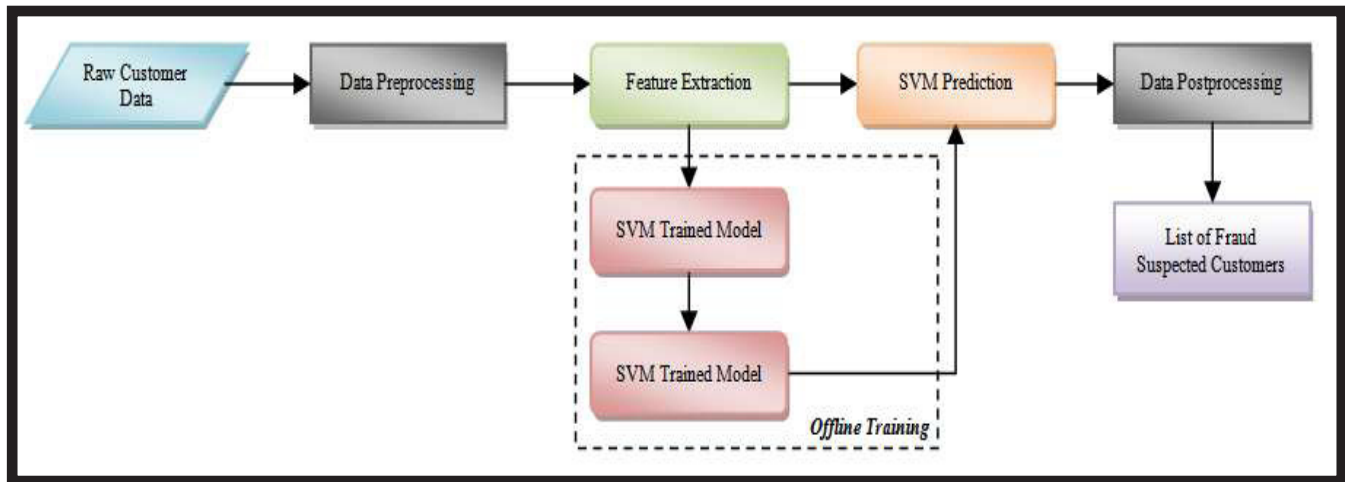




## R&D Fund Project

### Development of an Intelligent System for Detection of Abnormalities and Probable Fraud by Metered Customers in TNBD



Flowchart of the Proposed Intelligent System

#### Project Overview

At present, customer installation inspections by TNB Distribution (TNBD) are carried out without any specific focus due to the unavailability of a system to shortlist possible fraud suspects. It is desirable that a system is developed which is able to detect abnormalities and fraud suspects from the CIBS in order to assist the inspection teams to increase the effectiveness of their operation. The Intelligent system proposed by this project will provide the tools for non-technical loss classification and detection.

#### Project objectives are listed as follows:

- To innovate an intelligent classification and detection system that can pre-select suspected customers to be inspected on-site for abnormalities or potential fraud according to their consumption patterns and other characteristics.
- To develop estimation method of back-billing for fraud cases.

#### Deliverables

A novel intelligent system in a stand-alone computer, which will implement an algorithm to undertake the analysis of irregularities in kWh consumption patterns for detection of NTL activities.

#### Benefits

- \* Increased knowledge and experience in terms of customer fraud detection.
- \* The end product of this research project would be beneficial to TNBD in terms of reducing non-technical losses in the distribution system.
- \* The developed product will also reduce time and effort taken for investigation towards suspected customer fraud cases
- \* The system will benefit TNBD not only in improving its handling of NTLs, but will also provide additional knowledge of customers behaviour as the basis for improving service delivery.