

EPRI DATA ANALYTICS CASE

Dynamic Momentary Outage Detection and Calculator

The Data Challenge

Momentary customer interruptions caused by temporary faults can be difficult to detect and to diagnose the cause and location of the disturbances. Repeated disturbances can lead to customer complaints and a degradation of service until the issue is solved.

Solution Overview

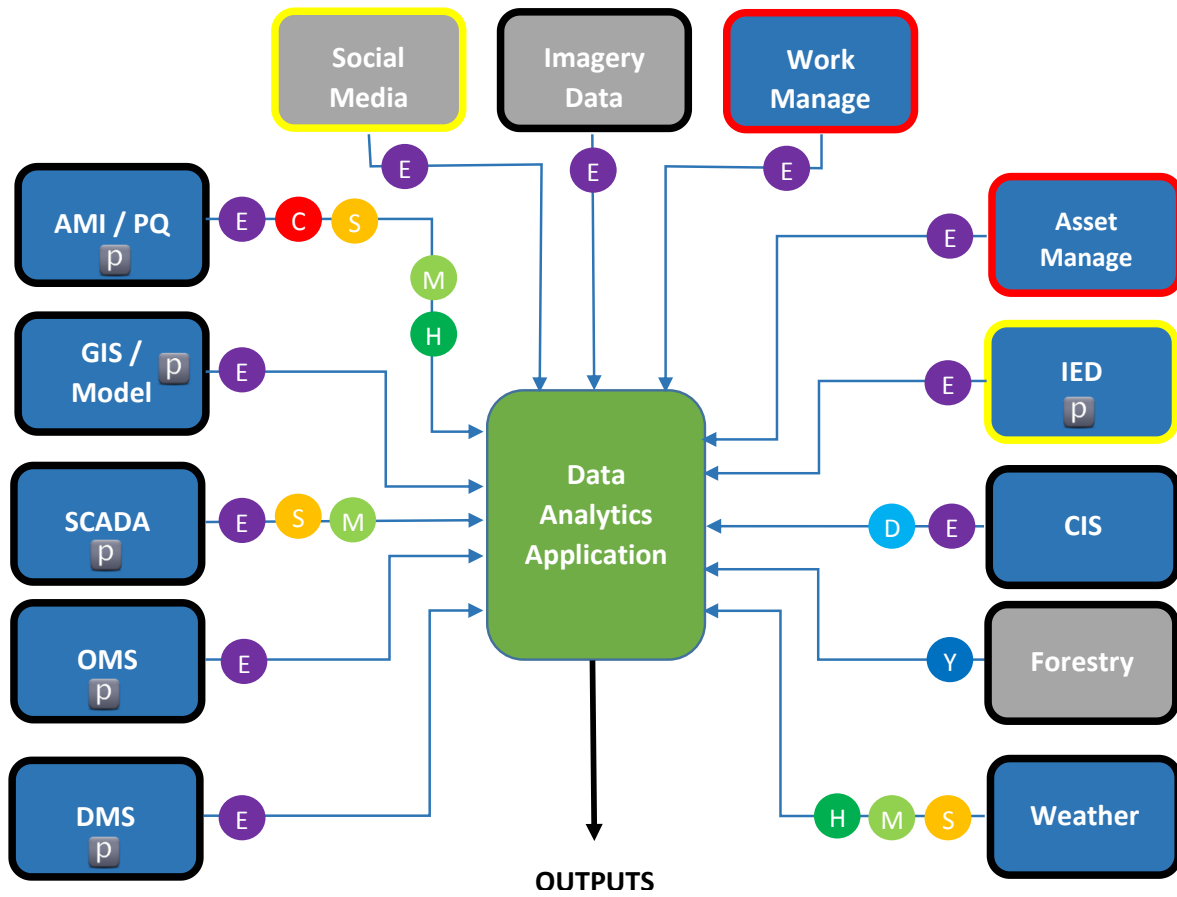
Basic algorithms and applications are developed to accurately mine data sets to detect momentary interruptions, assign these outages to a protective device, and calculate how frequently customers experience these types of interruptions over a given period of time.

Potential Methods for Solving the Problem

The automated method of aggregating data related to outages proposed in this data analytics case is based on manual methods implemented at utilities to capture the number and frequency of momentary interruptions on a periodic basis, such as quarterly or yearly.

Available Data Sets

The data sets highlighted in the following figure are available in the EPRI Data Repository to solve this data analytics case.



Classifications of Data:

- Traditional Data Set
- New Data Set
- Structured Data
- Un-structured Data
- Format of Data Varies

p Denotes a primary data set used to solve this data analytics case.

Frequency of Measurement

- C Cycles
- S Seconds
- M Minutes
- H Hours
- D Days
- Y Months to Years
- E Event Driven