1. Information Display Section
   1. UI Design Description
   2. The toolbar for the user to select the type of information to be displayed - useful information or display live status of emergency situations, must be placed on top of the webpage.
   3. Under each subsection, the user must be able to choose what specific live info the user wants to acquire – i.e. weather, shelter, dengue or fires (refer to section 1.2 & 1.3).
   4. A full map of Singapore must be placed under the toolbar, centre-aligned, and containing all necessary information.
   5. The user must be able to zoom-in and zoom-out the map according to the user ‘s preference.
   6. The textual description of the information shall be displayed under the map.
   7. Emergency Situation
      1. Common Display Format
         1. The user must be able to select the type of emergency incident to be displayed from a dropdown list at the top of the webpage.
         2. The categories of natural hazards, epidemic, traffic accidents, and accidents within crowded areas shall each have an independent dropdown list.
         3. Each incident must be marked on the map (of Singapore) according to the incident’s location by a coloured visible dot.
         4. The centre of the epidemic, dangerous zones along with the affected areas, shall be highlighted in red colour.
         5. Textual or Graphical illustration of the emergency situation shall be displayed under the map.
         6. Details of the illustration depends on the type of the accident (see the elaboration below).
         7. The information displayed on the map shall be updated at least every 5 minutes.
         8. Incidents with high emergency priority shall be updated immediately.
      2. Natural Hazards Category
         1. Natural Hazards Category shall contain fire, haze, tsunami, typhoon, earthquake, and earthquake aftershocks.
         2. The hazard’s date, location, intensity, possible harms, shall be displayed in a table under the map.
         3. Related hazard prevention and control information shall be displayed under the table.
      3. Epidemic Category
         1. Epidemic Category shall contain dengue, HIV/AIDS, bird-flu, and Zika.
         2. The category can contain more types of epidemic as time develops.
         3. The location, dangerous level, case number shall be displayed in a table under the map.
         4. Related epidemic prevention and control information shall be displayed under the table.
      4. Traffic Accidents Category
         1. Traffic accidents shall contain single car accident, two car collisions, and multiple vehicle pile-up.
         2. The centre of the accident, dangerous zones along with the affected roads, shall be highlighted in red colour.
      5. Accidents within Crowded Areas
         1. This category shall contain terrorist attacks and mass shooting.
         2. The location, attack intensity, and victims shall be displayed in a table under the map.
   8. Other Useful Information
      1. Common Display Format
         1. The user must be able to select the type of useful information to be displayed from a dropdown list at the top of the webpage.
         2. Each type of information (except for weather) must be marked on the map (of Singapore) according to the information category’s location by a blue coloured visible dot.
      2. Weather
         1. The information of today’s temperature, humidity, PM2.5, UV light intensity and air pollutants shall be displayed on the top-half of the webpage.
         2. The following week’s weather forecast shall be displayed under today’s weather information.
      3. Location of Civil Defence Shelters.
         1. The locations of CDSs shall be displayed on the map.
         2. User must be able to check the status of each shelter to see if it’s fully occupied.

2. Incident Creation Section

2.0. Logging in and out.

2.0.1. The call centre operator must be able to log in to the system.

2.0.2. The call centre operator must provide his operator account user name and password to log in. (The format of the username and password, how long, can or cannot contain special charaters?)

2.0.2. The operator must be able to log out of the system.

2.1. New record creation.

2.1.1. The operator must be asked to create a new record. (? I guess it’s the operator shall be able to create a new record)

2.1.2. The operator must then click on “Create a new record” to create a new record. (Where is this link?)

2.1.3. The operator must click on “Exit” to log out of the system. (Where)

2.2. Input information from the caller to the record form.

2.2.1. The operator must be able to key in the name of the caller.

2.2.2. The name of the caller must be text with more than 5 characters and less than 50 characters.

2.2.3. The operator must be able to key in the mobile number of the caller.

2.2.4. The mobile number of the caller must be 8 digits.

2.2.5. The operator must be able to key in the postal code of the caller. (why need this?)

2.2.6. The postal code must be 6 digits.

2.2.7. The operator must be able to key in the building unit number of the caller.

2.2.8. The building unit number must be in the format of texts with less than 20 characters. (what if the incident is not in a building?)

2.2.9. The operator must be able to choose a type of assistance requested among four choices

2.2.10. The four choices given must be emergency ambulance, rescue and evacuation, fire-fighting and gas leak control.

(How about other information? Location, type etc.)

2.3. Submission of the record form

2.3.1. The operator must be required to submit the record form.

2.3.2. The operator must be asked to confirm to submit the record form.

2.3.3. If the operator clicks on “Confirm”, the record form must be stored in the (incident) database.

2.3.4. If the operator clicks on “Yes”, the operator must be able to continue editing the record form.

3. Information Distribution Section

3.1. Displacement(?) of assistance requests

3.1.1. If a request for emergency ambulance, rescue and evacuation or fire-fighting is received, it shall automatically be dispatched to the agency Singapore Civil Defence Force.

3.1.2. If a request for gas leak control is received, it shall automatically be dispatched to the agency Singapore Power.

3.1.3. Requests shall be dispatched through SMS(then how to we manage on our website?).

3.1.4. Requests shall be dispatched within 1 minute of receiving the call.

3.1.5. Requests shall contain the name, number and location of the requester as well as the type of assistance requested.

3.2. Information update to public

3.2.1. Updates on current incidents shall be sent out by SMS to the public residents of the affected region. (how to define people affected)

3.2.2. Updates on current incidents shall be posted on a Twitter account.

3.2.3. Updates shall contain the location, type and status of the incident.

3.3. Status reports

3.3.1. The subsystem shall generate status reports summarizing key indicators and trends.

3.3.2. Status reports shall be generated with a frequency of 30 minutes.

3.3.3. Each status report shall be sent to the Prime Minister’s office over email.

3.3.4. Key indicators shall include the number of incidents reported of each type, the number of accidents which are still ongoing and the mean time for incidents to be resolved.

3.3.5. Trends shall include which areas are currently experiencing a larger number of incidents than normal and which types of incidents are currently most prevalent.

4. Departments track and incident status update section

4.0. Description

The departments’ track and incident status update section shall be at the end of CMS process. It has two types of functionalities – track the progress certain department made to solve the incident and update the live status for users’ information.

4.1. UI Design Description

4.2. Departments track

4.2.0. Description

Under this subsection, the track of responsible department’s progress shall be displayed. Each step reached shall be updated in time on the page. Steps of progress include task been informed and assigned to certain department, a plan been set, work is under way and work been done.

4.2.1. Common display format

4.2.1.0. The departments’ track shall be displayed as a form of flow chart consisting of four nodes, each represents one step of departments’ progress of solving the incident. Originally each node is in color of grey, once a step has been achieved, the color of that certain node will turn to green.

4.2.1.1. The first node represents the step that certain department was informed and assigned the task, node turns green upon finishing.

4.2.1.2. The second node represents the step that a plan of solving the incident is arranged, node turns green upon finishing.

4.2.1.3. The third node represents the step that work is under way according to the plan, node turns green upon finishing.

4.2.1.4. The fourth node represents the step that work has been finished and is waiting for the user’s comment, node turns green upon finishing.

4.2.1.5. Time when each step was finished must be recorded and displayed beside each node.

(This is a bit hard to implement, I was thinking if we could use a table instead)

4.3. Incident status update

4.3.0. Description

The incident status shall be displayed once user clicked the nodes.

4.3.1. Common display format

4.3.1.0. User clicks the first node, a survey of the incident must be shown, together with the responsible department or person and the contacts information.

4.3.1.1. User clicks the second node, a plan to solve the incident must be shown in detail.

4.3.1.2. User clicks the third node, the progress of the repairing work must be shown, in forms of document proof of pictures.

4.3.1.3. User clicks the fourth node, a scene of the incident or document proof must be shown to prove required work has been done.

4.3.1.4. User must be able to confirm the incident has been solved.

4.3.1.5. A user comment page must be displayed after user confirmed the result.

4.3.1.6. User must be able to select whether the incident was solved in time and with a good quality.

4.3.1.7. User must be able to provide feedback on the service provided by responsible department and the App itself.

4.3.1.8. When local operator receives bad feedback on department’s service from user, the person must deliver it to responsible department and require feedback.

4.3.1.9. When local operator receives bad feedback on App from user, IT responsible people must make response and improve design.

4.4. Social media

4.4.0. Description

When responsible department update the latest status of incident for user, public relations section shall make a copy of the most updated information to social media through newspaper or live news broadcast.

4.4.1.

4.5. Inform prime minister

4.5.0. Description

Prime minister must be able to monitor the real-time progress of the incident through e-mail/security department?

4.5.1.

5.0. Admin

5.1. Admin Authentication

5.1.1. The admin shall only be able to access the database containing the information of accounts of call centre operators and department officers.

5.1.2. The admin shall be using a username, password, and an encrypted key to access the system.

5.1.2. The format of the username and password follows the constraints of call centre operators and department officers.

5.1.3. Once logged in, the admin shall be directed to a page containing the table of all existing accounts with corresponding information including, username, domain, password and id.

5.1.4. Two links shall be found after each account. One is “delete”, another is “Edit”.

5.1.5. A link called “add new account” shall be found at the bottom right of the table.

5.2. Admin Functionality

5.2.1. The admin shall be able to add an account of call centre operator and department officer to the database by clicking on the link “add new account”.

5.2.2. The admin shall be able to delete an account in the database by clicking on “delete”.

5.2.3. The admin shall be able to change the username and password of each account in the database by clicking on “edit”.