Six Element Analysis (TO-BE):

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| --- | --- | --- | --- | --- | --- | --- |
| **Process** | **System Roles** | | | | | |
| **Human** | **Non-Computing Hardware** | **Computing Hardware** | **Software** | **Database** | **Network & Communication** |
| **Data Insertion** | **AQMS:**  1.Rceives raw data from research lab.  2.Collects raw AQI data from BMD.  3.Receives comment from Municipality and Ministry.  4.Receives generated chart from the database.  **Research Lab:**  1.Collects report from AQMS.  **Ministry:**  1.Receives report from AQMS.  **Bangladesh Meteorological Department:**  1.Receives report from AQMS.  **Municipality:**  1.Receives final report from AQMS.  **Representative of AQMS:**  Receives the monthly AQI data from the ministry and then inserts this data into the database of AQMS. | **Pen and Papers:**   1. To   Collect manual data for the hardcopy.  2. Stationary used to update on the data sheet by the workers collecting  the raw data.  **PDF:**  1. The data report  can be viewed on a  PDF format.  **Data Sheet in Printed Version:**  1. The data sheet can be collected as  a printed version from the data sources. | **Computer:**   1. All   the data are finally stored using a computer.  **Smartphone:**  1.AQMS  can be accessed through any smartphone.  **Printer**  1. Printers used  to print the data  sheet.  **Scanner**  1. Scanners to  scan the data.  **Router/**  **Internet Cables**  **by ISP**  **Providers/**  **Switch** | **Operating**  **System:**  1. Any Operating System used  like Mac,  Windows, Linux.  **Application**  **Software:**  1. Application  software  like MS  Excel,Chrome;  Safari;  Firefox  etc**.**  **Printing**  **Software:**  To print the data sheets, a printing software is needed by Bangladesh meteorological department, weather station and ministry. | **Database System of AQMS**  **1.** Collection of data  is updated into a  database system of AQMS.  **MS Excel files:**  1. MS Excel files can  be used to store the data.  **MySQL:**  1.Database system like  MySQL to store the  raw data. | **Internet:**  1.Used to access the system.  2. Internet is  used to validate  the forms and  reports.  **Mail:**  1.Mail is used to transfer data.  **2.** Mails can be exchanged among the users of AQMS in order to communicate about the data entries. |
| **Data Analysis and Data Update** | **AQMS:**  1.Process data and send required data to regenerate the chart.  **Municipality:**  1.After analyzing the received data from AQMS, sends a comment back to AQMS.  **Research Lab:**  1.Analyze the raw data and sends a report to AQMS.  **Representative of AQMS:**  1. The AQMS representative examines and validates the raw data after receiving the tallied data for the month from the ministry and the rules from the municipality, and then enters the data into the AQMS database. | **Not Applicable .** | **Computer:**   1. All   the data are finally stored using a computer.  **Smartphone:**   1. AQMS   can be accessed through any smartphone.  **Printer**  1. Printers used  to print the data  sheet.  **Scanner**  1. Scanners to  scan the data.  **Router/**  **Internet Cables**  **by ISP**  **Providers/**  **Switch** | **Operating**  **System:**  1. Any Operating System used like Mac,  Windows, Linux.  **Application**  **Software**  1. Application  software  like MS  Excel,Chrome;  Safari;  Firefox  etc**.**  **Printing**  **Software:**  To print the data sheets, a printing software is needed by Bangladesh meteorological department, weather station and ministry. | **Database System of AQMS**  **1.** Collection of data  is updated into a  database system of AQMS.  **MS Excel files:**  1. MS Excel files can  be used to store the data.  **MySQL:**  1.Database system like  MySQL to store the  raw data. | **Internet:**  1.Used to access the system.  2. Internet is  used to validate  the forms and  reports  **Mail:**  1.Mail is used to transfer data.  2. Mails can be exchanged among municipality, ministry and the representative of AQMS in order to communicate about the data entries. |
| **Output** | **User:**  1.Gets monthly updated information regarding Air pollution. | **Not Applicable** | **Smartphone:**  AQMS can be accessed through any smartphone.  **PC/ Laptop/ Computer:** AQMS can be accessed through computer. | **Operating**  **System:**  1. Any Operating System used by  the data  sourcing team  and  Users like Mac,  Windows, Linux.  **Application**  **Software:**  1. Application  software  like MS  Excel,Chrome;  Safari;  Firefox  etc**.**  **Printing**  **Software:**  To print the data sheets, a printing software is needed by Bangladesh meteorological department, weather station and ministry. | **MySQL:**  1.Database system like  MySQL to store the  raw data. | **Internet:**  1.Used to access the system.  2. Internet is  used to validate  the forms and  reports  **Mail:**  1.Mail is used to transfer data.  2. Mails can be exchanged among municipality, ministry and the representative of AQMS in order to communicate about the data entries. |