Technical Presentation on Central Server Application
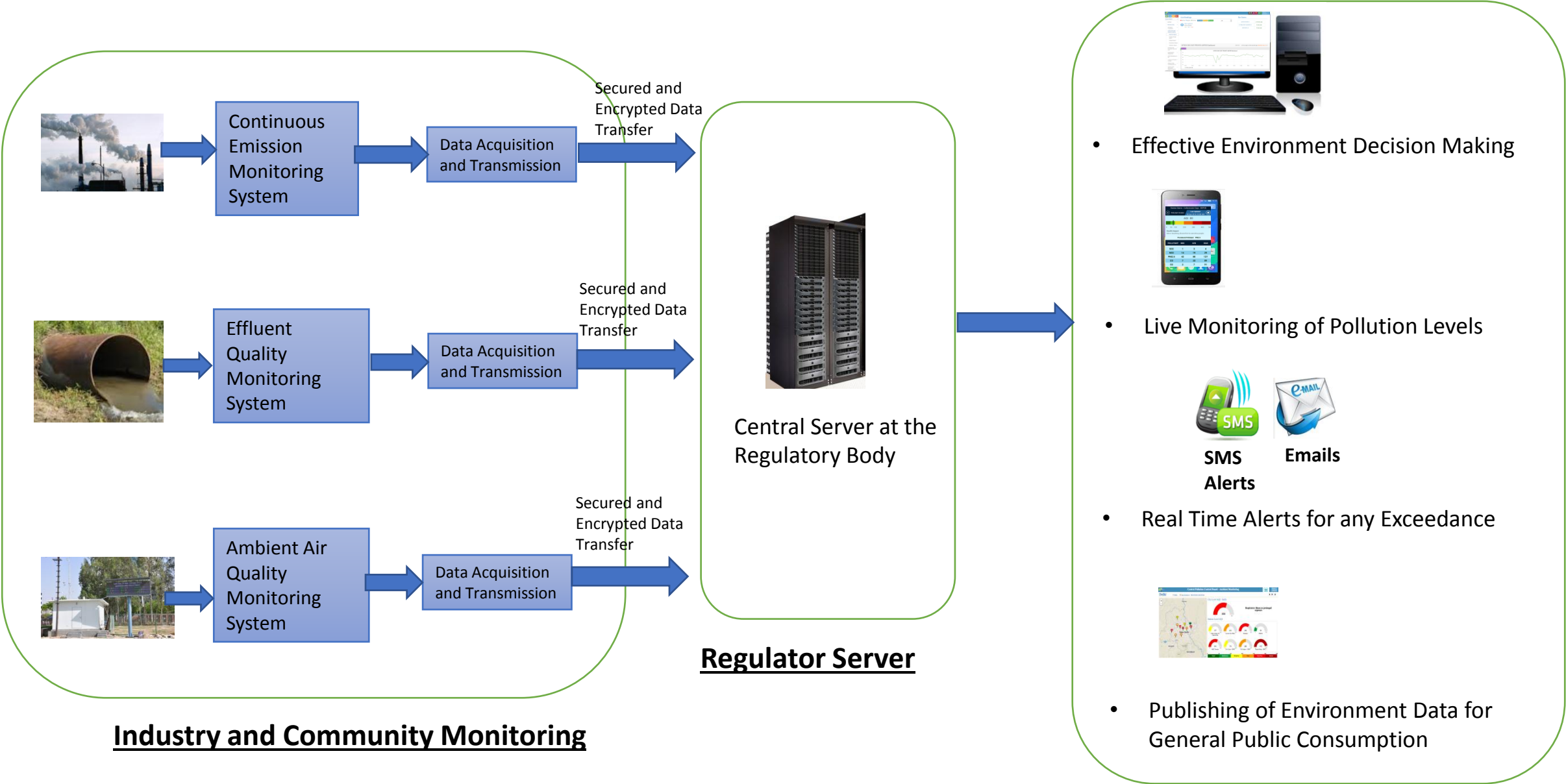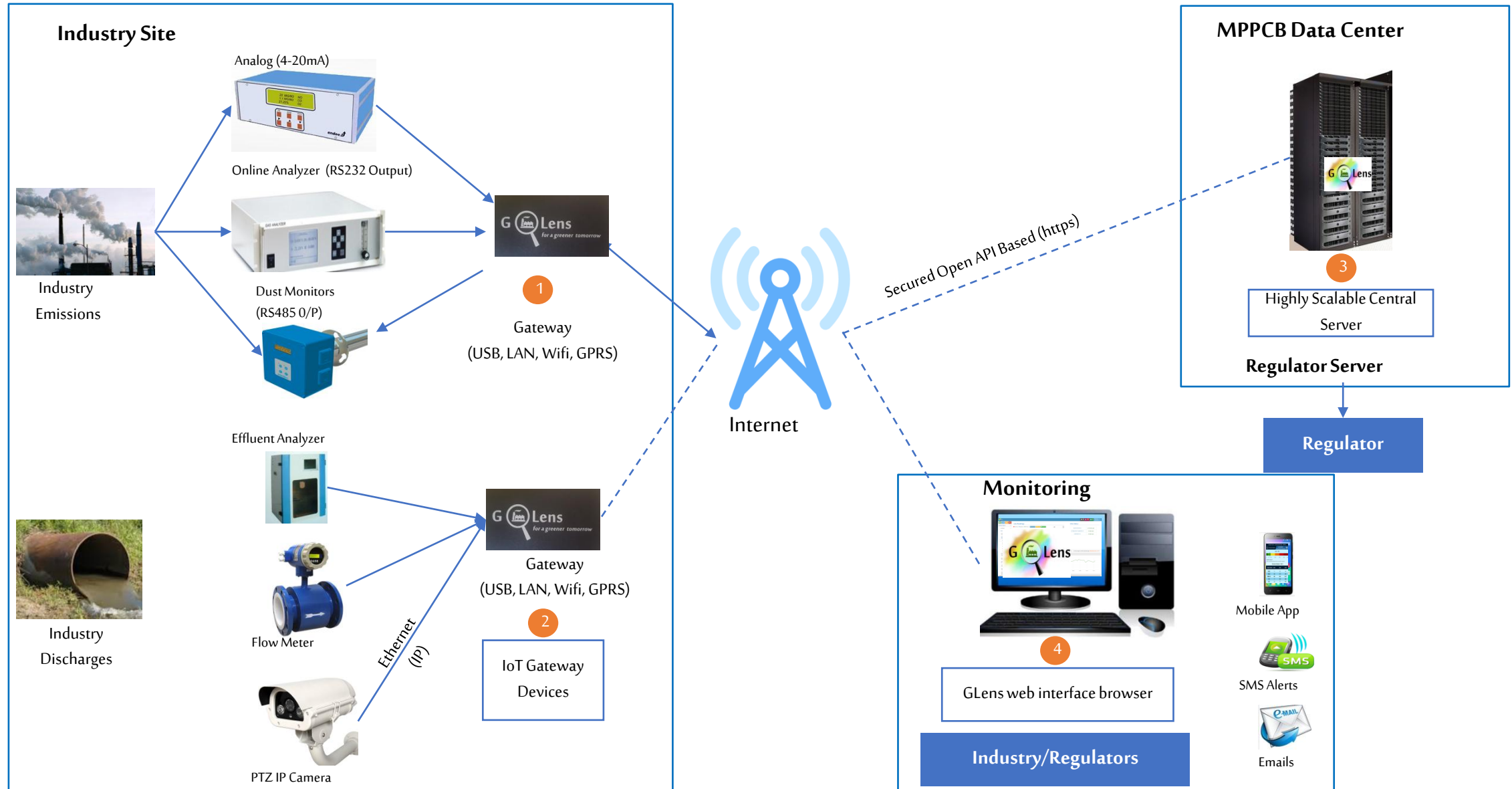
Operation and Workflow

High Level Overview of Online Monitoring System

Industry and Community Monitoring

Regulator Server

- Continuous Emission Monitoring System → Data Acquisition and Transmission → Secured and Encrypted Data Transfer
- Effluent Quality Monitoring System → Data Acquisition and Transmission → Secured and Encrypted Data Transfer
- Ambient Air Quality Monitoring System → Data Acquisition and Transmission → Secured and Encrypted Data Transfer

Central Server at the Regulatory Body

- Effective Environment Decision Making
- Live Monitoring of Pollution Levels
- SMS Alerts
- Emails
- Real Time Alerts for any Exceedance
- Publishing of Environment Data for General Public Consumption

Complete View of Online Monitoring Solutions

Industry Site

Analog (4-20mA)

Online Analyzer (RS232 Output)

Dust Monitors
(RS485 O/P)

Industry
Emissions

1

Gateway
(USB, LAN, Wifi, GPRS)

Effluent Analyzer

Industry
Discharges

Flow Meter

Gateway
(USB, LAN, Wifi, GPRS)

2

Ethernet
(IP)

IoT Gateway
Devices

PTZ IP Camera

Internet

Secured Open API Based (https)

MPPCB Data Center

3

Highly Scalable Central
Server

Regulator Server

Regulator

Monitoring

4

GLens web interface browser

Industry/Regulators

Mobile App

SMS Alerts

Emails

Key Concepts

Site

Monitoring Station

Analyzer

Parameter

Delayed Data

Calibration Data

Error Data (Analyzer Error)

Diagnostics Data

Average Data

Exceedance

Availability

Features of the Portal

Dashboard

| Overall Summary |

| Site Summary |

➡️

1. Summary of all connectivity across all connected sites.

2. Site Summary Provides a single snapshot view for a given site.

Live Status

| Site Status |

| Map View |

| Camera Status |

➡️

1. View current status of Site and Cameras in a single view

2. View the current status on Map

Features of the Portal

Regulator Reports

Exceedance Count

Custom Report

Scheduled Report

Data Availability

Exceedance Summary

Top 3 Exceedance

Focus Is on Regulator Aspect
   a. Exceedance and Availability of Data

Features of the Portal

Industry Reports

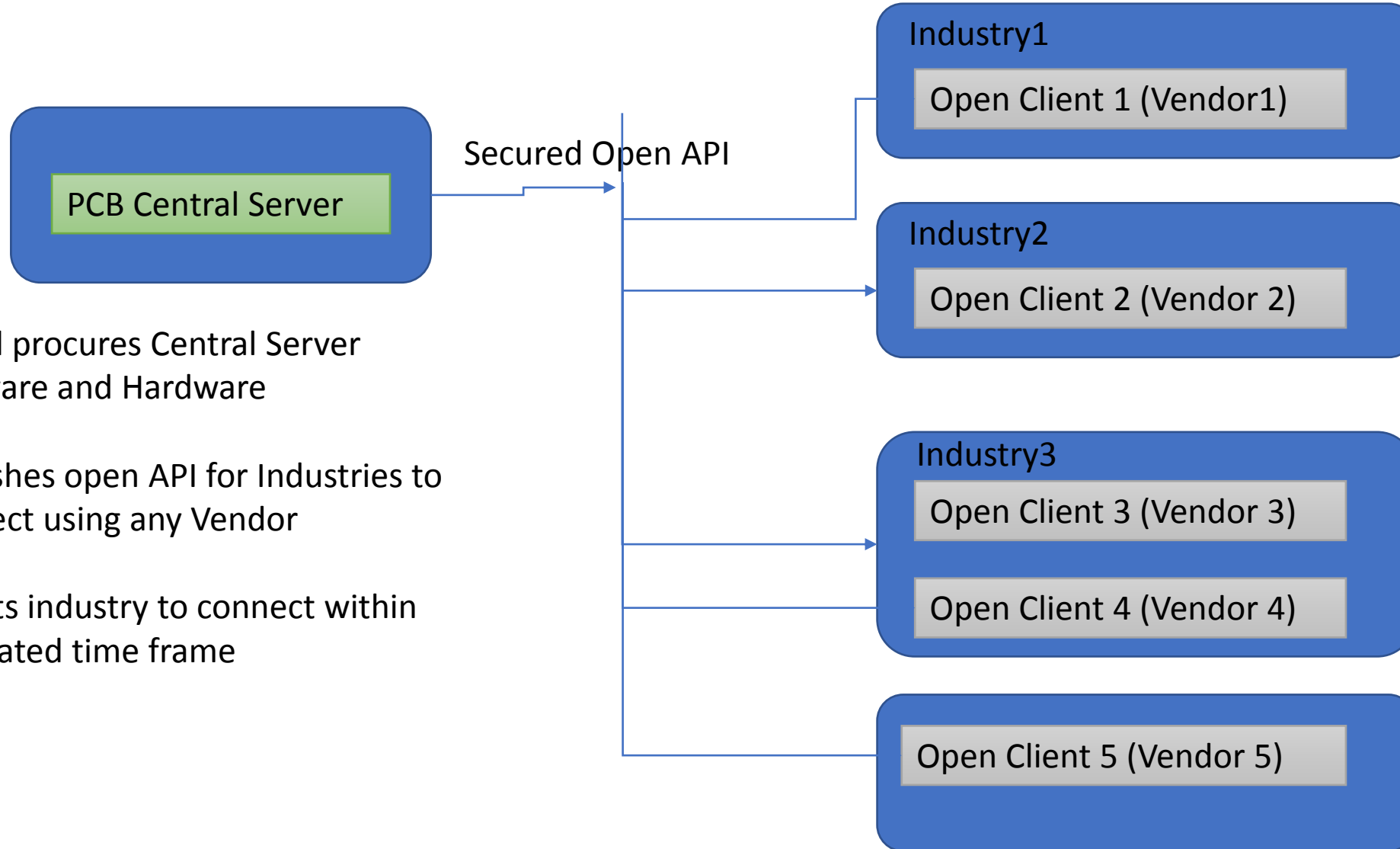| Average Report |

| Custom Report |

| Exceedance Report |

Focus is on Industry Specific Reports

| Real Time Report |

| Calibration Report |

| Alarms and Workflow |

Concept of Open API

PCB Central Server

Secured Open API

Industry1

Open Client 1 (Vendor1)

Industry2

Open Client 2 (Vendor 2)
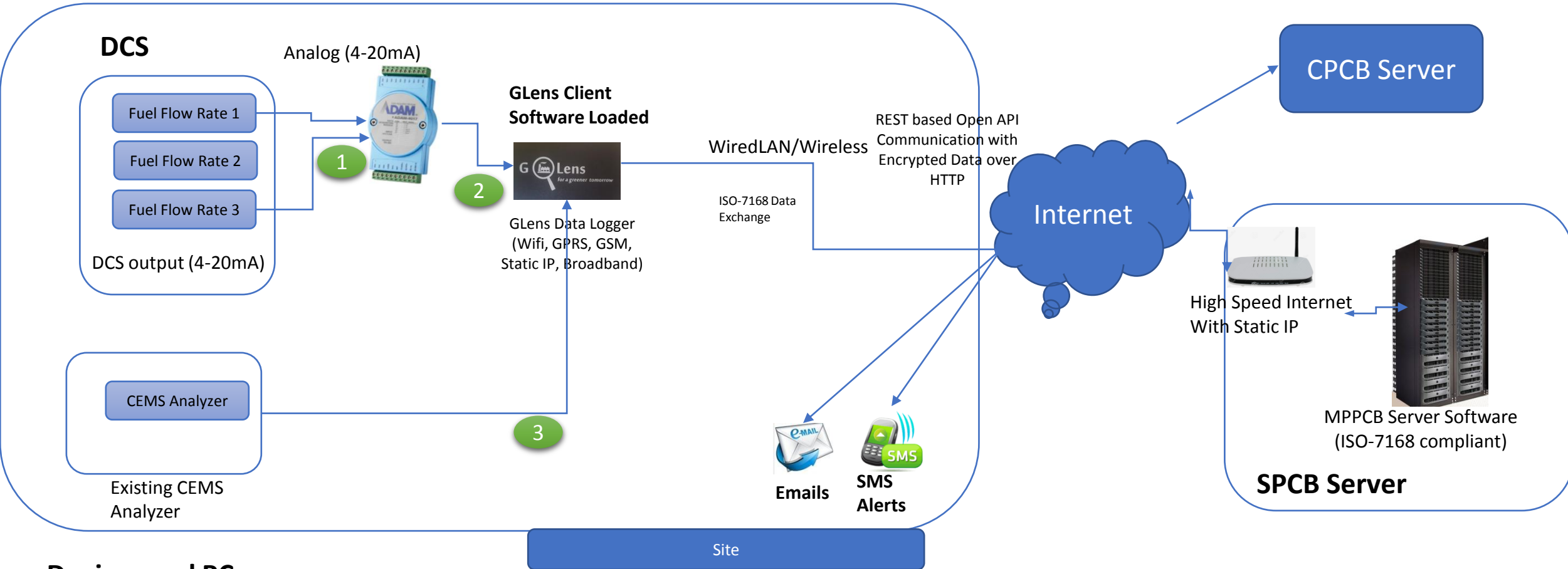
Industry3

Open Client 3 (Vendor 3)

Open Client 4 (Vendor 4)

Open Client 5 (Vendor 5)

- Board procures Central Server Software and Hardware

- Publishes open API for Industries to connect using any Vendor

- Directs industry to connect within stipulated time frame

Conceptual Solution for Dynamic Limit for Multi Fuel System

DCS

Analog (4-20mA)

Fuel Flow Rate 1

Fuel Flow Rate 2

Fuel Flow Rate 3

DCS output (4-20mA)

GLens Client Software Loaded

GLens Data Logger (Wifi, GPRS, GSM, Static IP, Broadband)

ISO-7168 Data Exchange

WiredLAN/Wireless

REST based Open API Communication with Encrypted Data over HTTP

Internet

CPCB Server

High Speed Internet With Static IP

MPPCB Server Software (ISO-7168 compliant)

SPCB Server

CEMS Analyzer

Existing CEMS Analyzer

Emails

SMS Alerts

Site

Devices and PC

1 8 Channel Analog to Digital Converter – Make Advantech Model ADAM-4017+

2 Data Acquisition and Transmission Hardware – Make GLens Model Envion 2.1. (This is optional hardware. PC can directly acquire data from the Analog to Digital Converter)

3 PC for Local Data Storage and Visualization Loaded with GLens Client Software with Dynamic Fuel Limit Software