Vision Document

for

*HotZone*

Version 1.0 *hopefully* approved

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Revision History

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Date** | **Reason For Changes** | **Version** |
| HotZone Vision 1 | 9 Oct 2020 | Initial Draft | 1.0 |
|  |  |  |  |

# Business Requirements

## Background

To cope with Hong Kong’s ongoing SARS-CoV-2 pandemic, the CHP must examine the contact histories among cases to trace transmission chains and identify case clusters. However, the preexisting process to achieve that is time-consuming and runs the risk of missing potential clusters. Besides, the geographic distribution is an invaluable hint to discovering hidden clusters and linkages between cases and any means to analyze it would be vital. The current methods of storing and processing data (electronic spreadsheets) have proven to be insufficient, necessitating a new system, HotZone, to meet these targets.

## Business Opportunity

The preexisting way of storing and processing SARS-CoV-2 case data is electronic spreadsheets. While it is easy to operate, it comes with neither means to analyze and cluster cases by geographic location nor methods that help connect cases for tracing. A potentially superior alternative is to store the case data, including geographical locations and types thereof (e.g. workplace), in a database and use dedicated computer software to retrieve the data and cluster them by location, wrapped as a web application. This way, the CHP would have access to both data and analyses in one package and can easily observe locational correlations between cases. This approach is also more feasible than attempting to deploy COTS software (there might have been some developed throughout the pandemic) because such software would not be compatible with the CHP’s way of recording locations (HK1980 grid coordinates), which is unique to Hong Kong’s conditions. The proposed product, *HotZone*, would have precisely zero problems with that because it is tailor-made for the situation in Hong Kong.

## Vision Statement

For the CHP and its staff who needs a more efficient and quality means to record location data that also performs clustering, the product HotZone is a web application that stores such data in an appropriate database and performs clustering based on locations given in HK1980 coordinates, unlike spreadsheets which cannot provide analytical functions and COTS software that is incompatible with Hong Kong’s standards.

## Business Assumptions and Dependencies

None.

# Scope and Limitations

## Major Features

F1: Create, modify, view, and remove data records, such as infection case, patient, infecting virus, and locations visited, in the system

F2: Obtain coordinates and attach it to the relevant location record

F3: Cluster cases by locational proximity and period

F4: Visualize case clusters

## Limitations and Exclusions

EX1: It should not be expected that the system could read preexisting spreadsheets and load records therein into the database.

LI1: The system may not be able to handle situations where the Hong Kong GeoData Store cannot provide coordinates for a location (e.g. not recorded by the store).

LI2: The system may not be able to react appropriately and uphold data consistency if the users failed to act in a disciplined way.

# Stakeholders

**3.1 Stakeholder Profiles**

|  |  |  |
| --- | --- | --- |
| Stakeholder | Major Value | Major Interest |
| CHP Management | Improved research efficiency and public confidence | Public trust in CHP, reduced infections per unit time, relatively constant cost |
| CHP Researchers/Officers | No need to manually cluster/analyze patterns, insight for designing public health advisories | Accuracy of clustering, whether clusters provide insight, reliability of the system, automation of clustering/analysis |
| CHP Staff and Admin Staff | Ease of maintaining infection case database | Ease of use, reliability of the system, maintainability of the system |
| General Public | Timely and helpful notices from CHP | CHP advisories, personal health |

# Delivery and Deployment

## Product Roadmap

|  |  |  |  |
| --- | --- | --- | --- |
| Feature | Release 1 | Release 2 | Release 3 |
| Target | 15 November | 29 November | Within Q4 of 2020 |
| F1: Create, modify, view, and remove data records, such as infection case, patient, infecting virus, and locations visited, in the system | Fully implemented | Fully implemented | Fully implemented |
| F2: Obtain coordinates and attach it to the relevant location record | Fully implemented | Fully implemented | Fully implemented |
| F3: Cluster cases by locational proximity and period | Not implemented | Fully implemented | Fully implemented |
| F4: Visualize case clusters | Not implemented | Not implemented | Fully implemented |
| Any remaining features and matters | Partially implemented | Partially implemented | Fully implemented |

## Release Plan

**Release 1:**

|  |  |
| --- | --- |
| Sprint 1 | Sprint 2 |
| * Create, delete, and view records * Obtain GeoData location data (1 match found) for unknown locations * The web app is enabled | * Modify records * Obtain GeoData location data (multiple matches) for unknown locations |

## Deployment Considerations

None.