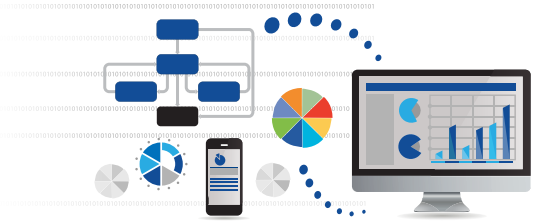
CAS Hemera Gauss

System developed to implement the BPM concept with the capacity to manage the Metering Management processes, prioritizing the Utility's decision making.

Gauss meets the complete process management cycle, from modeling to implementation, monitoring and optimization. Workflow control is achieved by creating the respective process steps.



As an advantage, the system is expandable for the application of business rules for different scenarios, allowing: stage creation, filling of configurable fields in each stage, application of transition between stages rules, flow integration for automatic start, change of stages notifications, traceability of each stage of the process.

The indicators available on the platform are the result of the application of rules that are configurable by utilities.

- They increase analysts' technical visibility, allowing the work to be optimized.
- They allow a view of the process, providing indicators and management reports: performance over time, assertiveness of the analysis process and energy gain.
- Allow the creation of several flows for the utilities' processes. E.g.: Contract Control, ISO Document Management, Equipment Maintenance.

Recovery of Energy Losses

This **Energy Loss Recovery** module is applicable to **C&I Customers** – Commercial & Industrial – to map the end to end revenue assurance process for the utility.

It applies more than **80 business rules** configurable by the utility, combined with more than **30 physical and logical CAS telemetry alarms** to point out suspicious targets that can cause losses. Using **Gauss** it is possible to concentrate the utility's metering analytical activities, allowing a more agile and assertive decision making:

- Invoiced Consumption History.
- Load Curve.
- Phasor Graph.
- Rule Occurrences.
- Indicators.

Rules	Individual rules parametrization.	Creation of new compound rules based on the combination of individual rules.	Rules association to indicators, with configurable weights.
Indicators	Indicators that can point to: defect, meter parameterization error, registration error, suspected fraud.		
	Passing Score attribution to indicators to determine decisions on loss recovery processes.		
	Task automatic distribution to people related to the process. Prioritization by indicators.		

At the end, an analysis dossier is generated with the possibility of adding documents, forms and images to a report.

Loss Diagnosis Automation

Field Environment – Meters

RS2000 Remote Terminal Unit

Manual Collection MOBii

Application Environment Commercial & Industrial

HEMERA

Telemetry Events
- Alerts
- Occurrences

Business Events
- Behavior and History
- Mass Memory

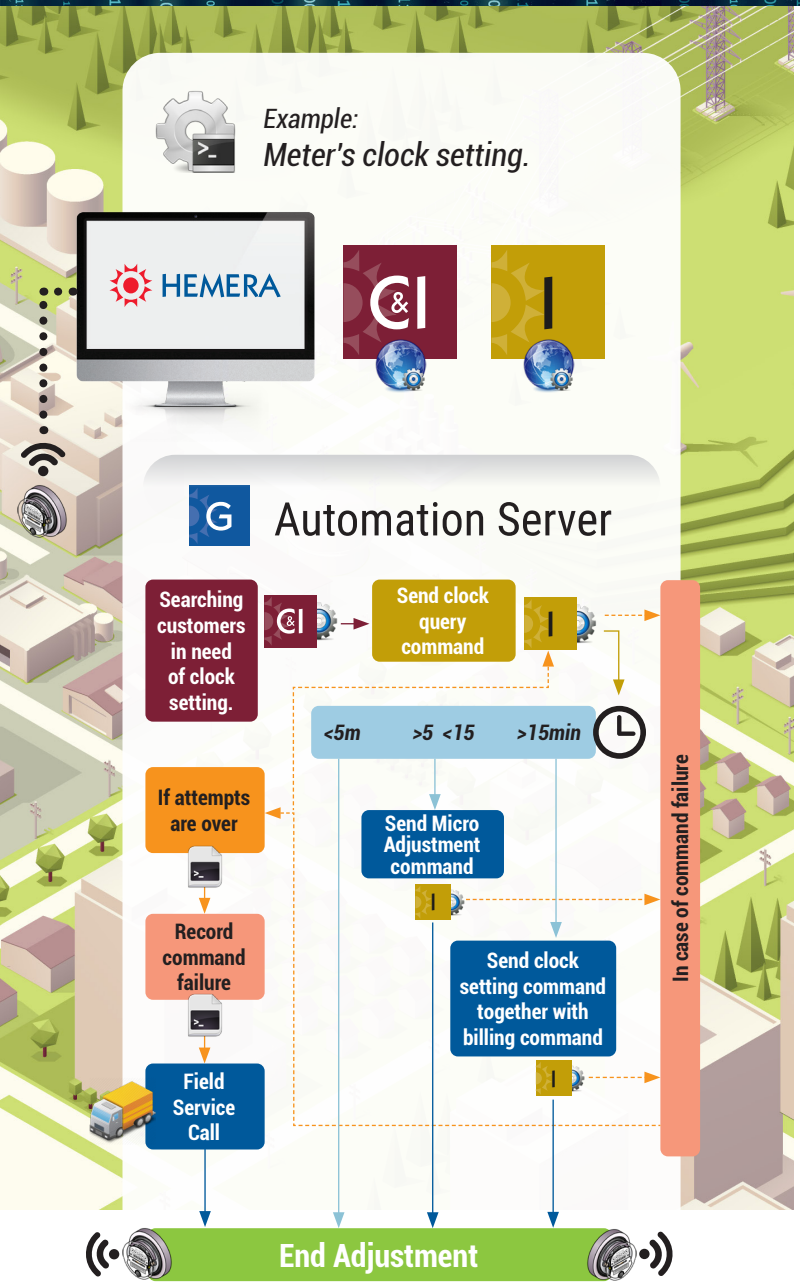
Attenuation

Analysis Environment Gauss

Analytical Rules
Over **80 Analytical Rules**
New Compound Rules Creation

Indicators

Indication to Fighting Losses process



Automation Server

It is a process automation module from **Gauss**, with a *Multi Agent* architecture, which allows the isolation of mission-critical tasks and scalability according to process demand.

It supports multiple programming languages and repository with version control.

Automation can be scheduled or triggered by events.

Automation Server can automate a task using an external system interface, perform a complex calculation or any task that can be coded in programming language.

Process management at utilities can benefit from **Automation Server** to automate, for example:

- Communication failures treatment.
- Telemetry configuration.
- Meter's clock setting.
- Control over the regulatory agency logical inspection.

Automation Server native programming

Communication Failure

- Telemetry communication test.
- Reading failure diagnosis.
- Call opening.
- Email return.
- Risk calculation and decision-making.

Meter's Clock Setting

- Delayed clock warning.
- Time check.
- Correction through commands.

Logical Inspection Regulatory Agency

- Logical Inspection Validation.
- Metering Data Delivery in XML.
- Call to open notification at the Regulatory Agency.
- Calls for equipment checks in the field in case of inspection failure.

ccee

Automation of the Regulatory Agency Data Delivery Assurance Process and Logical Inspection Monitoring.

Process Automation at the Utility:

HEMERA

Meter Data Management

Meters in the Field

Guardian
Logical
Inspection
Regulatory
Agency

Residential Smart
Monitoring
Billing Connect
& Disconnect

C&I
Monitoring
Billing

Residential
Monitoring
Billing
Connect &
Disconnect

Frontier
Monitoring
Load
Regulation

Iris
Sending
Commands

IG RS C&I R F I

D G

Utility Systems

- Communication Failure
- Contingency Meter
- Failure
- Energy Failure
- Billing

Process Metrics with **Dashboard**

Automation Server

Gauss Benefits

- **Speed:** Shorter response time to business demands.
- **Assertiveness:** Better results in fighting losses.
- **Automation:** Reduction of manual actions.
- **Flexibility:** Flow creation and business rules mapping.
- **Potencialization:** Analytical intelligence improving productivity.
- **Robustness:** Ability to process big data information and scalability.