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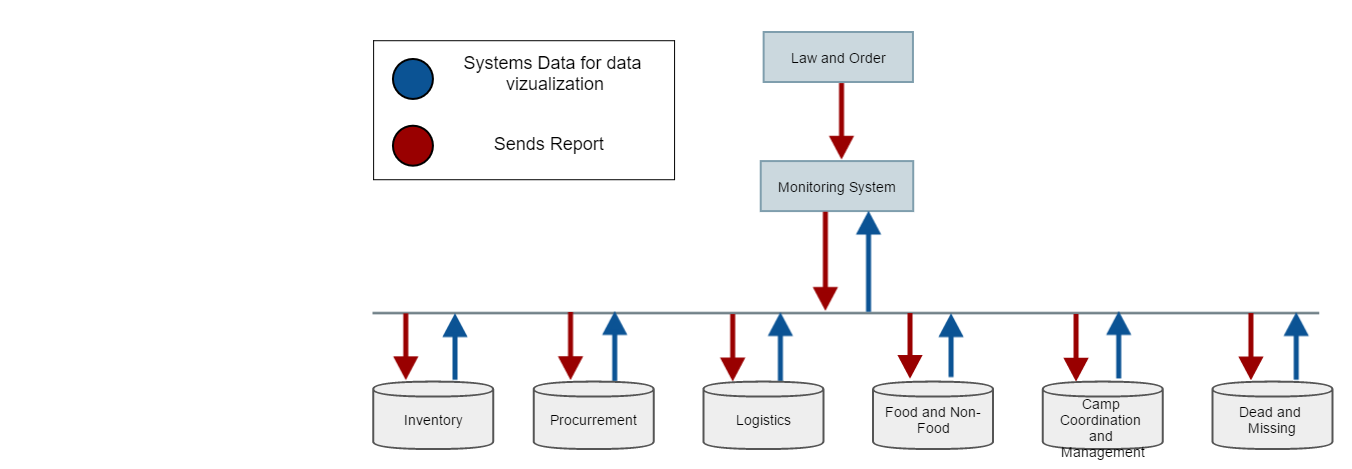
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# Introduction

## Conceptual Framework



## Overview

NDRRMC Monitoring System is a web-based system that provides data warehouse to connect multi-sourced data from different stand-alone NDRRMC systems (e.g. Logistics, Inventory, Procurement, etc.). The system includes embedded Business Intelligence Tool to properly monitor data in real time and for better decision-making.

Based on Conceptual Framework of NDRRMC Monitoring System. From the assessment report send by Law and Order, the Monitoring system will notify its user which are the admins of the different stand-alone systems which are; Inventory, Procurement, Logistics, Food and Non-Food, Camp Coordination and Management, and Dead and Missing. The responsible users will then receive a notification about the report details. Since the data from different system will be on use and the information of report is already in the system, it will help the NDRRMC and/or the users for recommendation and decision making in analyzing the needs of the affected area. From the collected data and the details of report received, the users can easily evaluate and identify what preparation he/she should do. It will also be useful in improving the planning process, correcting problems and obviating similar problems in the future.

## Objective

### *General Objectives*

* To increase community disaster awareness and improve disaster preparation coordination

### *Specific Objectives*

* To enable users to be updated about the reports
* To have the users a coordination with each other
* To help users in decision-making for disaster preparation and respond

## Scope and Limitations

The coverage of NDRRMC Monitoring System is the following:

* NDRRMC Monitoring System collects the data from different resources or system
* NDRRMC Monitoring System data gathered from Law and Order Report will be send to responsible user/s as notification
* NDRMMC Monitoring System provides summary reports in form of dashboards using analytic tool

The NDRRMC Monitoring System is limited only to register account for LGUs, NDRRMC member agencies, admins of different NDRRMC system. Each user will only have view access to the dashboards. The collection of data gathered will not be all visualized since system will only produce summary reports of the data of each of the system. Also, the report details that is being notified to users heavily depends on Law and Order System inputs such as its reliability and accuracy of the report.

# Quality Assurance Plan

## Scope of the Test Plan

Business Intelligence Tool being used by the team is Cloud9 Charts. It is used to connect multiple data source from different stand-alone system. Below are the features and function need to be tested:

|  |  |
| --- | --- |
| Connection of Database Server | * Cloud9 Agent is used to connect database server to BI Tool, it can connect to different types of data sources like file based data, SQL and No-SQL. |
| Join Database Connection | * Data from different stand-alone system can be join to other data regardless of its type. |
| Data Synchronization | * Data synchronization is needed to update the data in cloud9 charts whenever, there are updates applied by the other system. |
| Embed Dashboard | * Dashboard created in cloud9 chart can be embed for data visualization. |
| Login Account | * Admins of stand-alone system needs to login to receive reports notification and view data of different system. |
| Report Notification | * Users must receive report notification sends by Law and Order. |

## Role and Responsibility

|  |  |  |
| --- | --- | --- |
| Name | Role | Responsibilities |
| Florence Gail G. Haboc | Quality Coordinator | Responsible for ensuring all quality activities are planned and carried out accordingly  Responsible for ensure all team members are properly trained and equipped for their given roles and responsibilities |
| Aira Joyce A. Carpio | Quality Analyst | Responsible to ensure the function of the system is tested properly and efficiently.  Main role is to continuously improve system application and analyze user requirements. |
| Aira Joyce A. Carpio  Florence Gail G. Haboc | Quality Tester | Responsible for reporting of clear and bug reports. Develop test cases and prioritize testing activities. Execute test case and report defects, define severity and priority for each defect. |

## Quality Assurance Strategy

To assure the quality of software deliverables in each software development phase, we will use three types of testing which are Functional Testing, Usability Testing and Performance Testing. Functional Testing is needed to ensure that the required functionality in the system is being evaluate and compare to the software function and business requirements. Usability Testing is performed for evaluation of User-Interface of the system and identify usability problems. The primary purpose of a usability test is to improve system design. Lastly, Performance Testing is to assess how the system perform in terms of stability, responsiveness and to determine the effectiveness of the system.

The risk coming from software development and the process for reducing the risk should be addressed by using the strategy. Some risk or issues will be identified during the testing of the system. Since, the project team uses BI Tool with 14 days’ free trial support not all the features and functions of Cloud9 Charts are tested. Thus, the team will adapt the strategy to our project through four steps.

* In the first step, we will select the test factors and rank them. The selected test factors such as database connectivity, reliability, maintainability and system usability will be placed in the matrix based to their ranks.
* The second step is to identify the phases of the development process. The phase should be recorded in the matrix.
* The third step is to identify the business risks of the software deliverables. The risks will be ranked into three ranks such as high, medium and low.
* The last step is to decide the test phase in which risks will be addressed. In this step, we will decide which risks will be placed in each development phase and assign who will be responsible for the development phase.

The quality assurance strategy mention above will be used in each of the project lifecycle phases to identify risk and issues with each development phases with respect to the testing factors.

## QA Goals of Each Phase

|  |  |
| --- | --- |
| **Phase** | **Goals** |
| Requirements Gathering | Quality Coordinator should have a list of features and functions of the proposed system and select the features need to be tested and rank them depending on its function. |
| Connection of Database Server | Connection of Database Server to BI Tool which is the Cloud9 Chart should be check by the quality analyst and test by the quality tester to ensure that the proposed BI Tool is compatible in handling different data sources such as SQL, No-SQL and file based data. |
| Join Database Connection | Using different server like MySQL and Cassandra, quality testers should try to join multiple data sources like SQL and No-SQL to stitch the data back together into a single result. |
| Data Synchronization | Quality tester must test if cloud9 charts automatic synchronize the data whenever the other system does changes in their data. Data Synchronization is required for the user to be updated and track the data of each system. |
| Embed Dashboard | Quality analyst should check if the widgets in Cloud9 Charts can embed to the system. Embedded dashboard is use for data visualization of system’s user. |
| Login Account | Quality tester must test the login function in system. Admins of different system must automatically have registered to Monitoring System since, each system |
| Testing | All tested work functionalities should be checked for having zero defects in documents should be include in quality assurance checklist. |

## Quality Assurance Progress Reviews

In order to avoid defects from the work early and efficiently and to develop a better understanding of causes of defects so that it might be prevented, a methodical examination of software work products is conducted in projects in the following framework:

1. Reviews of Project Plans and all deliverables to the customer are carried out as stated in the Quality Plan of the project. A project may identify additional work products for review.
2. Reviews emphasize on evaluating the ability of the intended product to meet client requirements. The reviewer also checks whether the regulatory statutory and unstated requirements, if any, have been addressed.
3. Personnel independent of the activity being performed carry out the reviews.
4. Reviews focus on the work product being reviewed and not on the developer. The result of the review in no way affects the performance evaluation of the developer.
5. The defects identified in the reviews are tracked to closure. If a work product is required to be released without tracking the defects to closure, a risk analysis is carried out to assess the risk of proceeding further.

# Software Requirements Specification

## Cloud9 Charts – Business Intelligence Tool

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Checklist for requirement specification report** | | | | | |
| **Project name: Cloud9 Charts - Business Intelligence Tool** | | | | | |
| **Item no.** | **Subject** | **Yes** | **No** | **N.A.\*** | **Comments** |
| 1 | Connection of Database Server |  |  |  |  |
| 1.1 | Cloud9Agent can run through command line |  |  |  |  |
| 1.2 | Cloud9 UI can select a datasources |  |  |  |  |
| 1.3 | Specify datasource parameters |  |  |  |  |
| 1.4 | The cloud9 will prompt if all the details added are correct |  |  |  |  |
| 1.5 | Once "Test Connection" button is clicked, the system must prompt whether the testing is success or failed. |  |  |  |  |
|  | Once Clicked 'Save' there will be 'Configure Queries' link on the success bar. |  |  |  |  |
| 2 | Configure a Query |  |  |  |  |
| 2.1 | Once 'Data feeds/queries’ menu button in side navigation is clicked, it must be redirected to Queries page. |  |  |  |  |
| 2.2 | Once 'Add query' button is clicked, it must be redirected to  New Query page |  |  |  |  |
| 2.3 | The system must input the datasource to be used to  display the fields for adding query |  |  |  |  |
| 2.4 | For warehouse strategy part, scheduling of data synchronization  must be inputted |  |  |  |  |
| 2.5 | Once clicked 'Save and Run', the query will be added and run in  the system |  |  |  |  |
| 2.6 | Status of queries must indicate whether it is running or if there  are errors |  |  |  |  |
| 3 | Combining Data - Multiple Datasources |  |  |  |  |
| 3.1 | If there is a new report, does it reflect to the users' notification tab? |  |  |  |  |
| 3.2 |  |  |  |  |  |
| 4 | Widgets and Dashboards |  |  |  |  |
| 4.1 | Once 'Widgets’ button in side navigation is clicked, it must be redirected to Widgets page. |  |  |  |  |
| 4.2 | When 'New Widget' button is clicked, there must be an  pop up form for entering the widget details to add in Widgets lists |  |  |  |  |
|  | Once the settings were clicked beside the widget name, the system must show the form in configuring the widget to made in the right side |  |  |  |  |
|  | List of widgets must be shown when ‘Add Widget to Dashboard’ menu button in the side navigation bar is clicked |  |  |  |  |
|  | Once ‘Add to Dashboard’ is clicked, the widget must be automatically added to the current dashboard page |  |  |  |  |
| 5 | Trigger Notifications and Alert |  |  |  |  |
| 5.1 | An email alert can be set when a dataset has not been  updated for a (configurable) period of time or for data  related alerts |  |  |  |  |
| 6 | Embedding/OEM |  |  |  |  |
| 6.1 | Once 'Generate Shareable URL' from the 'Share' tab of the dashboard is clicked, system must generate a public URL for a dashboard |  |  |  |  |

## NDRRMC Monitoring System

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Checklist for requirement specification report** | | | | | |
| **Project name: NDRRMC Monitoring System** | | | | | |
| **Item no.** | **Subject** | **Yes** | **No** | **N.A.\*** | **Comments** |
| 1 | Sign In |  |  |  |  |
| 1.1 | The system must prompt an error message if the data entered is incorrect |  |  |  |  |
| 1.2 | The field is in proper format |  |  |  |  |
| 1.3 | When clicked sign up button, the page will redirect to home page |  |  |  |  |
| 2 | Home Page |  |  |  |  |
| 2.1 | The header widgets show the information of each connected system when clicked |  |  |  |  |
| 2.2 | Side navigation button shows system dashboard when clicked |  |  |  |  |
| 2.3 | Side navigation can be minimized |  |  |  |  |
| 2.4 | Home page includes the overall status of logistics |  |  |  |  |
|  | Home page includes the Logistics' Calendar showing the  status of requests |  |  |  |  |
| 2.5 | Homepage includes Law and Order's most recent reports |  |  |  |  |
| 3 | Notification |  |  |  |  |
| 3.1 | Notification will be received only to the specific user/s that is identified by the system |  |  |  |  |
| 3.2 | If there is unread notification, the notification tab will  show a symbol that there is new unread notification |  |  |  |  |
| 3.3 | The notification must be redirected to new page for viewing when clicked |  |  |  |  |
| 4 | Dashboard |  |  |  |  |
| 4.1 | If there is new data loaded in the database. The charts will must be update immediately |  |  |  |  |
| 4.2 | All widgets in dashboard must be interactive when one  widget is sorted |  |  |  |  |

# Test Plan