

BEEDIE BUSINESS ANALYTICS
HACKATHON 2024

EMERGENCY LINK

EMERGENCY RESPONSE APP

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Overview

- Project Introduction
- How might we?
- Expected Impact
- Proposed Solutions
- Summary



Our client, the City of Vancouver, seeks innovative solutions to enhance emergency management during and after natural disasters, focusing on community resilience through advanced technology and data-driven strategies.

Project Introduction

Create a highly reliable, user-friendly, and inclusive disaster response app that ***bridges language barriers, provides real-time updates on ground conditions, and optimizes resource allocation*** using predictive analytics to enhance preparedness and resilience for residents, volunteers, and emergency responders of Vancouver.

How might we?

Solutions

- **LinguistLink** Bridges language barriers with universally understandable disaster signs and visual tutorials.
- **GroundScout** Provides real-time updates on ground conditions using crowdsourced data and predictive analytics.
- **ResourceOptimizer** Optimizes resource allocation using fire risk data and healthcare workforce distribution.

Expected Impact

What we hope to achieve

Enhanced Communication:

- Ensures critical disaster information is accessible to all, breaking down language barriers and providing universally understandable communication tools.

Optimized Volunteer Coordination:

- Provides real-time insights into ground conditions and volunteer activities, improving response times and resource allocation for efficient disaster management.

Efficient Resource Allocation:

- Utilizes predictive analytics and integrates multiple data sets to ensure resources are deployed where they are most needed, enhancing overall disaster response effectiveness and equity.

175,669 households in BC do not speak French or English.

LinguistLink

Universal disaster communication for diverse communities.



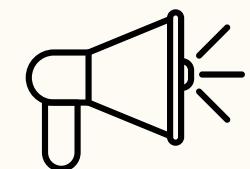
In British Columbia, 175,669 households face **heightened disaster risk due to language barriers**, making effective communication and emergency response coordination challenging.

Problem



Develop an app feature that includes **standardized disaster signs, video tutorials, a quick-start onboarding process, and multiple language accessibility options** to overcome language barriers during emergencies.

Solution

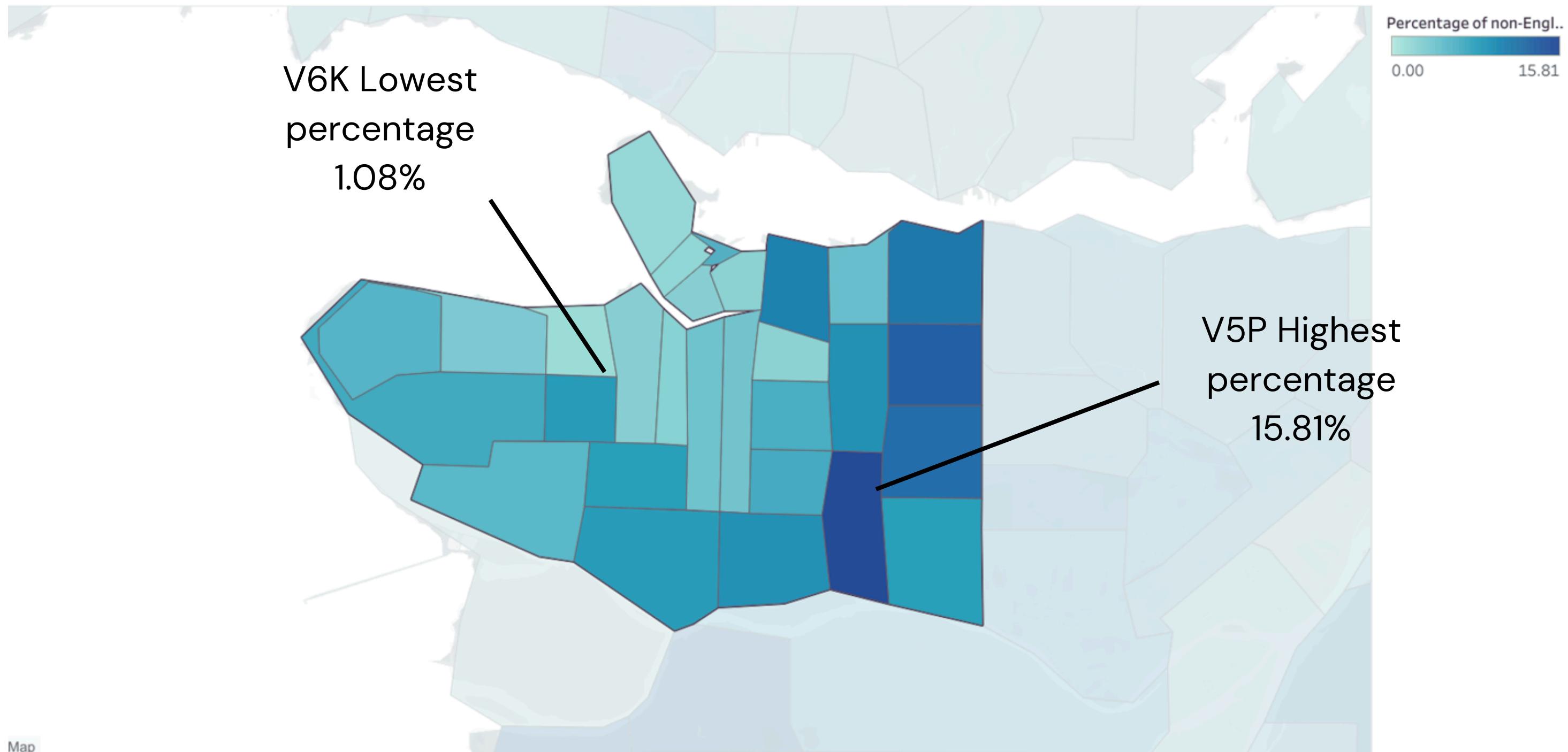


Ensures critical disaster information is **accessible to all**, enhancing community resilience and safety during emergencies by providing **universally understandable communication tools** and inclusive support for diverse linguistic needs.

Impact

Non- English And Non-French Speaker

Highlighting language barriers in disaster-prone areas.



[Link to the dashboard](#)

GroundScout

Real-time insights for optimized disaster response.



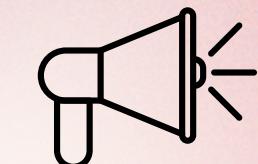
Lack of real-time data on volunteer activities, resource needs, and ground conditions, especially in flood-prone and low walkability areas, **leads to delays and inefficiencies in disaster response.**

Problem



Implement a feature for **real-time data collection, crowdsourcing** ground conditions, and integrating liquefaction and flood risk data to **optimize volunteer coordination and resource allocation.**

Solution

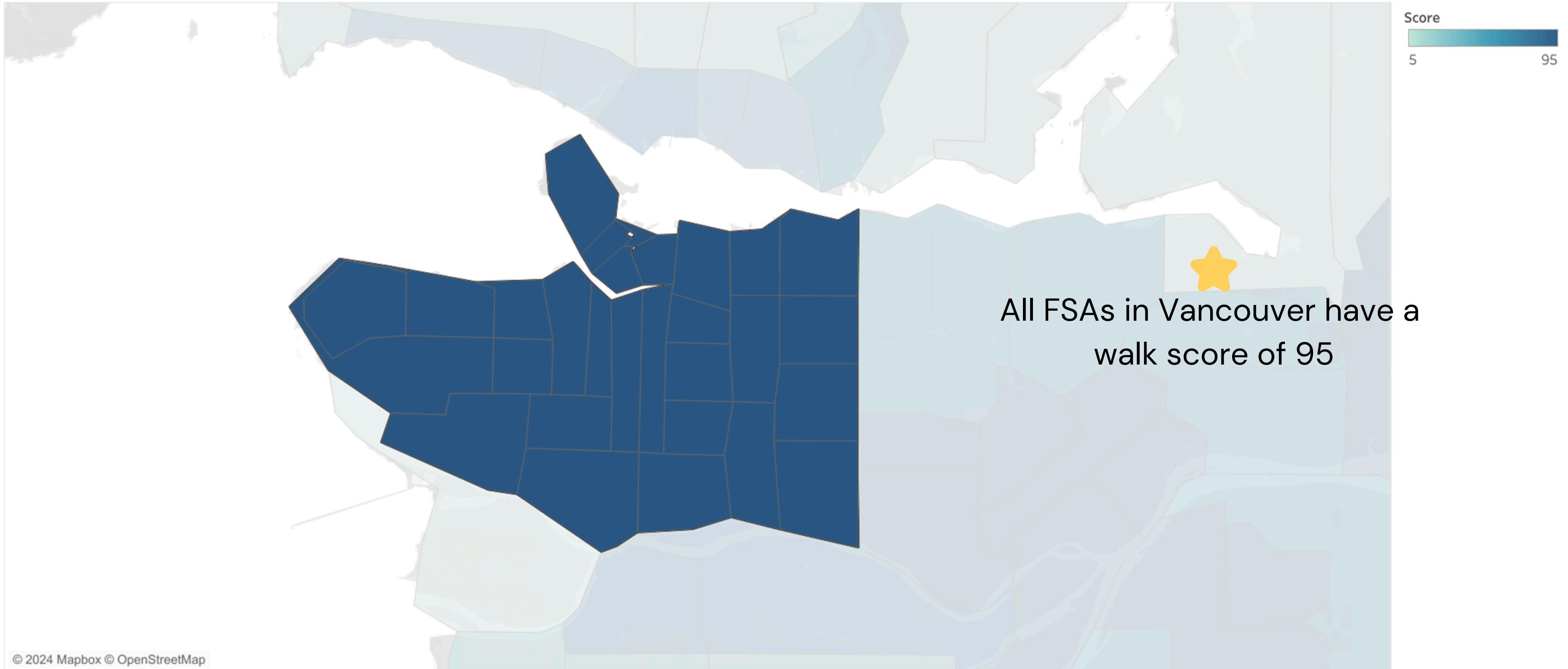


Transforms disaster response by **reducing response times, enabling precise volunteer deployment, optimizing resource use,** and providing real-time, actionable insights into ground conditions, ultimately enhancing community resilience and safety.

Impact

Walkability Scores in Vancouver

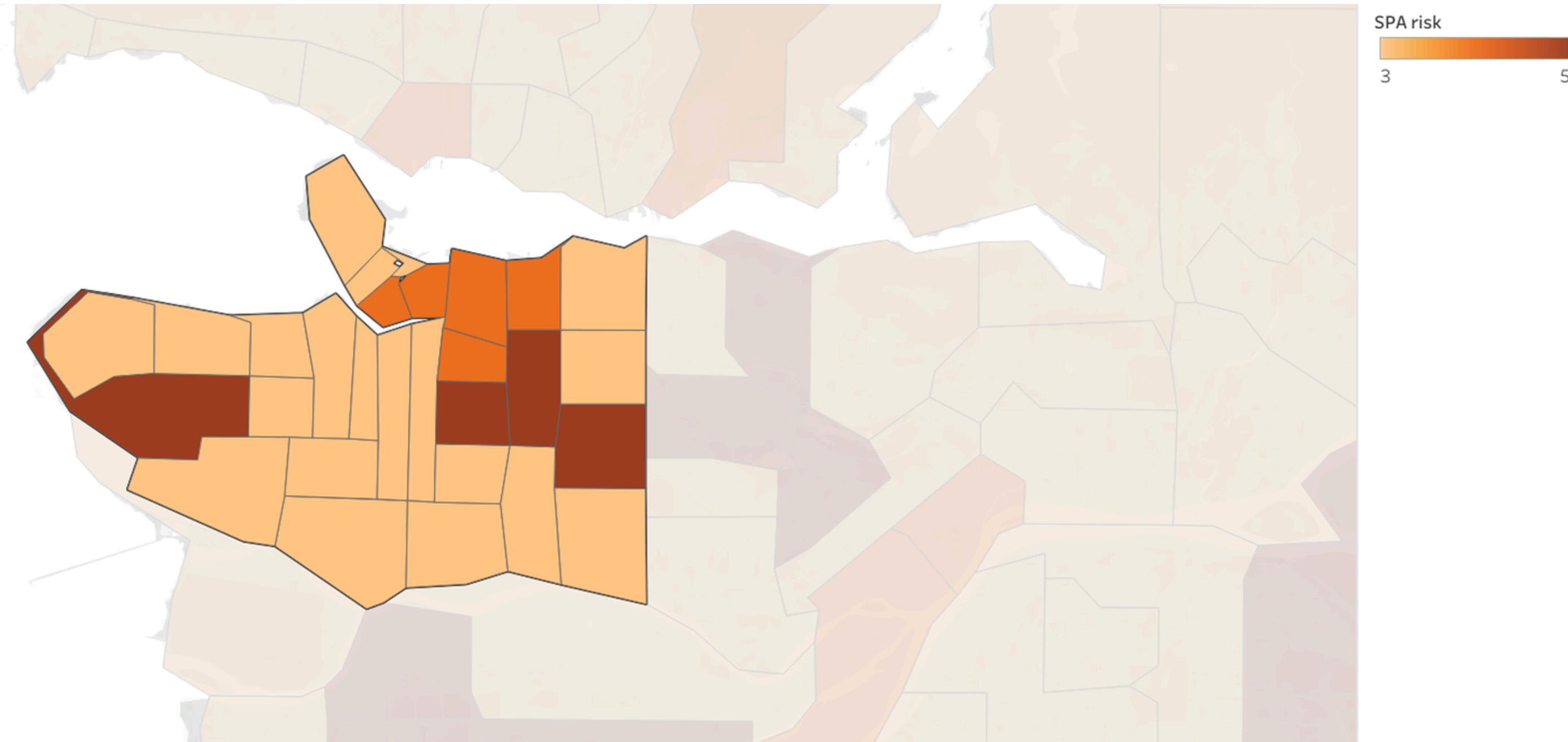
Highlighting walkability and accessibility in FSAs across Vancouver, with a consistent walk score



[Link to the Dashboard](#)

Liquefaction Risk in Vancouver

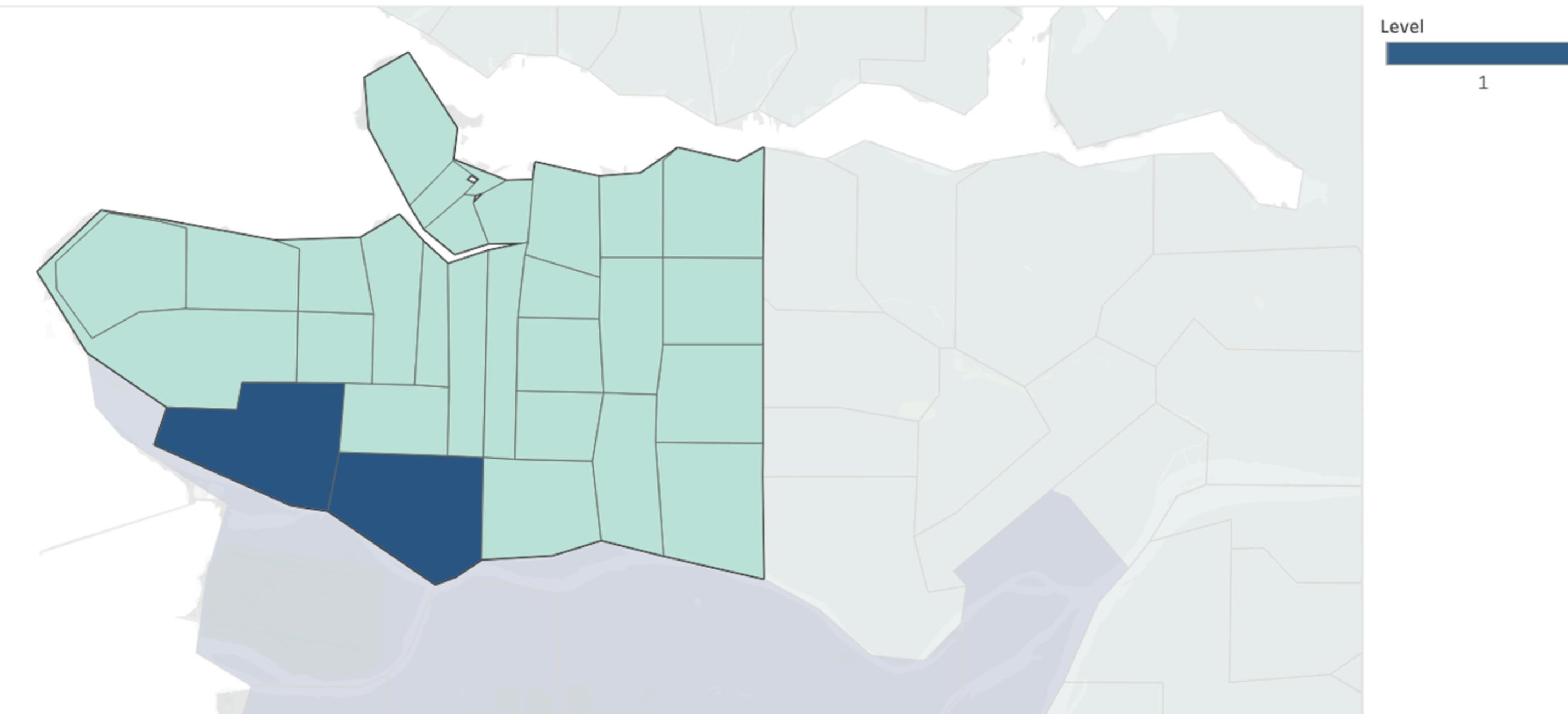
Assessing and mapping high-risk areas to improve volunteer coordination and disaster response strategies.



[Link to the Dashboard](#)

Flood Risk Levels in Vancouver

Identifying areas prone to flooding to enhance disaster preparedness and resource allocation.



[Link to the Dashboard](#)

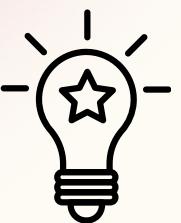
ResourceOptimizer

Smart resource allocation for efficient disaster response.



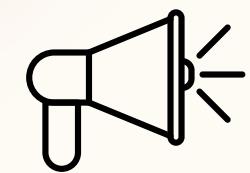
Traditional population-based resource allocation **overlooks critical factors like fire risk and healthcare availability**, leading to resource shortages in high-risk areas and inefficient use of volunteers during disasters.

Problem



Implement an advanced resource allocation feature that **uses fire risk data, healthcare professional availability, alongwith real-time volunteer information** to create a comprehensive and dynamic resource distribution plan.

Solution

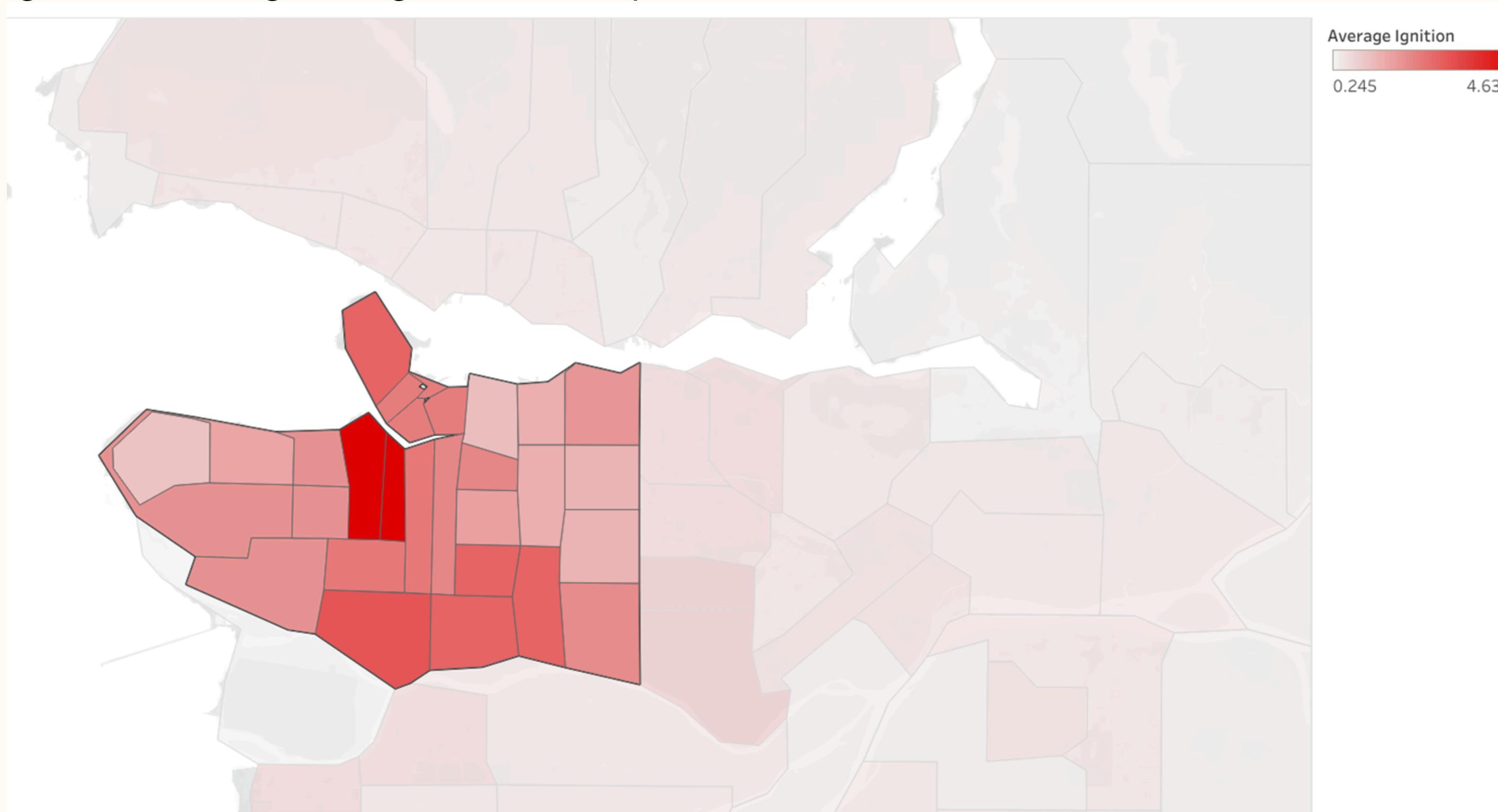


Ensures resources are deployed **precisely where they are most needed**, enhancing disaster response efficiency, reducing potential damage, improving care delivery, and ensuring a more effective and equitable allocation of resources and volunteers.

Impact

Ignition Risk Levels in Vancouver

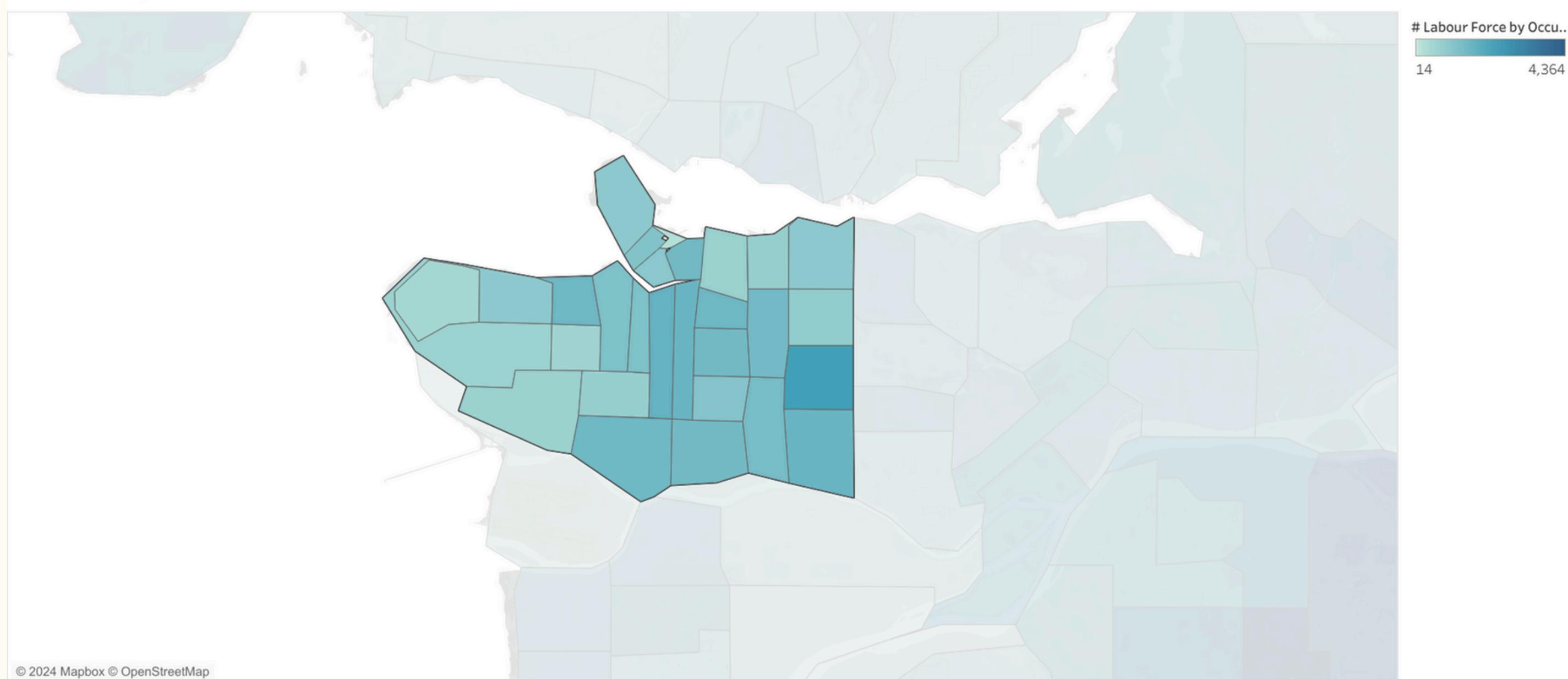
Mapping areas with high fire ignition risk to prioritize resource allocation



[Link to the Dashboard](#)

Distribution of Health Sector Workers in Vancouver

Visualizing the concentration of healthcare professionals to optimize volunteer deployment and resource allocation



[Link to the dashboard](#)

By implementing these features, the app will significantly help in communication, volunteer coordination, and resource allocation during disasters. This will make disaster response faster, more efficient, and more inclusive, ultimately enhancing overall community resilience and safety.

Summary

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