

## Integrated Building Management System

**eTRIA**<sup>TM</sup>



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ware for a Smart Habitat



Laurus Software Technologies Pvt. Ltd.





# We Integrate and Interface Business

Laurus Software Technologies is a software products, solutions and services company offering innovative, technical and engineering applications to best suit the needs of a vast clientele in select domains namely Building Automation, Industrial Automation, Fire, Security & Surveillance, Employee & Resource Management, Facility Management and Insurance & Finance.

Laurus Software's **"Interfaces and Integrates Business"** operations efficiently and effectively at significantly lower costs through its innovative and technologically advanced products, product licenses, custom development, and project consulting services.

With proven track record and 100% repeat business from loyal customers. Laurus Software's is a profitable organization, professionally managed by a team of technocrats and backed by a pool of in-house technical experts.

Our loyal customers are an integral part of our growth and it is with their support , that the interesting journey uphill, continues with increased innovative products getting added into the existing portfolio year on year. Our current portfolio of products and solutions includes :

## Building Automation

- BMS - SCADA
- BTU METERING
- Energy Monitoring
- Thin Servers - (BACNet, Modbus etc)
- History Reporting Software

## Resource Management

- Time and Attendance
- Visitor Management
- Cafeteria Management
- Library Management
- Parking Management
- Club House Management

## Insurance & Fianance

- NASTIE

In the coming years we will work towards being recognized as a leading products and solutions company through collaborative innovation and lasting client relationships.

## Fire, Security & Surveillance

- Fire Alarm Systems - HMI
- Fire Reporting
- Fire Panel Integration Servers

## Industrial Automation

- SCADA
- Control Modules and Protocol Stacks
- Thin Servers - (OPC, Modbus etc)

## Facility Management

- Help Desk Software Systems
- Integrated Facility Management System
- Residential Property Management System

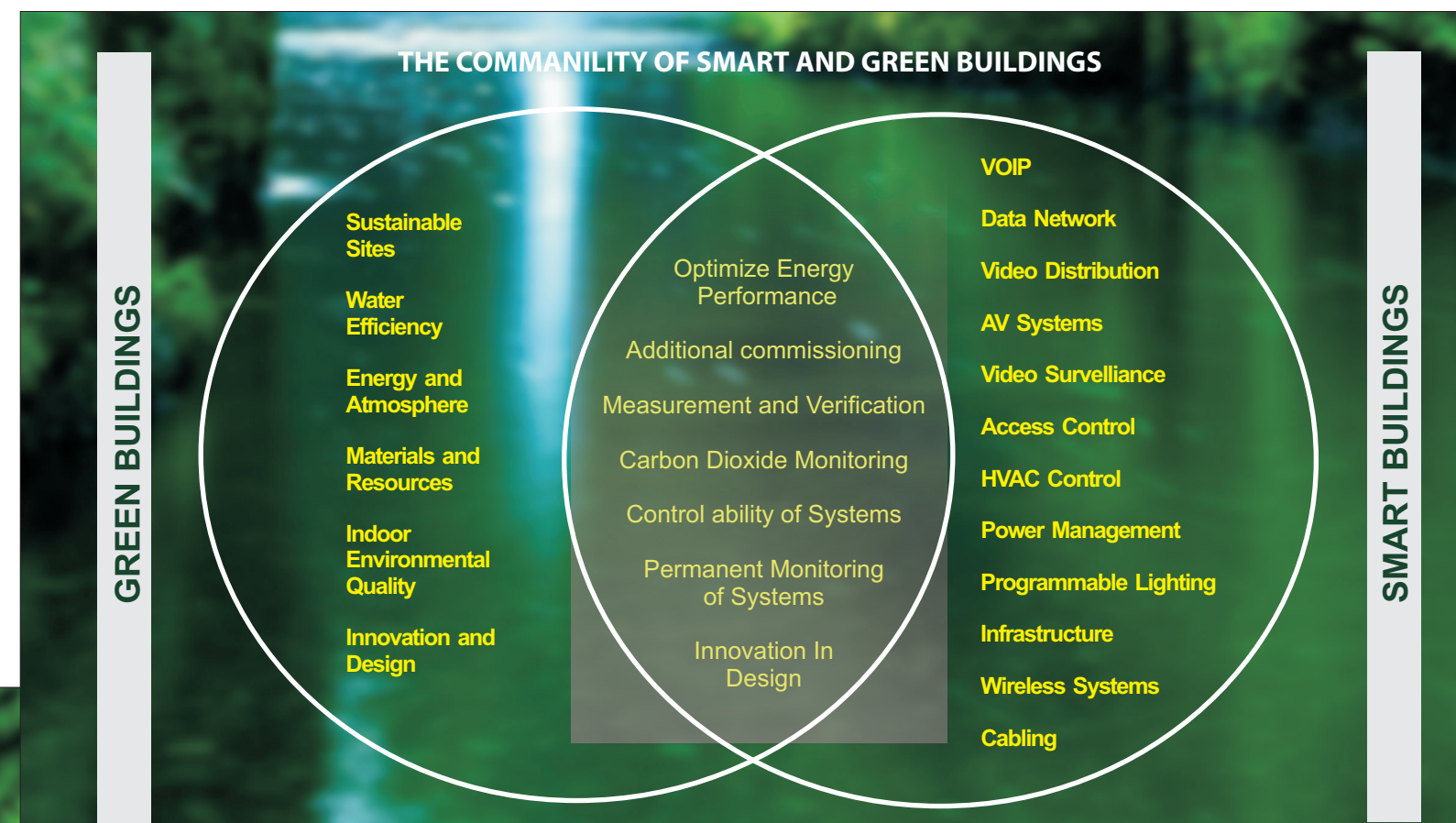
'Go Green' is the buzzword as climate change takes centre stage. Growing consciousness about global warming has permeated in human minds. Common households to corporate houses all want to espouse green technology. The switch is from conventional to energy efficient, emission-free habitats.

While green buildings are about resource efficiency, lifecycle effects and building performance, Smart buildings, whose core is integrated building technology systems, are about operational efficiencies, enhanced management and occupant functions. It primarily involves:-

- **Energy optimization and saving**
- **Security systems (access control, CCTV cameras, etc.)**
- **Parameter control (temperature, humidity, etc. )**
- **Programmable lighting control (natural and artificial)**
- **IT systems networking**
- **Integration of automation devices to a central control system**

Due to this integrated approach a new partnership is emerging between, green builders, designers and developers, and building intelligence providers. They advocate practices that deliver sustainable, environmentally sound, high performance, low energy-usage infrastructure. This has systems, controls and automation needed to provide improved scheduling, coordination, optimization and usability. It brings convenience, financial and conservation benefits to living. This is what a Smart Habitat is all about and we at....

## Laurus Software's provides all the automation needed to make your habitat





# eTRIA - the eware for a smart Habitat

Techno savvy consultants always seek intelligent, well-integrated, reliable, building solutions that offer safety, comfort and energy efficiency to all inhabitants - be it home or a workplace or a commercial complex.

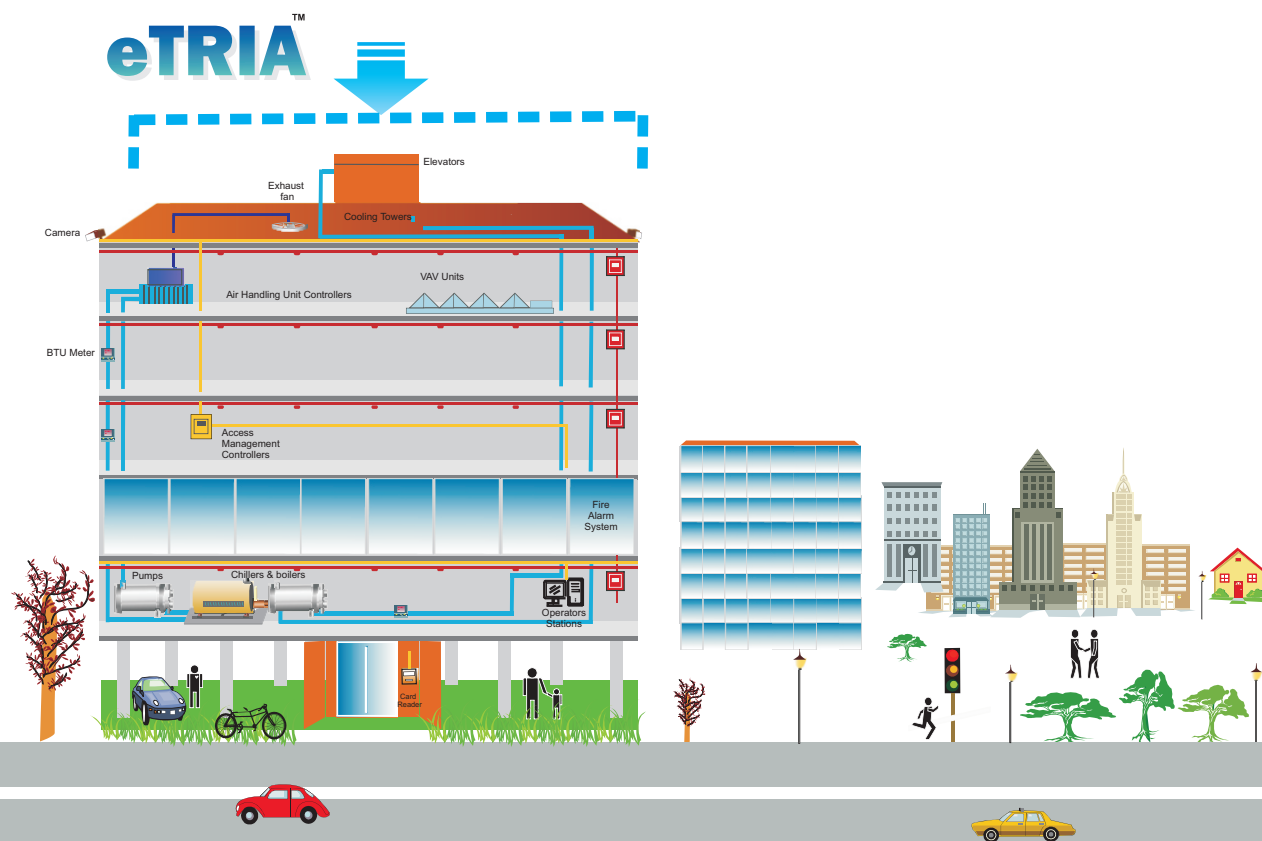
After extensive research and in-house development, Laurus Software's offers an innovative automated product **eTRIA**, to cater to this rising market segment.

Simple-to-use, web-enabled, remotely accessible, feature-rich **eTRIA** is Laurus Software's Central Building Management system that can record, log, monitor and control various inputs and parameters in real time. It consists of an intelligent data acquisition, graphic user interface, and report modules, enabling users to gather pertinent information about the various sub-systems and then make appropriate operational control changes.

**eTRIA** monitors the status of building security systems, HVAC systems, electrical distribution, elevators, and a number of other building management functions for enhanced energy saving, parameter control (temperature, humidity, etc.), and integrated network.

**eTRIA** can be highly customized due to its modular design and scalable architecture. It supports multiple protocols, even custom non-proprietary protocols to integrate well with your functional needs without hindrance.

**eTRIA** works with Standard Windows OS and does not need any specialized database licenses. Tag based versions are available. Economically priced, it comes with local support via unrestricted email and telephonic support and including one year of free upgrades.



## Feature-rich eTRIA – significant highlights

### Multiple Protocol Connectivity



**eTRIA** supports a multitude of standard protocols like the BACNet IP / MSTP, Modbus - the entire family, LONWorks, and a host of proprietary protocols- the library is increasing. The unique architecture allows user to integrate protocols in future without causing any impact on the core application. Multiple protocols can thus co-exist within the same facility letting multiple vendor devices communicate with the same platform, providing seamless integration into the system.

### In-built Common Configuration Tool



**eTRIA's** simple and intuitive interface configures and sets-up your networks, controllers, system tags and various logging blocks like History, Alarm etc. The entire network can be configured dynamically without a need for a separate development environment. The integrated run time and development environment provided within **eTRIA** provides the users with the flexibility to add/ delete/ configure networks and associated systems on the go.

- Set-up Networks
- Set-up Controllers
- Tag Definitions
- Configure alarms & history

### Web Enabled for Remote Monitoring and Diagnostics



The web module provided as an optional module with the software, allows users to log into the system remotely by using the internet. One can monitor the system remotely and also view diagnostic information separately. This web module is a client module and multiple users can connect to the system simultaneously to monitor the facility.

Some of the other features include 21 CFR Part II support for Pharma Industry, Back-up/ Restore , event and alarm log, error log, odbc connectivity etc. to name a few.

### Single, Integrated Software

The most unique feature of **eTRIA** is that it has both the **Development** and **Run time environment** are well integrated within the same package, eliminating the need to buy and install 2 separate software one for configuration and another for run time view. Viewing a configured system is just a mouse click away from the configured system.

## Feature-rich eTRIA — significant highlights

### Trending - Real Time and Historical



Get instant insight into the stability and performance characteristics of various sub systems and control panels in use with **eTRIA** real time online/ historical trending that allows zoom in / zoom out.

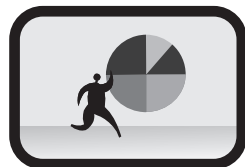
The drag and drop functionality allows you to monitor and configure your trend views on the go. The multiple y-axis support along with the capacity to add up to 16pens (with palette, color, type selection) in one trend block gives you the capability to monitor larger systems in a single frame.

### Scheduling



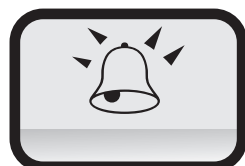
Use **eTRIA** scheduling engine for optimal utilization of facilities, schedule of lighting, HVAC, security systems, common occupancy sharing, and automated maintenance of all other systems leading to energy efficiency of the building. This important feature allows starting / stopping the schedule on a daily, weekly, monthly basis or even event based schedules. These can be pre-configured for months or years in advance. The flexible user interface can also modify the set schedules without disturbing the existing scheduled operations.

### Reporting



Reports are vital to improve processes and decision making. Valuable intelligence derived from analysis fosters enhanced safety. But each report may be in a different format and style. **eTRIA** architecture easily integrates new report formats into the system be it custom reports in user defined templates or standard templates. Reports can also be generated with minor statistical functions like average, minimum, maximum, and mean calculations. These reports can be easily exported to a PDF file format or converted and published to Microsoft Excel or other Microsoft packages.

### Alarms and Events

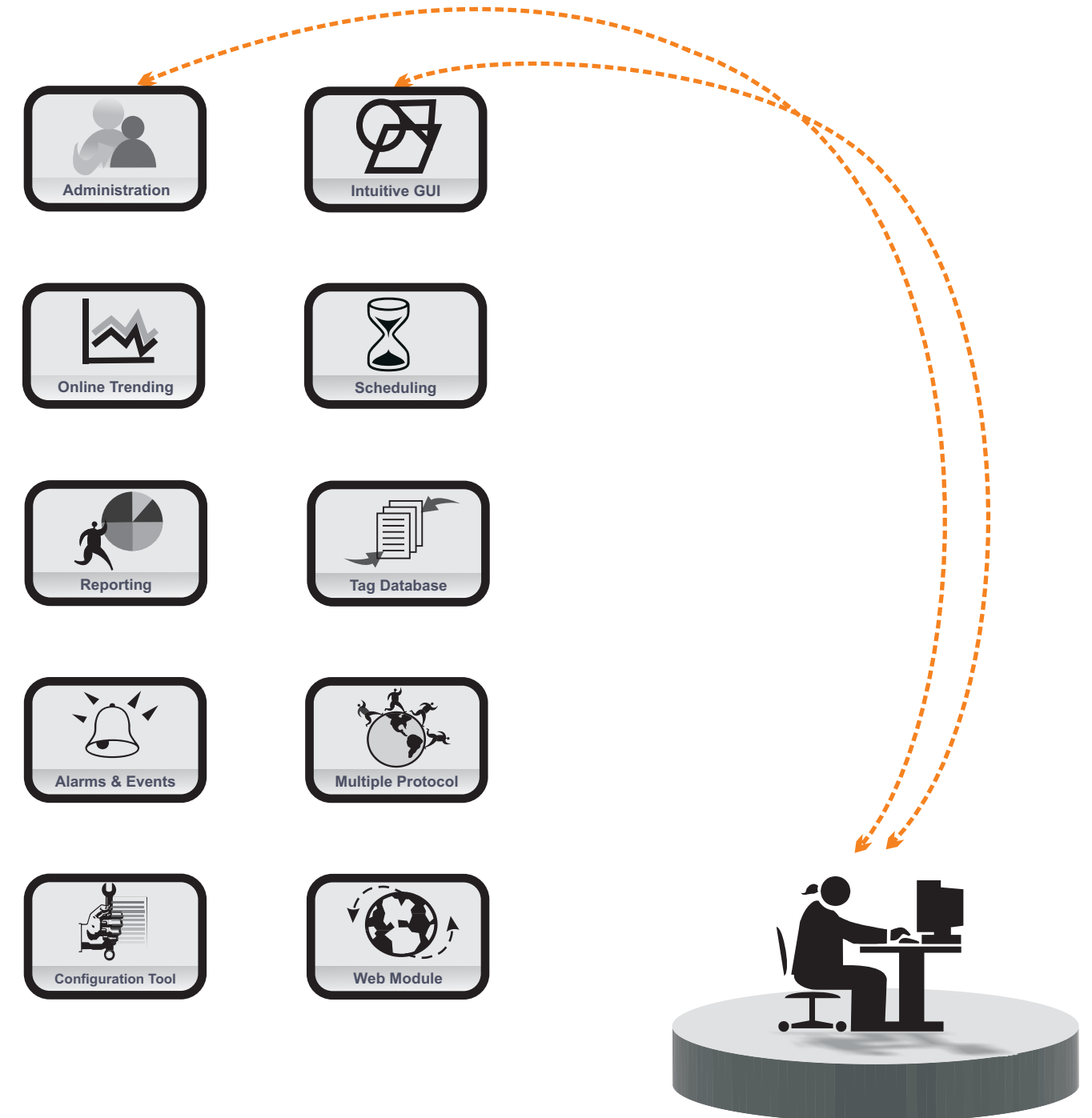


The unique presentation of alarms and events in **eTRIA** allows users to view all alarms being generated with a single mouse click. Once responded to, these alarms move into the acknowledged section that can be archived and exported. **eTRIA** defines various types of alarms associated with a particular input and can even define up to 10 priority levels.

A single comprehensive summary of alarms and events enables the user to quickly address various alarms efficiently and resolve the problem.

## Feature-rich eTRIA — a perfect match for your unique building management

**eTRIA** is a truly modular design and the system architecture also serves as a framework to link / de-link or add / remove individual features to/from the base product without having to re-design or modify the core components, there by, reducing cost of development, customization, testing and time to market.

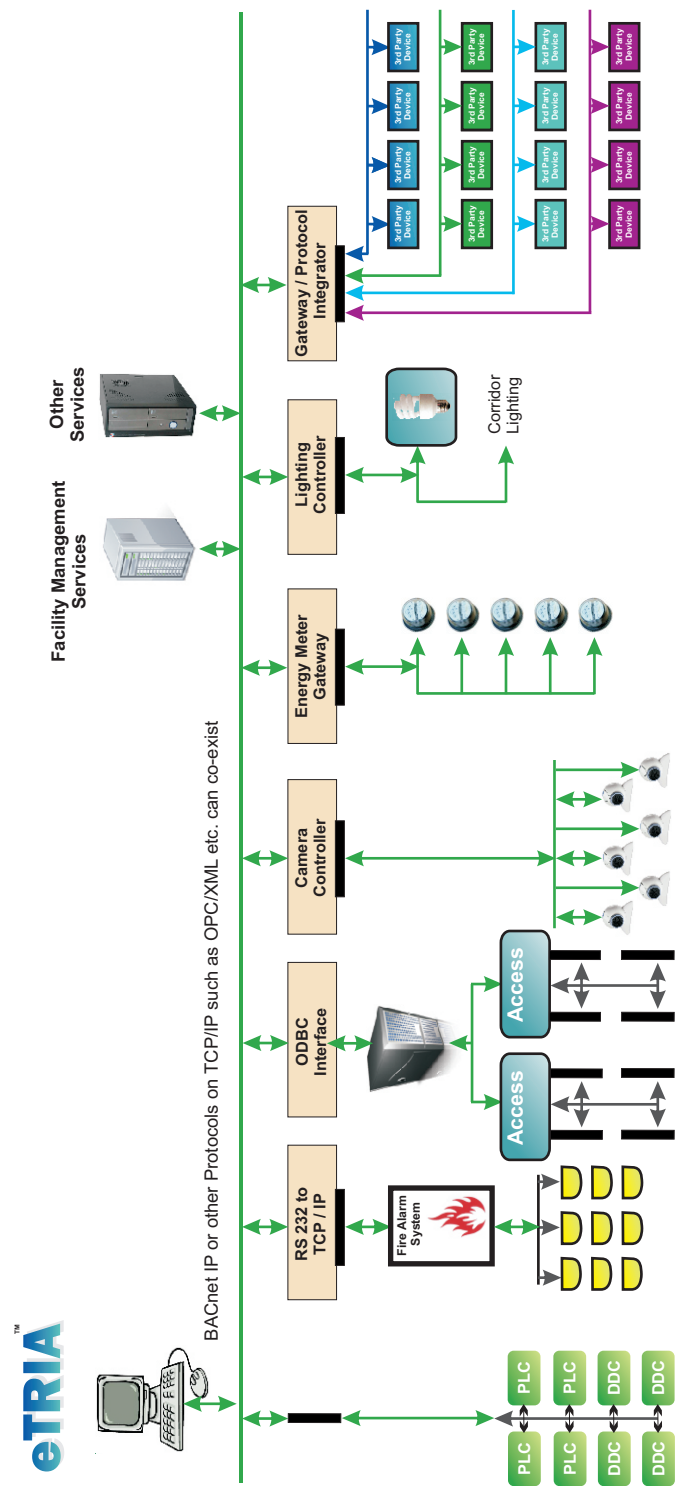




# Componentized eTRIA Modular Design and Scalable Architecture

# Feature-rich eTRIA – significant highlights

System Architecture



## Administration



A central, well-integrated, automated system allows multiple users to monitor, record, and log various functions or parameters. And these safe, secure and smooth operations are ensured by access protected, unlimited user creations that are functional or role based like the:

- Administrator - Super User
- Operator
- Maintenance Technicians
- Supervisors

For many more choice - based unlimited user creations, select the enlisted features to be defined for a particular user type with just a mouse click. Custom names can also be assigned to various users of the system.

## Intuitive GUI



Humans recognize and register the visual language of signs and symbols faster than they read text commands. These graphic images or icons add speed and power to the system.

All these various 'mouse able' interfaces like pull-down menus, dialog boxes, check boxes, drop-down list, scroll bars, etc. can be highly customized using relevant graphics, icons and representations. This bit-mapped display gives an in-house, home-made look and feel to the system, increasing user comfort zone and thereby enhancing the efficiency of software operation.

## All this is possible as eTRIA has the capability :-

- To import various types of graphic formats (autocad / bmp, etc.)
- To give multiple choices to create graphics from its rich and growing symbol library of animated and static symbols.
- An integrated Graphic editor along with the viewer can customize the graphics on

Additionally, one can view instant trends of any point from the graphic screen itself rather than going to the trend feature within the software.

**Custom Graphics Support** also allows custom AVI, JPG, BMP, ACAD, PPT etc. type files to get directly imported into the Animated Graphics and Symbol Library of **eTRIA**.

## Tag Database Import - Export



One of the most tedious tasks of configuring the system and application engineering with any HMI is the tag database creation or addition of the tags into the system. **eTRIA** provides a very simple and flexible tag database import / export feature that users can create and modify tags and blocks in a spreadsheet using easy Excel tools. One can build the tag database and then easily import the entire database into **eTRIA** with simple mouse clicks, without any additional programming.