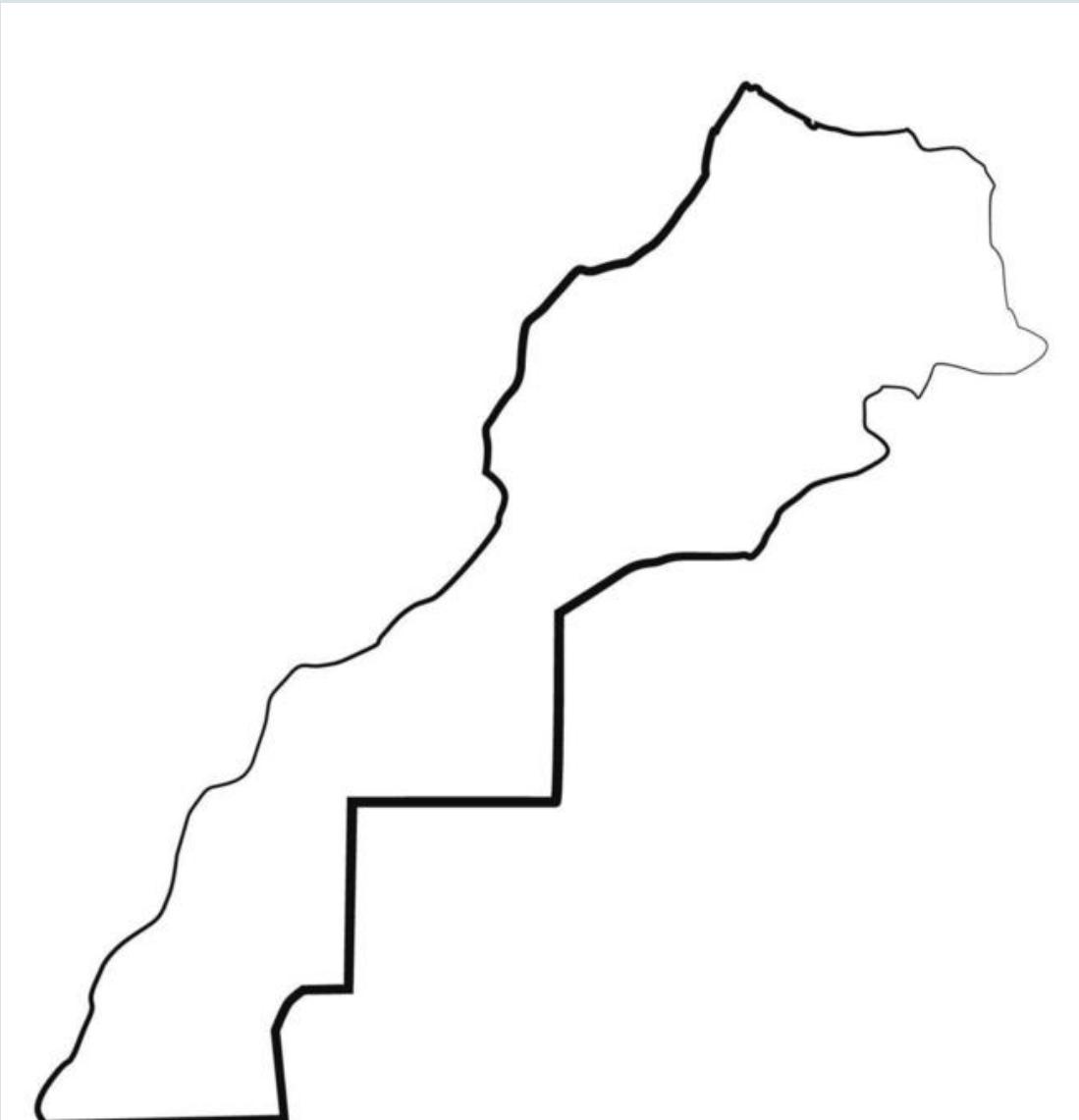


QUI SOMMES NOUS?

66

75+ INGÉNIEURS, ÉTUDIANTS, DOCTORANTS, ENTREPRENEURS
MAROCAINS BÉNÉVOLES AU MAROC ET À L'ÉTRANGER

99



ORGANISATION



CONTEXTE

66

SEISME DU 8 SEPTEMBRE 2023

99



DES CENTAINES
D'INTERVENTIONS
BÉNÉVOLES DÉCENTRALISÉES



CANAUX DE COMMUNICATION:
RÉSEAUX SOCIAUX +
TÉLÉPHONE





PROBLÈMES



1. Flux d'informations incontrôlable sur les réseaux
2. Distribution inefficace de l'aide
3. Blocage et obstacles sur les voies d'accès
4. Redondance dans la collecte des dons

PROPOSITION DE VALEUR

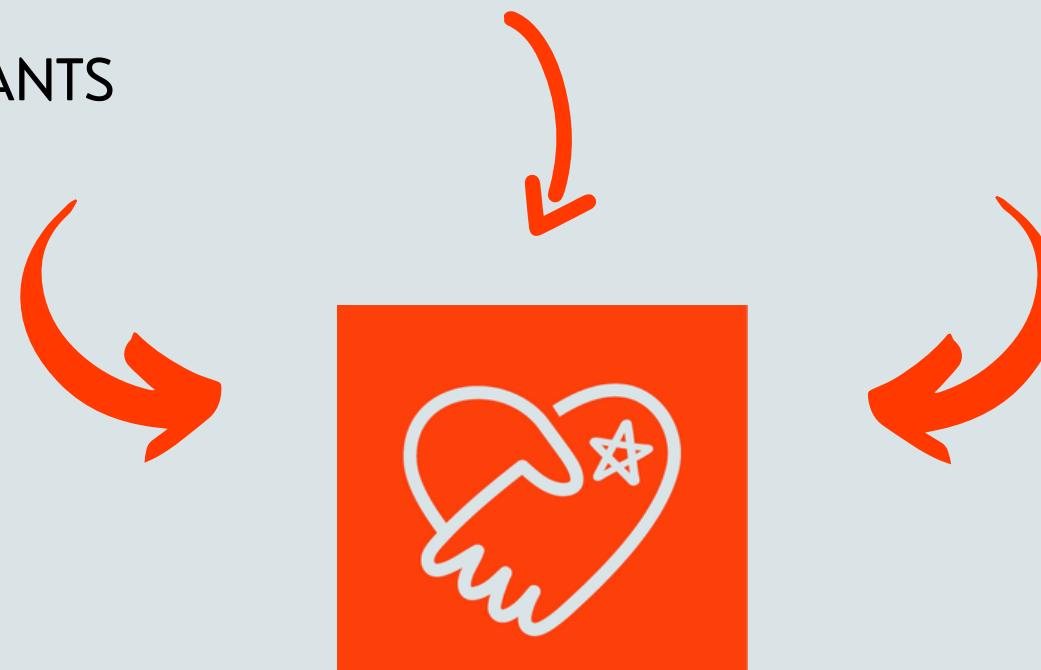
NT3AWNou



INTERVENANTS



Personnes
en difficulté



PLATEFORME



AUTORITÉS

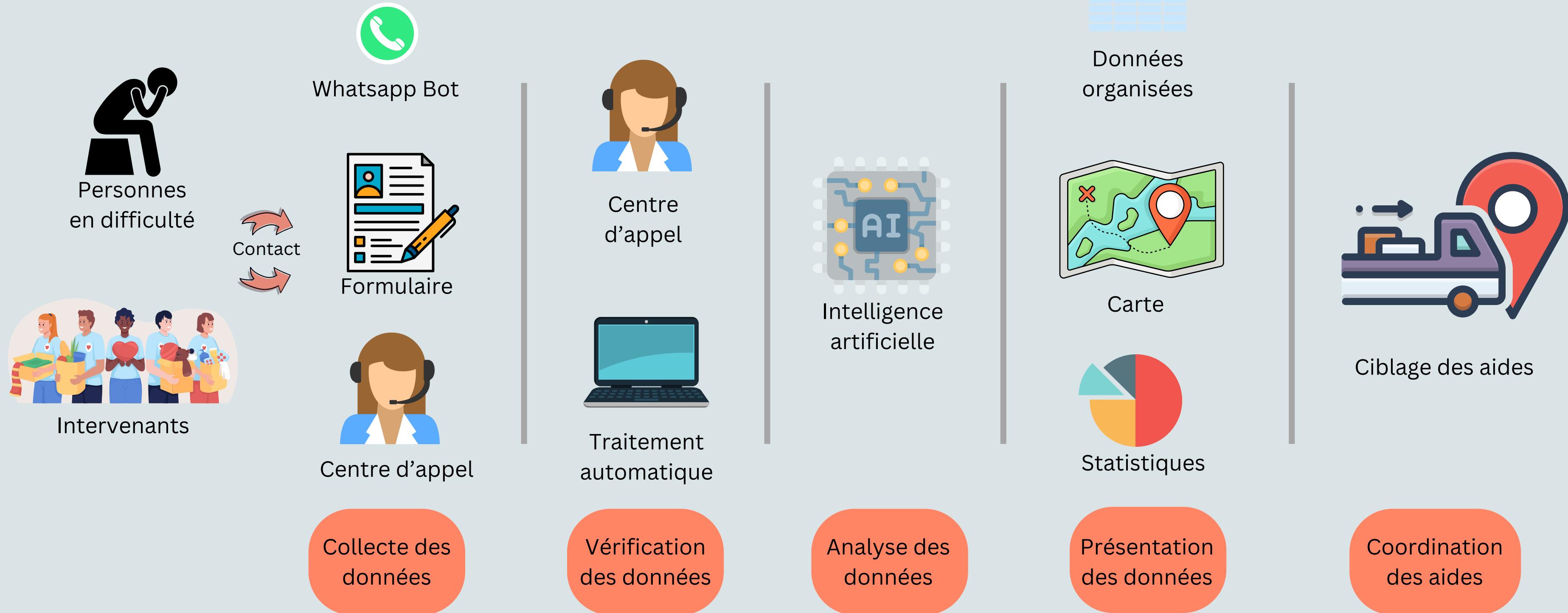
The screenshot shows the Nt3awnou platform's user interface. At the top right is the logo "نتعاونو Nt3awnou" with social media links for Instagram, Facebook, LinkedIn, and a green star. Below the logo is the Arabic slogan "ومن أحياها فكأنما أحيا الناس جميعاً". The interface includes a language selection dropdown set to "العربية" (Arabic), a checkbox for "عرض الطلبات غير المتحققة" (Show unfulfilled requests) which is unchecked, and a checked checkbox for "عرض التدخلات" (Show interventions). A search bar at the top right contains the text "البحث" (Search). The main area features a map of Morocco with many colored location pins (red, green, orange, pink) scattered across it, representing service delivery points. A legend on the right side of the map provides a key for these colors: red for "حالة طوارى عاليه" (High emergency), orange for "حالة طوارى متوسطة" (Medium emergency), light orange for "حالة طوارى منخفضة" (Low emergency), green for "تم" (Completed), dark green for "جزئي" (Partial), and pink for "مخطط" (Planned). The map also displays place names in both Arabic and French, such as "Marakech", "Tafraout", and "Agadir". A copyright notice at the bottom right states "Leaflet | Data by © OpenStreetMap, under ODbL, Maroc Map".

“SOLUTION



- Espace permettant aux personnes dans le besoin de **demande de l'aide**
- Espace dédié aux associations pour **collaborer**
- **Vérification** et validation des données collectées
- Solution **open-source** collaborative, accessible à tout le monde
- Carte **interactive** permettant de visualiser l'ensemble des opérations

FONCTIONNEMENT GLOBAL



COLLECTE DES DONNÉES

2043

REQUÊTES

Nombre de requêtes collectées



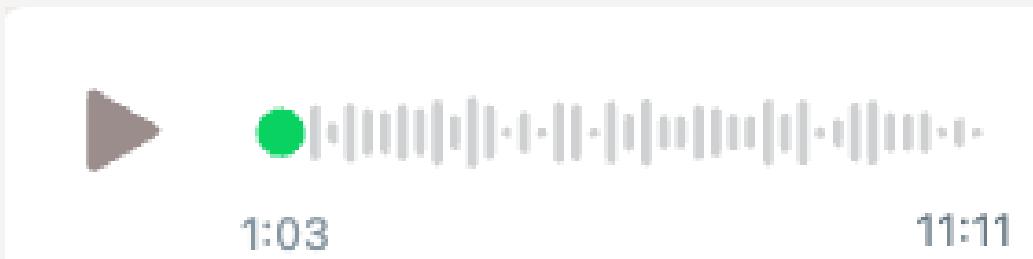
242

INTERVENTIONS

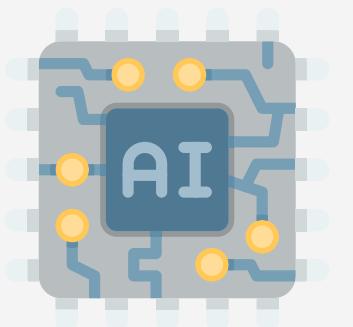
Nombre d'interventions collectées



UNE COLLECTE INTELLIGENTE



RECONNAISSANCE
VOCALE
AUTOMATIQUE



السلام عليكم عافاكم أنا من واحد الدوار لي من جماعة
تالكزونت دوار إكلي شفنا هاد المبادرة فواحد
سطوري فالواتساب و قلنا نتواصلو بيكون على حسب
المساعدة اي حاجة الا كان ممکن الله يجازيكم بخير



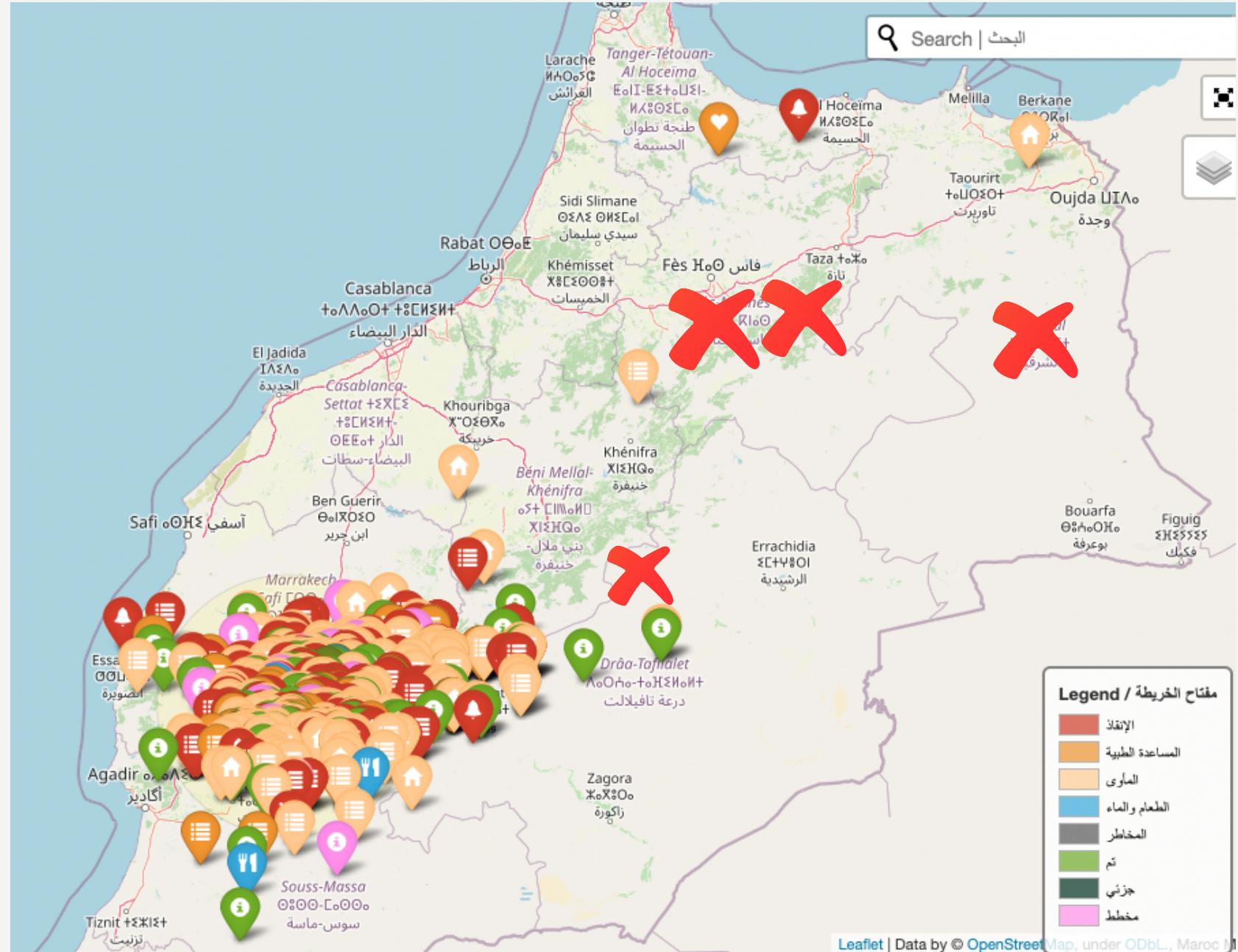
Catégorie d'aide

اي حاجة الا كان ممکن

Lieu

جماعة تالكزونت دوار إكلي

VÉRIFICATION DES DONNÉES



Vérification des coordonnées
Equipe: Analyse des données



**Validation des données &
Evaluation de l'urgence**
Equipe: Centre d'appels

ANALYSE DES DONNÉES



Affectation au douar le
plus proche

Requête

الخيام و الافرشة و الاغطية

Classification des
requêtes en catégories

Catégories

ALIMENTATION ET EAU

ASSISTANCE MÉDICALE

VÊTEMENTS

SECOURS

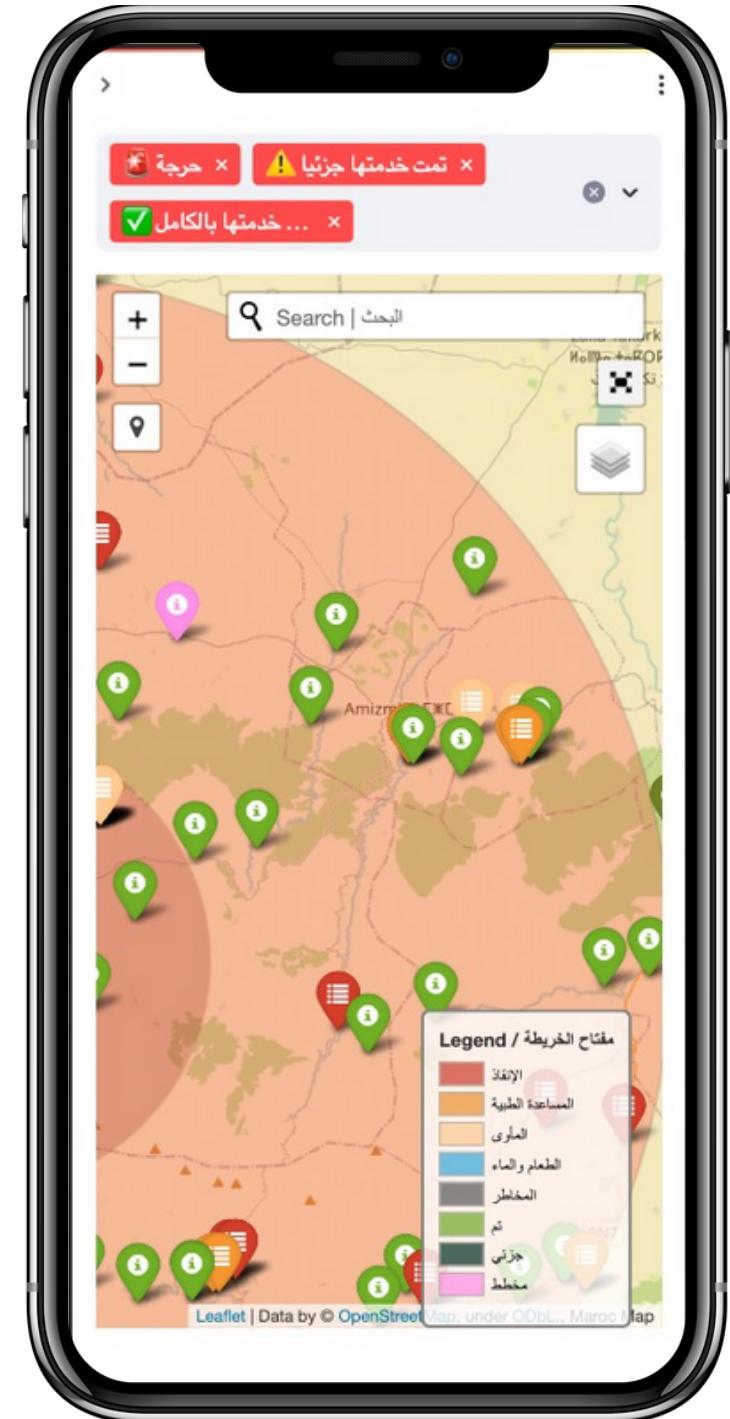
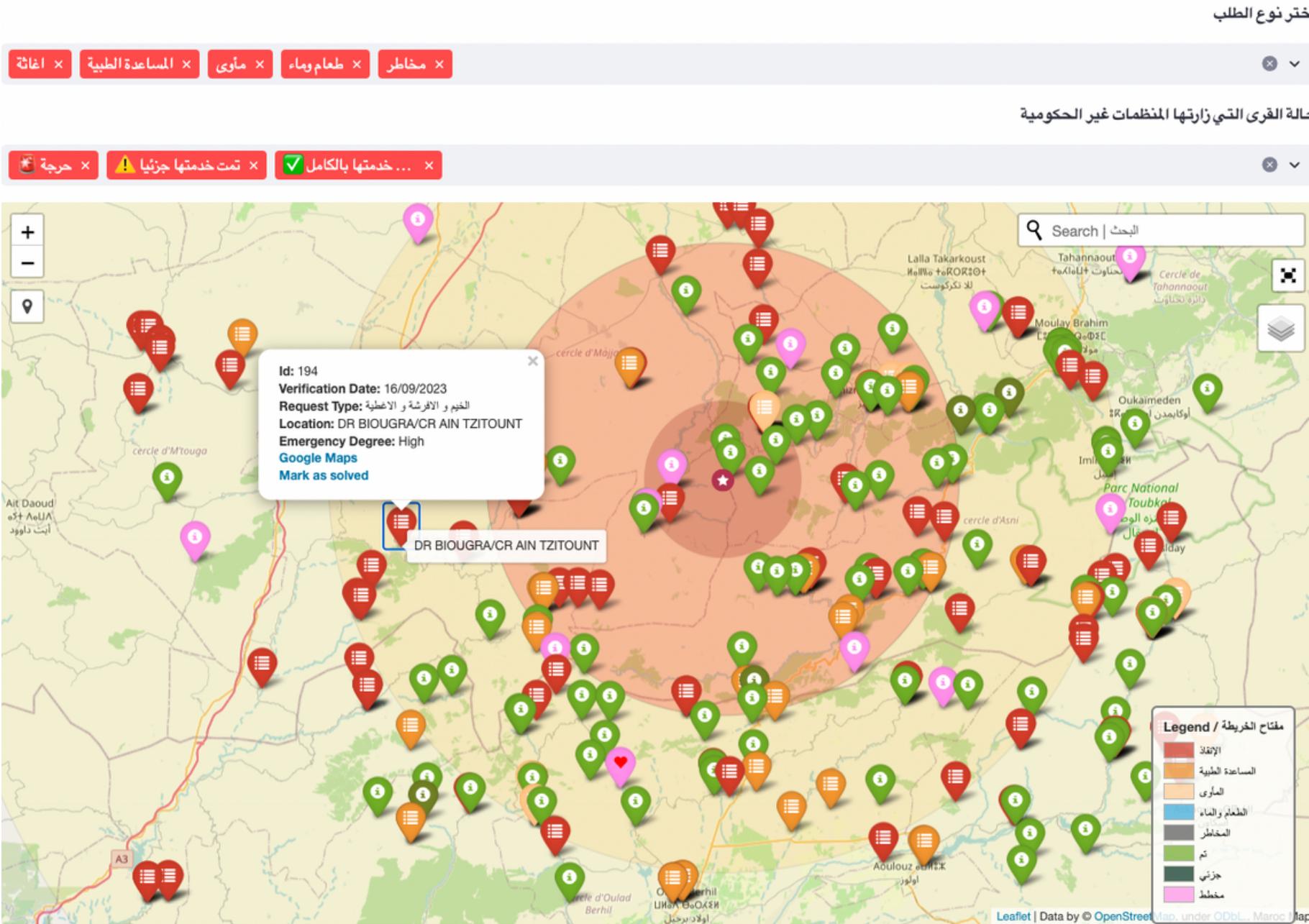
REFUGE

COUVERTURES

MEDICAMENTS

AUTRE

VISUALISATION DES DONNÉES

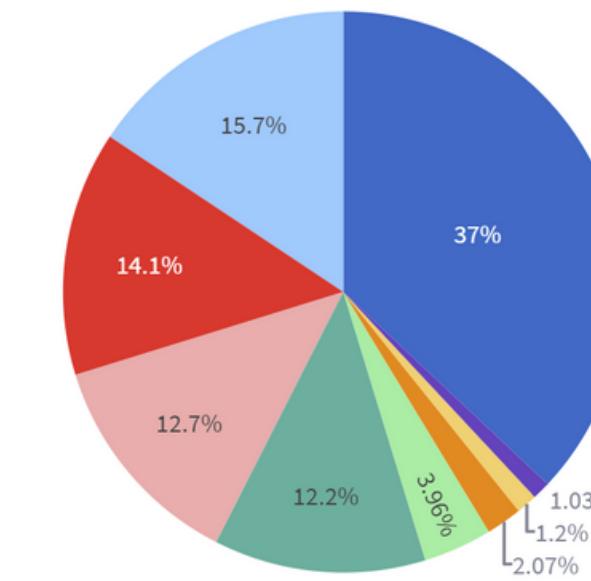
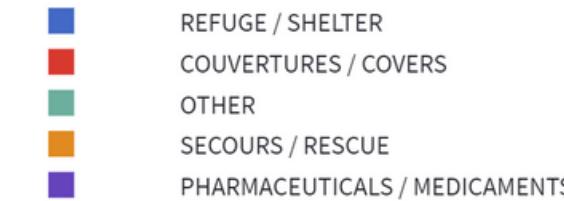
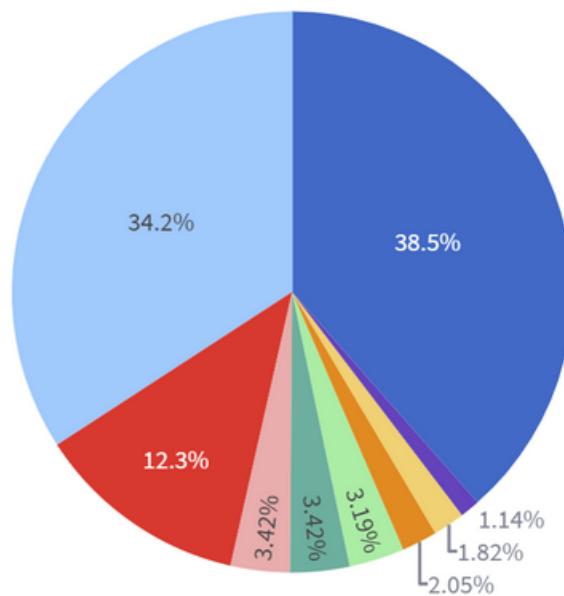


Carte qui résume les besoins / interventions

INDICATEURS

الرسوم البيانية

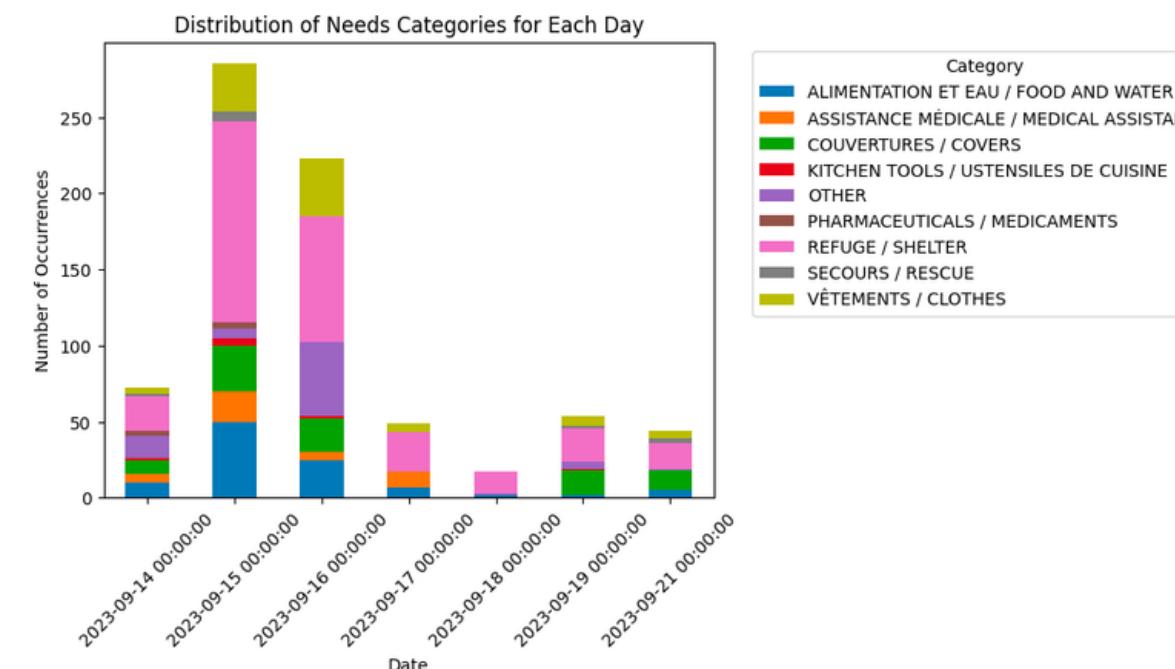
أصناف المساعدات



أصناف الاحتياجات



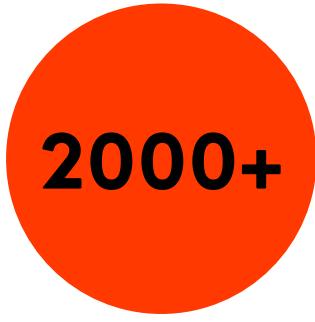
Besoins vs Interventions



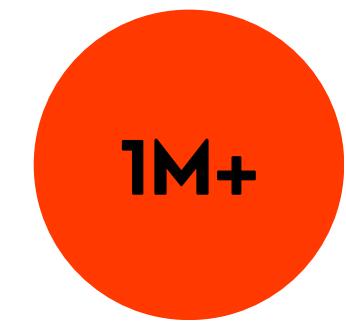
IMPACT



INTERVENTIONS RÉCOLTÉES



DEMANDES D'AIDES TRAITÉS



NOMBRES DE VUES
PLATEFORME + INSTAGRAM

À L'ÉCHELLE INTERNATIONALE

Nt3awnou représenté à NeurIPS 2023 - New Orleans

NAML 2023

No Village Left Behind: A Moroccan Data-driven Platform for Effective Aid Coordination

Introduction

- In the aftermath of the devastating 6.8 magnitude earthquake that struck Morocco's High Atlas Mountains on September 8, 2023, Nt3awnou's platform quickly emerged to optimize relief coordination. This involved efficiently orchestrating resources to aid those affected.
- Consolidating diverse and heterogeneous data sources is complex, particularly in low-resource dialects like the Moroccan one.
- In this work, we employed NLP techniques to convert collected data into a refined and usable dataset. Key challenges included authentic data collection in crises, accurately identifying similar-named rural villages (clusters) and obtaining precise geolocation despite inaccuracies in mapping APIs (e.g. Google Maps and OpenStreetMap).

Pipeline in a Nutshell

- Curating reference 'dowm' data by aligning two datasets with geo-ontology categories, utilizing phonetic distance measures.
- Gathering modications, involving structured information from NGOs and individual requests in Moroccan Dialect via a chatbot.
- Data processing, translating audio messages, cleaning, parsing locations, and mapping them to reference 'dowm' data using matching techniques.
- Categorizing requests (shelter, food, medicine) via a multilingual model.

Figure 1: The overall pipeline of the data-driven platform.

We aggregate incoming requests into pre-defined population needs using the Fuzzy-Matching algorithm [1].

Figure 2: Requests automatic classification.

The collected and processed dataset is presented on an interactive map:

Figure 3: Interactive map of the aid requests and interventions.

Using manually labeled data, we evaluate the performance of the different processing algorithms:

Task	Model	Accuracy	F1 Score	Avg. Loss	Epochs	Results
Modications labeling	Naive Bayes	0.85	0.82	0.001	10	Table 1: Results of the preprocessing tasks.
Food requests classification	Random Forest	0.92	0.90	0.0005	10	Table 2: Results of the food requests classification.

Table 1: Results of the preprocessing tasks.

Table 2: Results of the food requests classification.

We provide summary metrics on the processed data, and the results show a high demand for shelter and food.

Figure 4: Statistics of the needs and supplies.

Conclusion

- The presented Moroccan data-driven platform is designed to facilitate the coordination of aid for areas in need following the earthquake by collecting data, preprocessing it to get a clean dataset, and visualizing results and statistics on our online platform.
- Future work aims to involve social media analytics to gather additional updates on the situation of the affected areas and to develop methods for assessing damages through satellite imagery data.

Acknowledgements

We want to express our sincere gratitude to other contributors in this project: Ahmed Benchaâb, Ali El Fida, Anas El Amraoui, Aissa Khelid, Ayoub Bataa, Aïda Tamez, Faïçal Naïci, Hâdi Khlidi, Hâdi El Ajami, Jossue Bâki, Imane Houari, Inès Suleiman, Khalid Râba, Lââli Ulâas, Mâlik Belâbda, Mohamed Châbeche, Mohammed Saka, Rachid Srour, Walid Bouchech, and others for their invaluable assistance with data collection and cleaning. Thank you for your vital roles in our success!

References

[1] Daoudi, S., Faujjar, R., Oumlil, V., & Meknaci, R. (2023). Joint robust and efficient fuzzy match for online data cleaning. In Proceedings of the 2023 ACM SIGKDD international conference on knowledge discovery and data mining (pp. 13–20).

[2] Gao, Y., Li, Y., Tang, Y., Wang, A., & Liu, M. (2020). word2vec 2.0: A framework for self-supervised learning of speech representations. Advances in neural information processing systems, 33, 12449–12460.

[3] Wang, L., Yang, N., Huang, X., Shi, B., Ying, L., ... & Wu, F. (2022). Multi-modality weakly supervised domain generalization. arXiv preprint arXiv:2212.01111.

COUVERTURE MÉDIATIQUE



ILS NOUS ONT FAIT CONFIANCE

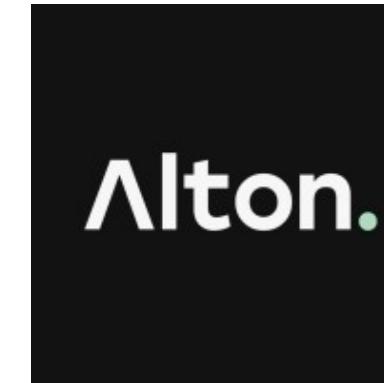
MoroccanEarth

Mosa^{ada}

Tawari²
طواری



Maoutini



DÉFIS



01. AGENTS POUR LE CALL CENTER

Besoin de volontaires pour les appels téléphoniques

02. RÉFÉRENCE DE PLATEFORME POUR L'AIDE ASSOCIATIVE

Référence la plateforme pour être utilisée par toutes les associations désirant apporter leur aide