Detection of Water Logging Problem and Providing Solutions using GPS in Study Area

1. Introduction

Urban waterlogging is the accumulation of extra water on streets, roadways, and other low-lying regions of cities and towns. When there is excessive rainfall, lack of suitable infrastructure, or other issues, the drainage systems in urban areas cannot handle the amount of water. Several issues, such as flooding, traffic congestion, health hazards, property damage and disruption of services, can result from waterlogging. Effective measures can be taken in order to avoid causalities like accidents and human loss in such conditions. This project proposal aims for real time detection of water logging conditions and to design strategy to help the citizens by mitigating problem arising in water logging situations in urban areas.

2. Objectives

The objectives to be addressed in this project proposal are as follows:

1. To create real time water logging map using GPS data in the study area.
2. To provide the best route map for user destination in water logging conditions.
3. To suggest alternative safest route to users in water logging conditions.
4. To intimate local authorities about the water logging condition in the area.

3. Proposed Methodology

1. Data collection: water level information can be obtained by sensors available; route map can be obtained from google map API, rainfall data can be obtained from weather stations.
2. Water logging map will be created from above data sets of waterlogging and google map.
3. Web based solutions will be designed to help user for alternative route to reach the destination.
4. The system is so designed that if any hotspots of water logged is there the local authorities will an automated intimation.

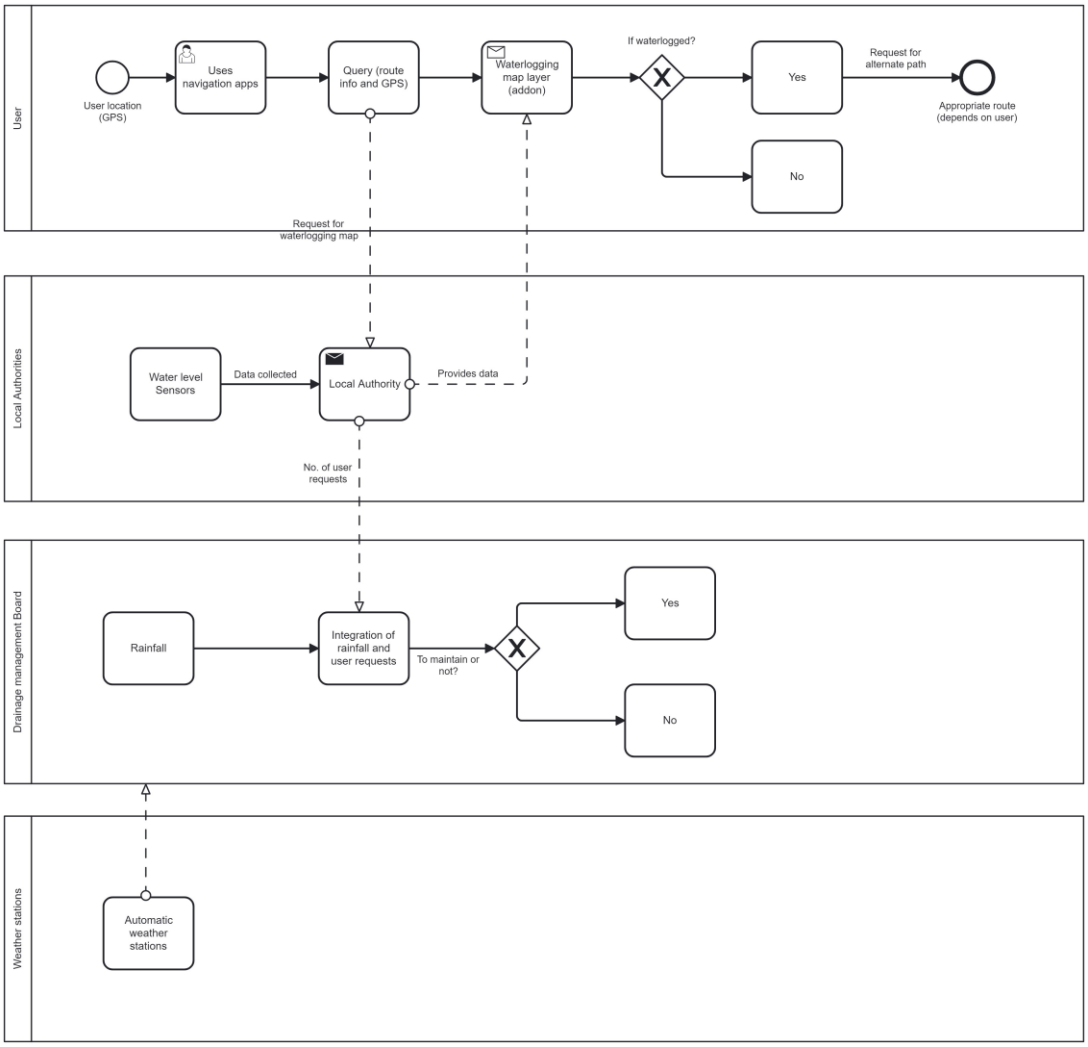

Fig 1: BPMN diagram detection of water logging problem and providing solutions using GPS in study areas