POWER INTELLIGENCE & ASSET MONITORING (PIAM)
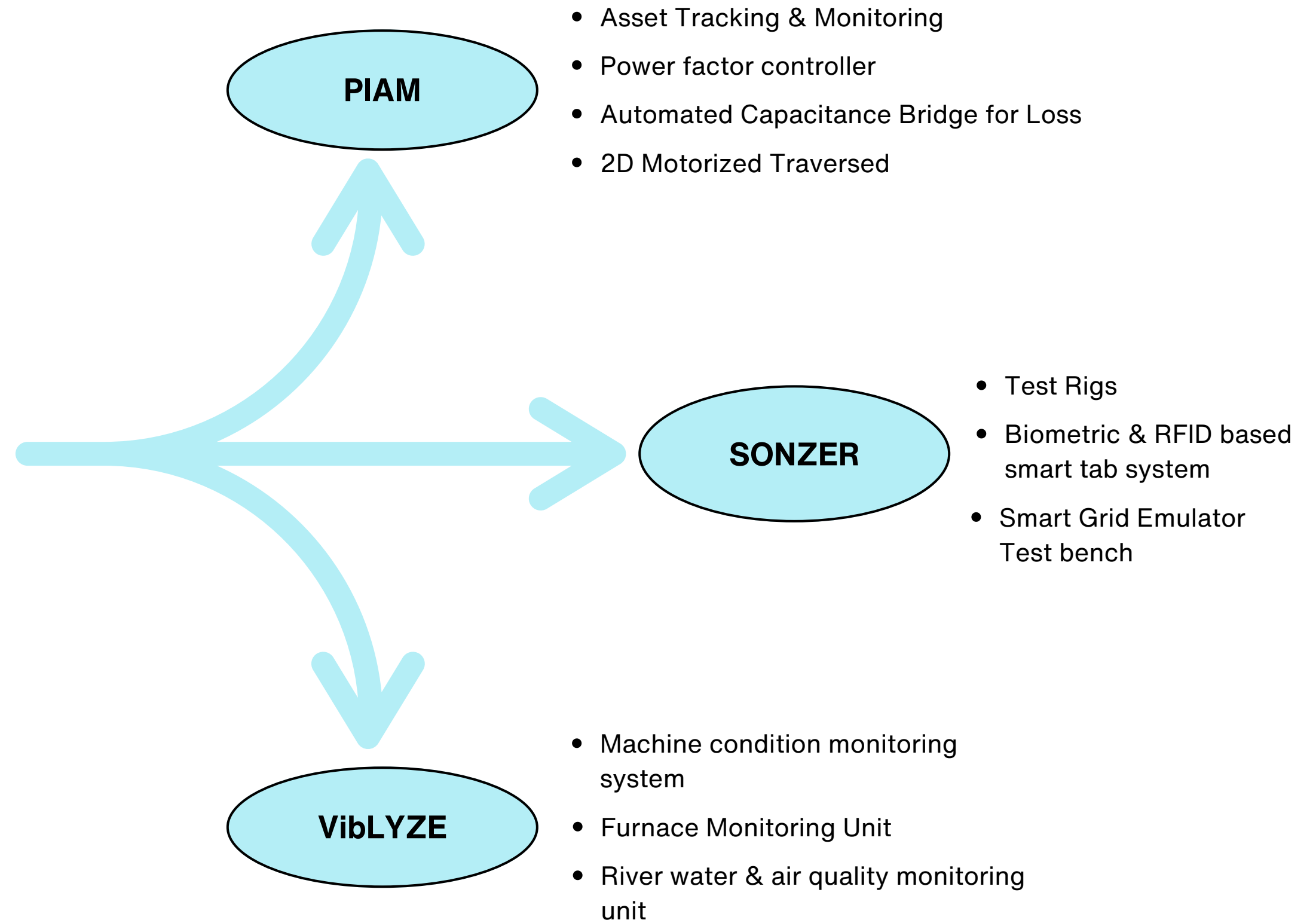
Empowering ESCOMs: PIAM - Revolutionizing Asset Management with Precision and Intelligence

ELECTRONO SOLUTIONS

ELECTR●NO ®

Welcome to Electrono! Embrace innovation with us as we propel your organization into the digital age. Let's shape the future together!
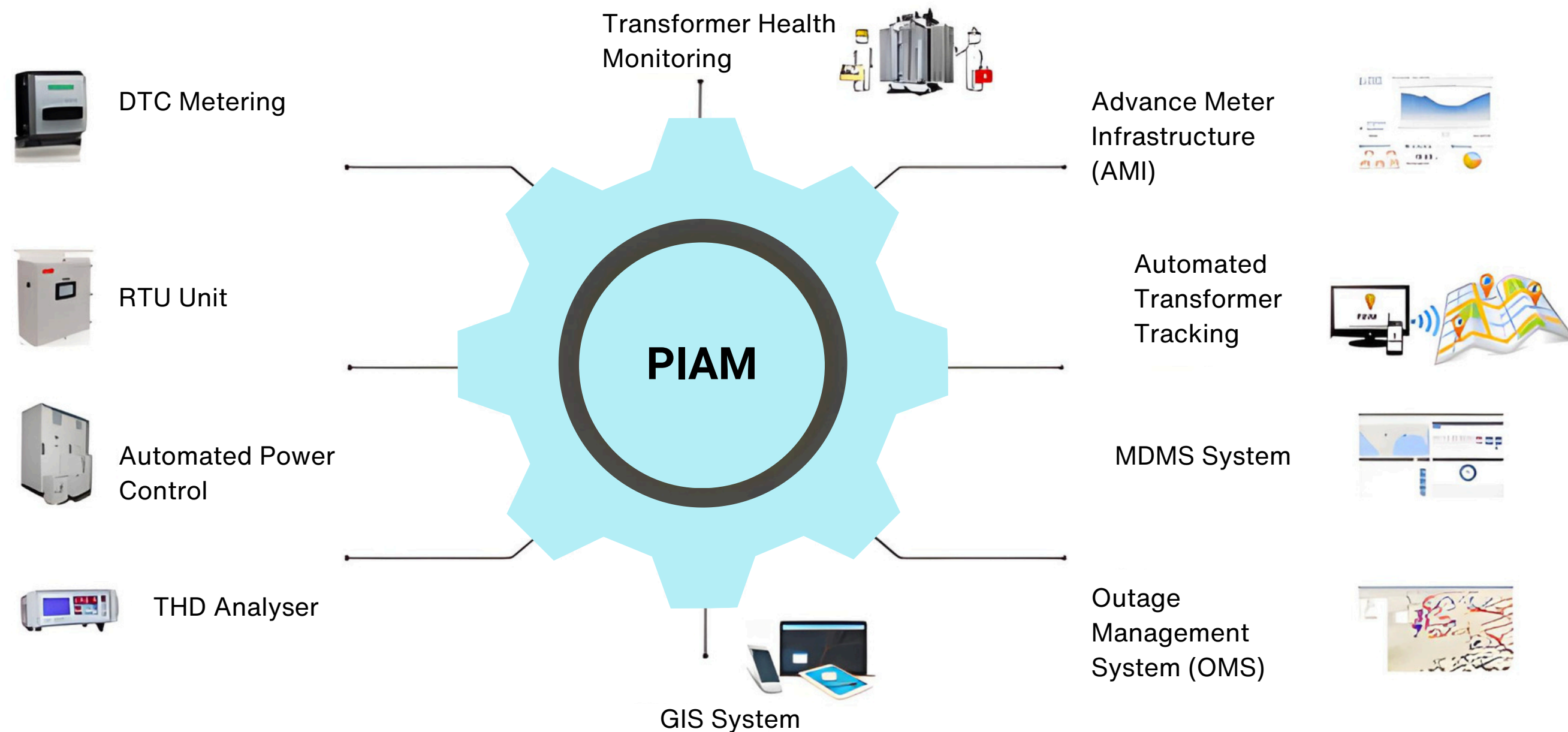
Our Vision and Values

At Electrono, we're on a mission to propel organizations into the digital era through cutting-edge IIoT solutions. Our commitment to quality drives us to enhance products, services, and operational capabilities, while elevating customer experiences. By facilitating expansion into new markets and boosting revenues, we empower businesses to thrive in an increasingly digital world.

PIAM

- Asset Tracking & Monitoring
- Power factor controller
- Automated Capacitance Bridge for Loss
- 2D Motorized Traversed

SONZER

- Test Rigs
- Biometric & RFID based smart tab system
- Smart Grid Emulator Test bench

VibLYZE

- Machine condition monitoring system
- Furnace Monitoring Unit
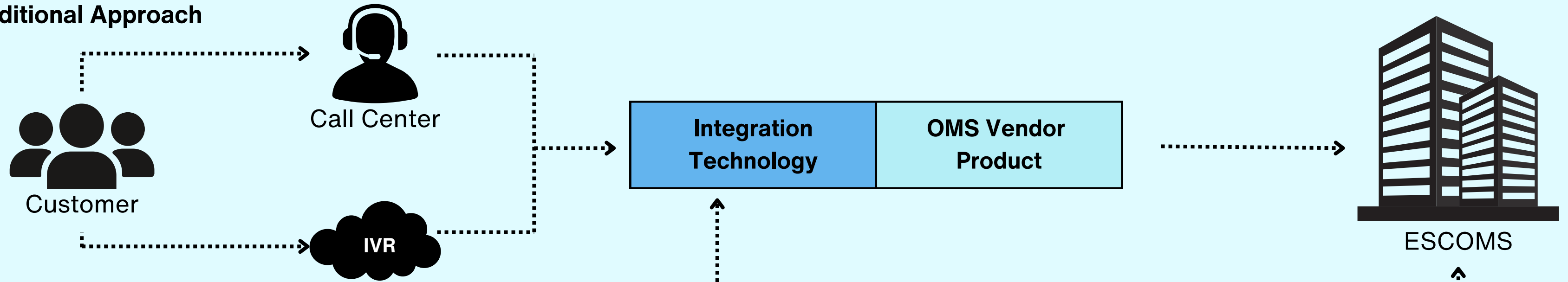- River water & air quality monitoring unit

PIAM

In an era where operational efficiency and technological integration are paramount, PIAM stands as a beacon for transformation in the utility sector. PIAM simplifies complex asset management challenges faced by Electricity Supply Companies (ESCOMs) through an integrated platform leveraging IoT, artificial intelligence, and cloud computing.
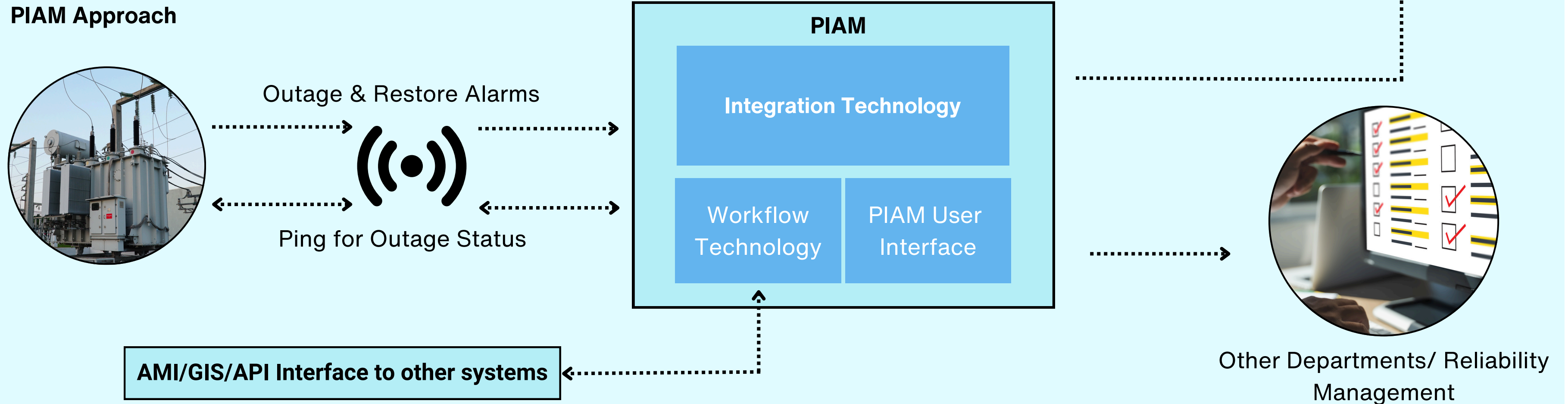

- Transformer Health Monitoring
- DTC Metering
- Advance Meter Infrastructure (AMI)
- RTU Unit
- Automated Transformer Tracking
- Automated Power Control
- MDMS System
- THD Analyser
- Outage Management System (OMS)
- GIS System

PIAM

P I A M Architecture

ELECTRONO®

Traditional Approach

Customer

Call Center

IVR

| Integration Technology | OMS Vendor Product |

ESCOMS

PIAM Approach

Outage & Restore Alarms

Ping for Outage Status

PIAM

Integration Technology

| Workflow Technology | PIAM User Interface |

AMI/GIS/API Interface to other systems

Other Departments/ Reliability Management

Why Choose PIAM?

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PIAM

Reduced inspection and maintenance costs

Improved Operational Safety

Reduced failure-related repair or replacement costs

Detects incipient faults & helps improve MTBF, MTTR, FMI

Reduced revenue losses due to distribution assets down time

Enables Condition Monitoring for preventive maintenance

Referred capital costs due to load growth or equipment condition

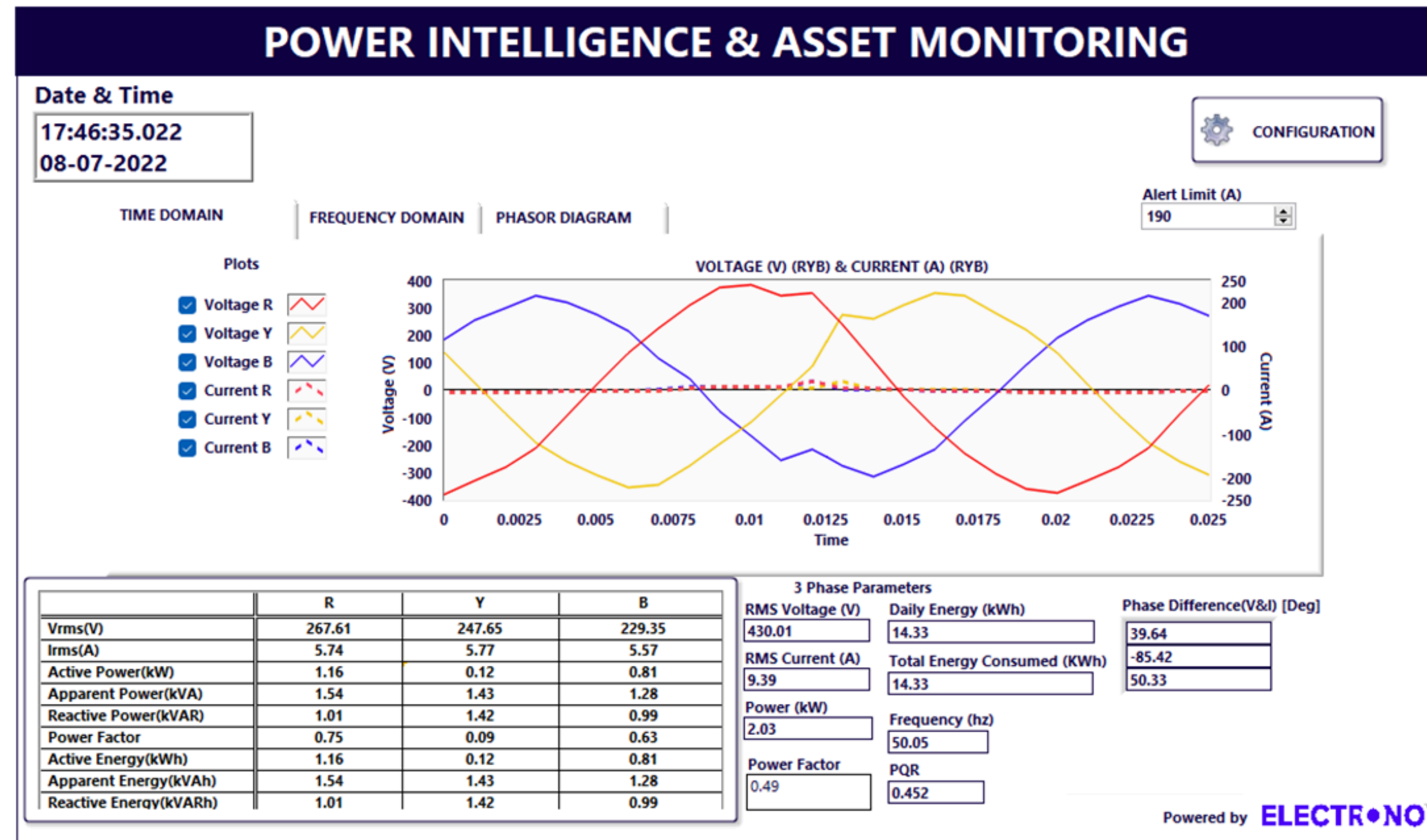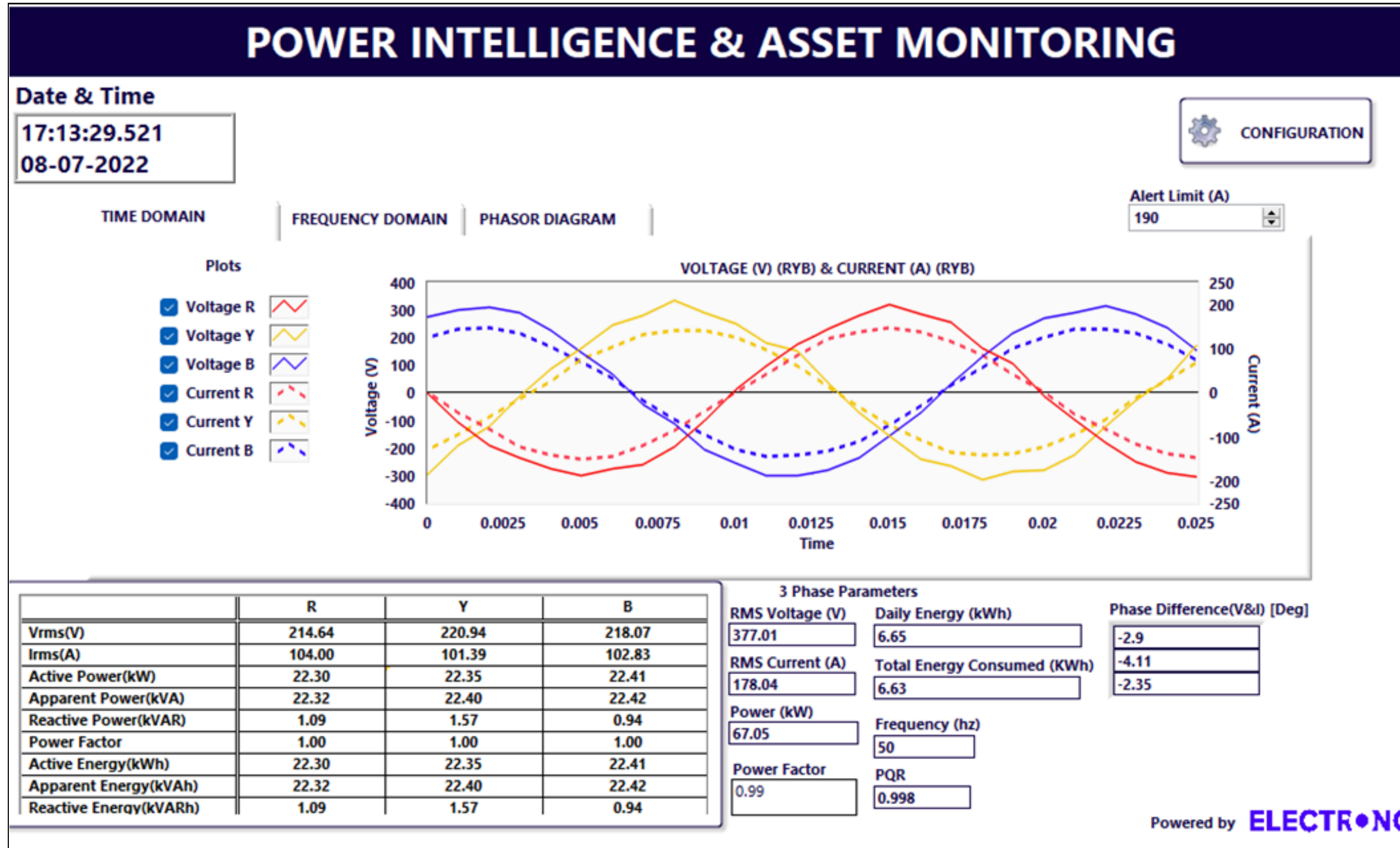Provides monitoring and diagnostic for all vital Distribution Assets

P I A M Dashboard & Real-Time Readings

- Time, Date, System, Meter ID with Phase Sequence
- PT Secondary, CT Secondary
- Cumulative - RYB - Active Energy (KWh)
- Cumulative - RYB - Apparant Energy (KVAh),
- Cumulative - RYB - Reactive Energy (KVArh Lag),
- Cumulative - RYB - Reactive Energy (KVArh Lead)
- Average Power Factor - RYB phase, Power ON hour
- Load ON hour, Voltage L-N (R,Y,B) (V), Average Voltage
- Phase to Phase Voltages L-L (RY, YB, RB)
- Current (R, Y, B), Average Current
- Power Factor (R, Y, B)
- Combined Power Factor (RYB)
- Instant Active Power-KW-R,Y,B
- Instant Reactive Power - KVAr-R,Y,B
- Instant Apparent Power - KVA - R,Y,B
- Instant-KW-RYB
- Rising Demand-KW/KVA,
- Maximum Demand-KW/KVA
- Total Harmonic Distortion

POWER INTELLIGENCE & ASSET MONITORING

Date & Time
17:46:35.022
08-07-2022

CONFIGURATION

Alert Limit (A)
190

TIME DOMAIN | FREQUENCY DOMAIN | PHASOR DIAGRAM

Plots
- Voltage R
- Voltage Y
- Voltage B
- Current R
- Current Y
- Current B

VOLTAGE (V) (RYB) & CURRENT (A) (RYB)

	R	Y	B
Vrms(V)	267.61	247.65	229.35
Irms(A)	5.74	5.77	5.57
Active Power(kW)	1.16	0.12	0.81
Apparent Power(kVA)	1.54	1.43	1.28
Reactive Power(kVAR)	1.01	1.42	0.99
Power Factor	0.75	0.09	0.63
Active Energy(kWh)	1.16	0.12	0.81
Apparent Energy(kVAh)	1.54	1.43	1.28
Reactive Energy(kVARh)	1.01	1.42	0.99

3 Phase Parameters

RMS Voltage (V)
430.01

Daily Energy (kWh)
14.33

Phase Difference(V&I) [Deg]
39.64
-85.42
50.33

RMS Current (A)
9.39

Total Energy Consumed (KWh)
14.33

Power (kW)
2.03

Frequency (hz)
50.05

Power Factor
0.49

PQR
0.452

Powered by ELECTRONO

ELECTR●NO®

PIAM implemented in Whitefield Bengaluru: Feeder 10001926848 Vinayaka layout TC

- PIAM did a pilot for about two months in Vinayaka layout in Whitefield.

- PIAM IS Playing a Key Role to Empower Smart Grid Initiative

Unique selling proposition

Vendor-Agnostic Platform:

- Minimize reliance on disparate software and hardware suppliers through an all-encompassing, unified solution.

Academic and Research Empowerment through Open Source:

- Cultivate innovation and ongoing advancement via PIAM's open-source accessibility, motivating educational and research establishments to enrich and extend its functionalities.

Adaptable and Versatile:

- Personalize PIAM's functionalities to align with your operational intricacies, guaranteeing utmost pertinence and efficiency.

Robust Security and Regulatory Adherence:

- Engineered with rigorous security measures and regulatory compliance frameworks to fortify the protection of sensitive operational information.

Get In Touch

ELECTRONO®

ELECTRONO SOLUTIONS PVT. LTD.

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or Scan