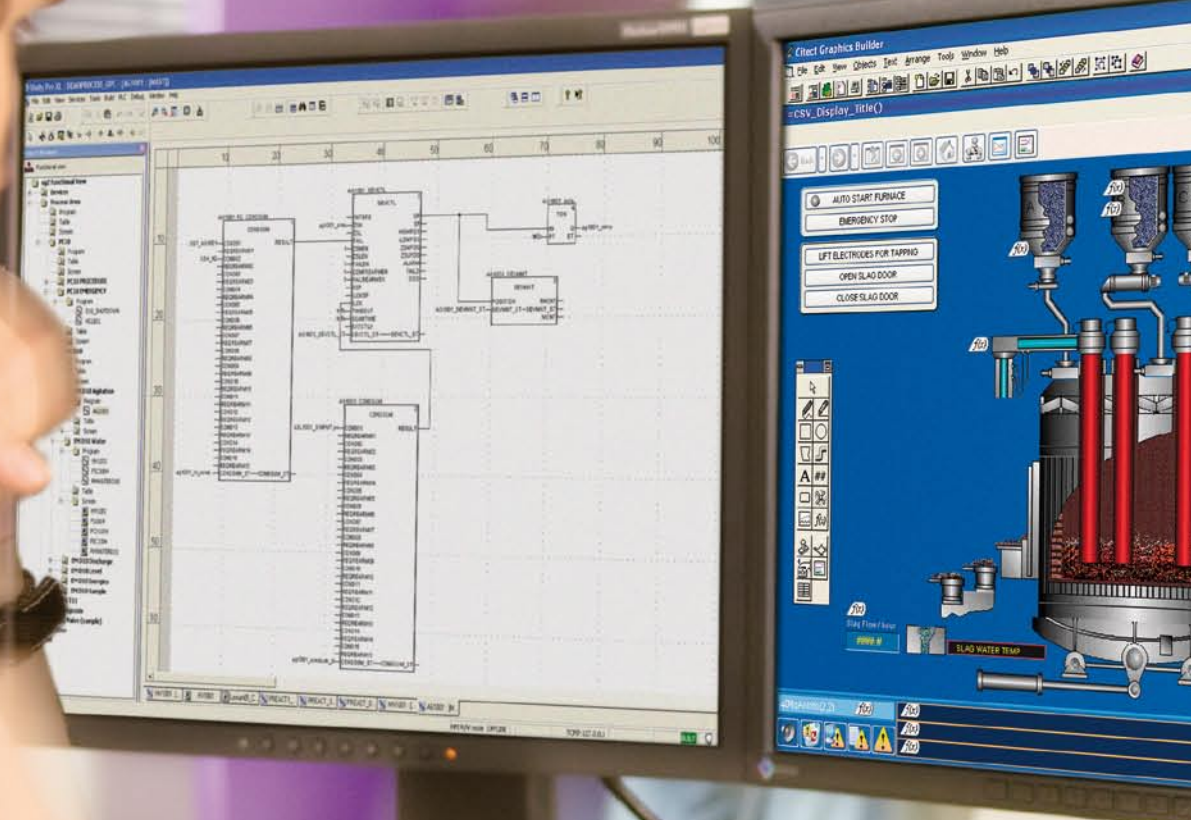


# Accelerating your engineering workflow

Engineering solutions for industry

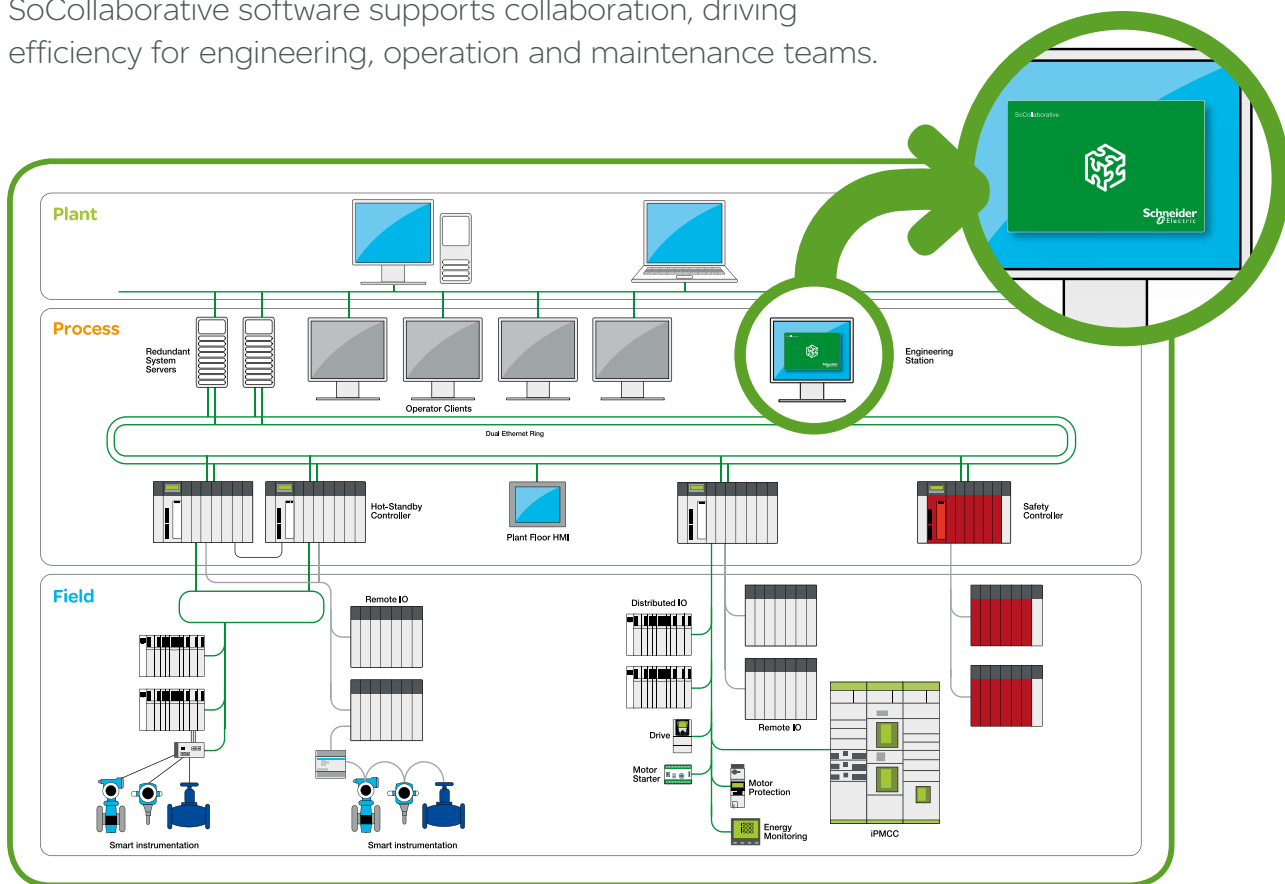


**Schneider**  
Electric

# PlantStruxure™

PlantStruxure™ is a collaborative system that allows industrial and infrastructure companies meet their automation needs and at the same time deliver on growing energy management requirements. In a single environment, measured energy and process data can be analyzed and used to yield a holistically optimised plant.

SoCollaborative software supports collaboration, driving efficiency for engineering, operation and maintenance teams.



## > Integrated to reduce risk

From devices to MES all of the system components are designed to work together with each other and with our chosen technology partners.

## > Scalable for changing times

From tens of I/O to hundreds of thousands, it means that you can start out small and grow as your requirements change.

## > Collaborative to increase efficiency

It is open to exchange information with other plant and business software, and fosters an environment of collaboration by delivering the process information you need in the way that you like to see it.

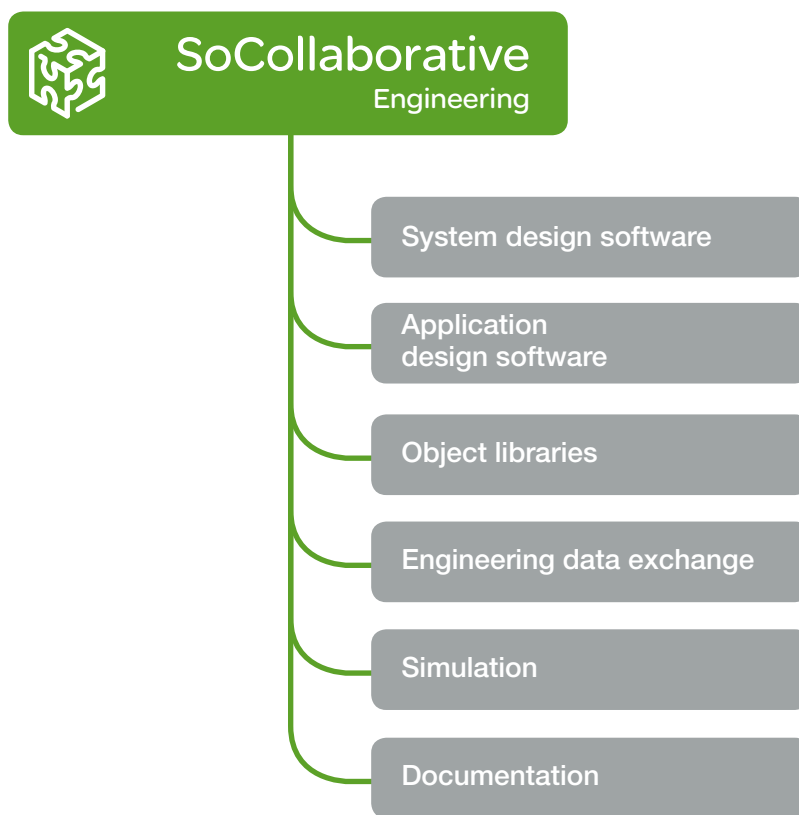
## > Flexible because your process is unique

It supports the architectures that you need for your application. Single site, multiple sites, distributed control, local control, discrete, process, safety, batch all within the one system.



# SoCollaborative

> You need to focus your team and energy on designing and engineering automation solutions to meet the needs of your end users today and tomorrow. If you can shorten your project delivery time with software that is easy to use and matches your engineering workflow then you can really be more efficient.

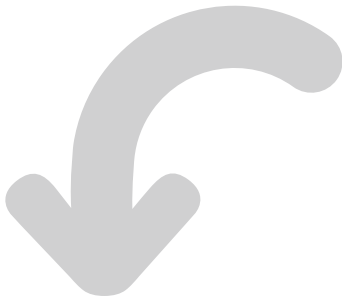


The Schneider Electric system has helped us considerably reduce programming and installation time, to control and secure these phases and consequently to minimise delays in commissioning.

Chang SiYong  
Electrical & Automation Engineer  
Lafarge Cement (China)

# So easy to use

You have everything you need to configure your system with SoCollaborative Engineering.



**SoCollaborative**  
Engineering

 **Unity Pro**  
a SoCollaborative software


Configuration of Modicon Programmable Automation Controllers

 **Vijeo Citect**  
a SoCollaborative software

Design the operation environment of your system

 **Web Designer**  
a SoCollaborative software

Design of Web based diagnostics and monitoring applications

 **UAG / sg<sup>2</sup>**  
a SoCollaborative software

Management of the system from a single location

 **Libraries**  
a SoCollaborative library

Tested and validated process and device objects for system engineering

# For more efficiency

SoCollaborative Engineering helps you to accelerate your control system configuration, significantly reducing your engineering time and minimising your project risk.

## Reduced project schedules

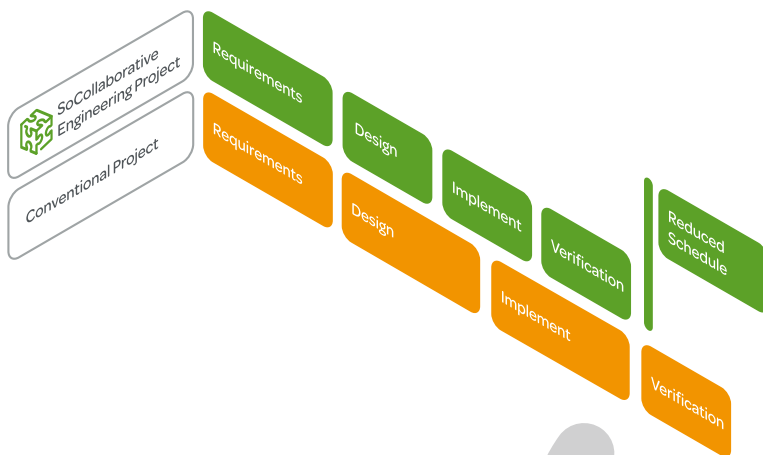
A combination of single data entry, feature-rich object libraries, collaboration with third party process design software and the ability to standardize and reuse your engineering best practises helps to dramatically decrease the time it takes to design, engineer, install and commission your system.

## Integration with process design software

The openness of SoCollaborative Engineering means that you can easily exchange process and system design data with third party applications and remote engineering teams, removing the need to configure the system from scratch.

## Minimise project risk

It delivers an object-based approach to your configuration and includes feature-rich application libraries specifically focused on the process industry.



# 30%

Engineering savings compared to a conventional approach

# Advanced software for desi

## Unity Pro

- > The simple configuration of Modicon controllers

Unity Pro is designed for IEC61131-3 programming, debugging and operation of Modicon M340, Premium and Quantum programmable automation controllers.

### Easy to use

Unity Pro makes best use of the graphic and context-sensitive interfaces of Windows XP® and Windows Vista®.

- > Direct access to tools and data
- > 100% graphic configuration
- > Customisable toolbar and icons
- > Extended drag-and-drop and zoom functions
- > Integrated diagnostics window
- > FDT/DTM container.

### Five IEC61131-3 languages to mix as you wish

Each section of code can be programmed in the language of your choice, best adapted to each processing operation. All edit, debugging and operation tools are accessible whatever the language used.

### All the advantages of standardisation

Benefit from a complete set of functions and tools enabling modelling of application structure on your machine or process structure. The program is split into organised function blocks grouping: program sections, animation tables, operator screens and hyperlinks. Basic functions used repetitively are encapsulated in user function blocks (DFB) in IEC61131-3 language.



### Time saving by reuse

Tested and qualified, your standards reduce on-site development and installation times. Quality and deadlines are optimised.

- > Function modules reusable in the application or between products by means of XML import/export
- > Function blocks instanced by drag-and-drop from the library
- > Instances can automatically inherit library modifications
- > Specific libraries can be reused in Vijeo Citect.

### Off-line simulation

The simulation function built into the system enables engineers to replicate the functionality of the application in a PC environment. This helps to identify any errors in the application programming and decreases testing and commissioning time.

# gn and configuration

## Vijeo Citect

### > Design the operation environment of your system

**Reliable, flexible and high performance Supervisory Control and Data Acquisition (SCADA) system.**

### Real-time visualisation of your process

The engineering environment of Vijeo Citect allows you to quickly configure and deploy the operating and monitoring interface for your system, including graphics, trends, alarms, security policies and system navigation.

### Powerful Graphics

The graphics capabilities of your system are a critical factor in its overall usability. Vijeo Citect lets you develop true color, easy-to-use graphics that provide the operator with an intuitive, consistent user interface.

### Ready to use

Over 70 ready-to-use page templates and 500 symbols come completely configured, covering all your needs for trending, alarming and visualisation. Use them as they are, or edit them to match your own corporate standards.

### Redundancy for reliable architectures

Because of Vijeo Citect's task based architecture, you get an unrivalled level of system redundancy. Each of the tasks in Vijeo Citect, (I/O, trends, alarms, reports, display), can be shared across multiple computers in your system. And the best thing about it – no special configuration is required.

## Security

Support for read-only projects allows you to secure your configuration from unauthorised changes. System integrators, OEMs and engineering teams can deploy a project safe in the knowledge that it is read-only secured.

Integration with Windows security allows corporate security standards to be applied to the system and creates a single location for the management of all user accounts, including operators, managers and engineers.

## Applications with special requirements

To provide you with maximum flexibility and power, Vijeo Citect comes with two programming languages: Cicode and CiVBA. Both languages are designed for the control environment and support full multi-tasking to for maximum system performance.

## Web Designer

### > Design Web based diagnostics and monitoring applications

**It provides easy and intuitive design of the Web based diagnostic and monitoring application for the Modicon PACs built-in Web servers.**

Design of animated Graphic Custom Web pages

> Setting of advanced services available on FactoryCast HMI and FactoryCast HMI Gateway Web servers:

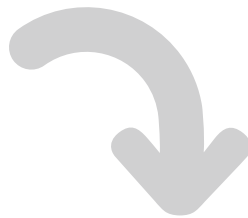
- Data Logging
- Database connectivity (SQL, Oracle, MySQL)
- E-mail/SMS notifications
- Dynamic reports
- Recipes management

> Full Management and transfer of the Web site (Predefined and user defined Web pages and documents).

# Management of the system from a single location

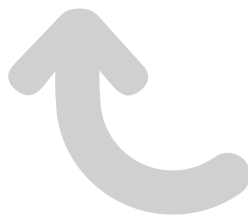
Decrease your engineering time by choosing the system configuration tool that matches your engineering workflow.

> You have a Modicon PAC background and a lot of experience integrating devices. A system that allows you to perform object based configuration would fit very well with the way you like to engineer. It would significantly improve your engineering efficiency



Choose UAG

Choose sg<sup>2</sup>

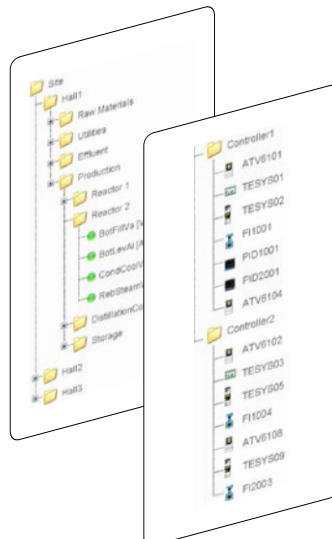


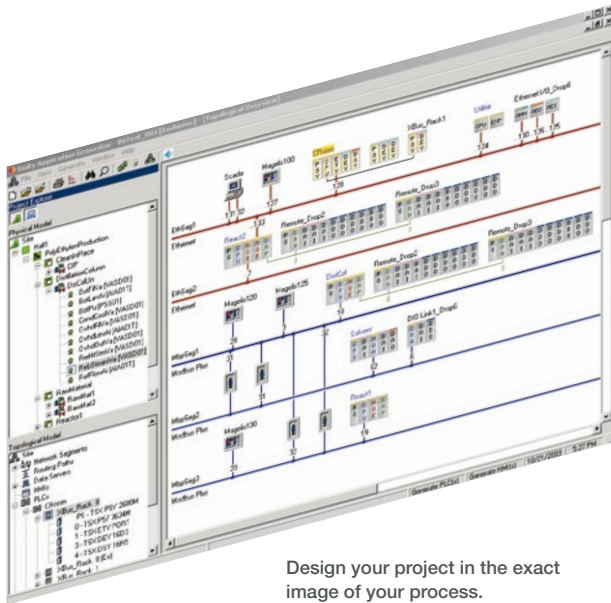
> Your competitive advantage is that you have a good understanding of process design and modeling, and you want a system that supports physical and topological models just like in the S88 standard. With a system like this, you can accelerate your engineering workflow and improve your engineering efficiency.



... I can shorten my project delivery time with software that matches my engineering workflow...

Process view or objects approach, make the best choice for you.





Design your project in the exact image of your process.

## UAG

> Design your project in the exact image of your process

### Your process expertise

UAG offers a flexible process methodology, capable of keeping pace with your installation's development and complying with ISA-88. UAG updates the control, monitoring and supervision data for your process, according to the centralized configuration.

It automatically handles:

- > Consistency of the topological layout
- > Management of all Modicon PAC resources
- > Inter device communication
- > Operating modes
- > Process device configuration
- > Process interlocks
- > Consistency of the controller and HMI applications.

### Total traceability

UAG tracks and documents every modification made. The version control system, supports compliance with FDA 21 CFR 11, ensures simple, straightforward validation.

### Generate your applications automatically

With the process design information, UAG generates the Modicon PAC application including:

- > Hardware configuration
- > Application structure
- > Communication configuration
- > Control Devices and corresponding interlocks...

As for you supervisory applications, UAG generates:

- > The tag database including properties like alarms, archiving, access rights
- > The pictures with control mimics
- > The communication driver configuration

The controller and HMI applications remain synchronized, acting like a single database.

## sg<sup>2</sup>

> The object-based approach to your control system configuration process

### A collaborative approach

Leveraging the features of Unity Pro and Vijeo Citect to deliver added value for all users

- > Supporting the range of Modicon PAC and providing easy integration of Schneider Electric devices
- > No manual data handling and optimized communication between the Modicon PAC and SCADA databases.

### To work smarter

- > Easier configuration of your automation system without any loss of system functionality.
- > Minimising project risks with a library of preconfigured objects integrated with Unity Pro and Vijeo Citect.
- > Delivering system standardisation
- > Reducing your training time
- > Increasing system functionality
- > Built-in diagnostics and maintenance

### Generate your application automatically

> From the process and smart devices libraries, sg<sup>2</sup> generates:

#### for Unity Pro

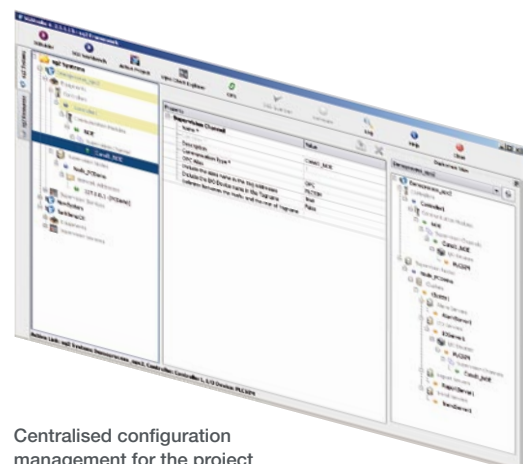
- > Automatic code creation
- > Animation tables
- > Operator screens

#### for Vijeo Citect

> The tag database including properties like alarms, archiving, access rights...

> The pictures with control mimics

And freedom to choose the supervisory data to exchange.



Centralised configuration management for the project from a single environment

# Integrated diagnostics, access control and logging of operator actions

Engineers can use the libraries as they are or take advantage of their extensible nature in order to augment the library to meet specific standards. Once created, user defined objects are available for reuse in the same application or on subsequent applications, cutting development time and reducing project risk.

## Object-based configuration to save time

The object libraries available with SoCollaborative Engineering enable you to quickly and easily develop your control system while at the same time reducing ongoing maintenance and ensuring a consistent operator interaction with your system.

## An object based approach

SoCollaborative Engineering is shipped with a range of ready-to-use libraries that combine both visualisation for Vijeo Citect and control for Unity Pro in a single object. When used in conjunction with our system engineering tools, this object based approach to configuring your system aids in system wide standardisation and can greatly reduce your engineering effort.

## Extensible, open and reusable

Engineers can take advantage of the extensible nature of the libraries in order to build their own user-defined objects if required. Once built, the objects are available to be reused in the same project or on subsequent projects, cutting development time and reducing project risk.

## Runtime integration

For the operator, each system object is integrated with the runtime environment of Vijeo Citect and therefore supports the standard built-in user security to prevent accidental or unauthorised operation of the plant. Each object also provides essential features for operation such as interlock status, auto/manual operation, manual over-ride and remote or local control, to name a few.

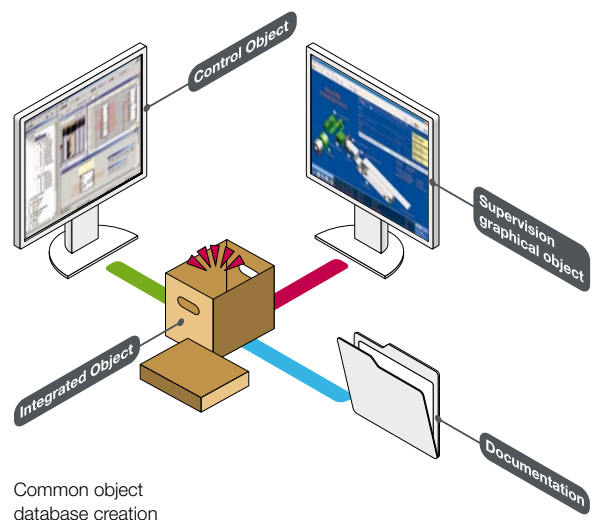
## Object libraries to meet your needs

The object libraries available for use with SoCollaborative Engineering have been designed to meet the needs of a wide range of industries.

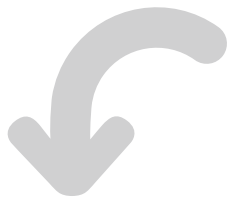


### Good to know

All SoCollaborative object libraries are tested and validated.



System libraries have a control facet and visualisation facet included in the one object



 **Device and Process Library**  
a SoCollaborative library

Containing over 120 objects, this library allows the easy integration of Schneider Electric devices into your system along with the all the objects needed for standard process control applications.

 **Enhanced Process Library**  
a SoCollaborative library

Focused on thermal and boiler applications this library of advanced functions contains more than 100 objects.

 **Predictive Control Library**  
a SoCollaborative library

This library of objects allows you to tune and optimise your process in order to reduce costs.

 **Fuzzy Logic Library**  
a SoCollaborative library

For applications that do not respond well to standard PID control, this library allows you to implement “fuzzy logic” control.

 **Flow Calculation Library**  
a SoCollaborative library

Primarily focussed for Oil and Gas customers, this library contains function blocks to facilitate gas flow measurements according the AGA standard for AGA3, AGA7 and AGA8.

 **Tesys Library**  
a SoCollaborative library

Objects dedicated to the integration of TeSys U starter-controllers and TeSys T motor management systems into your control system.

 **HVAC Library**  
a SoCollaborative library

A dedicated library to facilitate the creation of applications for controlling air conditioning in buildings.



Control libraries are for use with Unity Pro

 **Make the most of your energy**

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