Requirements Document

Landover Hills - MD Open Data Portal
Zulykath Lucero, Shishir Poreddy, Ruth Ayele,
Arafat Bhuiyan, Avindra Mahesh, Daniel Araj

Project Definition

Objective:
Our project is focused on integrating Landover Hills' municipal data into the Maryland Open Data Portal. This involves assessing your current datasets, identifying any gaps or formatting issues, and developing a clear plan to align your data with the state's submission standards. A major part of our team's contribution will be setting up processes so that Landover Hills can continually collect and maintain data in a format that is easily integrated with the Maryland Open Data Portal. Ultimately, this will enhance public transparency and facilitate easier access to reliable municipal information for residents, businesses, and other stakeholders.

Background:
Landover Hills currently collects a variety of data in formats that do not fully meet the structured requirements of the Maryland Open Data Portal. In response, our team will assess the existing data, engage with key stakeholders (including the Maryland Open Data Portal representatives), and benchmark best practices from other municipalities to develop a streamlined process for data submission.

Expected Deliverables

Our work will result in the following deliverables:

- **Data Needs Report:**
  A detailed summary identifying the specific data categories required by the state for municipal contributions.

- **Municipal Data Assessment:**
  An inventory and gap analysis of Landover Hills' existing data, highlighting any areas that need improvement or new data collection.

- **Best Practices Review:**
  A comparative analysis of how other municipalities (e.g., Frederick, Montgomery County) successfully contribute to the portal, with recommendations tailored for

Landover Hills.

- **Implementation Plan:**
  A comprehensive, step-by-step guide for data collection, formatting, and submission that complies with Maryland Open Data Portal standards.

- **Data Dashboard:**

  A web-based dashboard integrated into the city's website that will display the current municipal data. This dashboard will provide real-time visualizations and insights, enabling residents, businesses, and officials to easily explore the data. It will serve as a complementary tool to the data submission process, ensuring continuous transparency and accessibility.

- **Final Report and Presentation:**
  A complete project summary that outlines our findings, recommendations, and next steps to ensure a smooth data integration process.

Technical Requirements

To meet the project goals and deliver the above outcomes, our team will address several technical requirements:

- **Data Formatting Standards:**
  Develop clear guidelines to transform your existing data into standardized formats required by the Maryland Open Data Portal. This includes data cleansing, normalization, and documentation of metadata.

- **Data Inventory and Gap Analysis Tools:**
  Utilize data assessment tools and techniques to catalog existing datasets, evaluate their completeness, and identify any deficiencies.

- **Integration Compliance:**
  Ensure that all data submissions adhere to the state’s technical specifications, including any security and privacy protocols for handling municipal data.

- **Data Dashboard Development:**

    - Design and implement a responsive, web-based dashboard that:
        - Displays up-to-date municipal data in an engaging and user-friendly format.
        - Includes visualization components such as charts, graphs, and interactive tables.
        - Allows for real-time data updates and filtering options.
        - Is accessible to a wide range of users, including residents and municipal officials.

Critical Risks and Mitigation Strategies

Identified Risks:

- **Insufficient or Mismatched Data:**
  Given the size of the city and its limited resources, there is a significant risk that Landover Hills may not have enough data, or the data available may not match the specific requirements of the Maryland Open Data Portal. This gap could affect the quality and completeness of the data submission.

- **Data Format Incompatibility:**
  Even when data is available, it might not conform to the structured formats required by the portal, leading to additional efforts in data cleaning, transformation, and documentation.

- **Resource Constraints:**
  The city's limited resources could lead to challenges in both collecting additional required data and processing existing data to meet state guidelines.

Mitigation Strategies:

- **Enhanced Data Audit:**
  Initiate an early and comprehensive review of existing data to identify gaps and mismatches against the portal's requirements. This will allow us to quickly determine whether supplemental data collection is needed.

- **Targeted Data Collection Plan:**
  Develop a tailored plan for acquiring or generating the necessary data, which might include identifying alternative data sources or leveraging community and departmental inputs.

- **Collaboration with Stakeholders:**
  Work closely with city officials and relevant departments to understand current data capabilities and to plan for any necessary improvements. This collaboration will ensure that any shortfalls are addressed proactively.

- **Technical Support and Training:**
  Offer guidance on best practices for data formatting and management, and if needed, provide training sessions to help city staff align their data collection and maintenance processes with the portal's standards.

- **Contingency Planning:**
  Establish contingency measures that include phased data submission or pilot testing of smaller datasets, which can help demonstrate progress while full-scale data collection and formatting efforts are being finalized.

Long-Term Dashboard and Data Management Strategy

Overview:
While the initial focus is on integrating data and developing the dashboard, it's essential to establish a clear, structured plan for long-term management. This ensures that once the Town takes over, they have a sustainable process to maintain the dashboard and the underlying data. The strategy includes defined roles, training, and a scheduled update plan.

1. Roles & Responsibilities

- **Data Manager:**
  - Appoint a dedicated staff member (or team) to oversee the dashboard's data quality, integration, and ongoing updates.
  - Responsibilities include data verification, addressing discrepancies, and liaising with technical support.
- **Technical Support Specialist:**
  - Responsible for the technical maintenance of the dashboard, ensuring its smooth operation and handling updates or bug fixes.
- **Departmental Liaisons:**
  - Each key department (e.g., Public Safety, Community Development) designates a liaison to provide updated data and feedback on the dashboard's usability.

2. Training & Capacity Building

- **Initial Training Sessions:**

    - Conduct comprehensive training workshops focused on data collection best practices, data formatting standards, and dashboard management.
    - Develop user manuals and quick reference guides to assist staff with day-to-day tasks.
- **Ongoing Training:**
    - Schedule periodic refresher courses and update sessions to address new features, best practices, or changes in state data standards.
    - Utilize feedback from the initial training and real-world dashboard usage to tailor subsequent sessions.

3. Update Schedule & Data Governance

- **Regular Update Intervals:**
    - Define a clear schedule for updating the data on the dashboard—this could be weekly, monthly, or quarterly depending on the data's nature and stakeholder needs.
    - Establish automated reminders and review checkpoints to ensure adherence to the update schedule.
- **Data Quality Checks:**
    - Implement a routine audit process to validate data accuracy and consistency before each update.
    - Maintain version control and logs for changes made to ensure transparency and track progress.
- **Contingency and Review:**
    - Develop contingency plans for unexpected data issues or system downtimes.
    - Set up a biannual review process to evaluate the dashboard's performance and make any necessary improvements.

4. Communication and Feedback Loop

- **Internal Communication:**
    - Use regular internal meetings and status reports to discuss dashboard performance, data issues, and upcoming training needs.
- **Stakeholder Feedback:**
    - Establish a clear channel for staff and external users to report issues or suggest improvements.

    - Schedule periodic feedback sessions with key stakeholders (e.g., department heads, municipal leadership) to ensure the dashboard continues to meet user needs.

5. Documentation & Future Planning

- **Comprehensive Documentation:**
    - Maintain detailed documentation of the dashboard's technical setup, update processes, and troubleshooting procedures.
- **Scalability Considerations:**
    - Plan for future enhancements, ensuring that the system can scale as the Town's data needs grow or as more datasets are integrated.
- **Resource Allocation:**
    - Include a plan for budgeting time and potential resources (software licenses, additional training) to support ongoing dashboard maintenance.