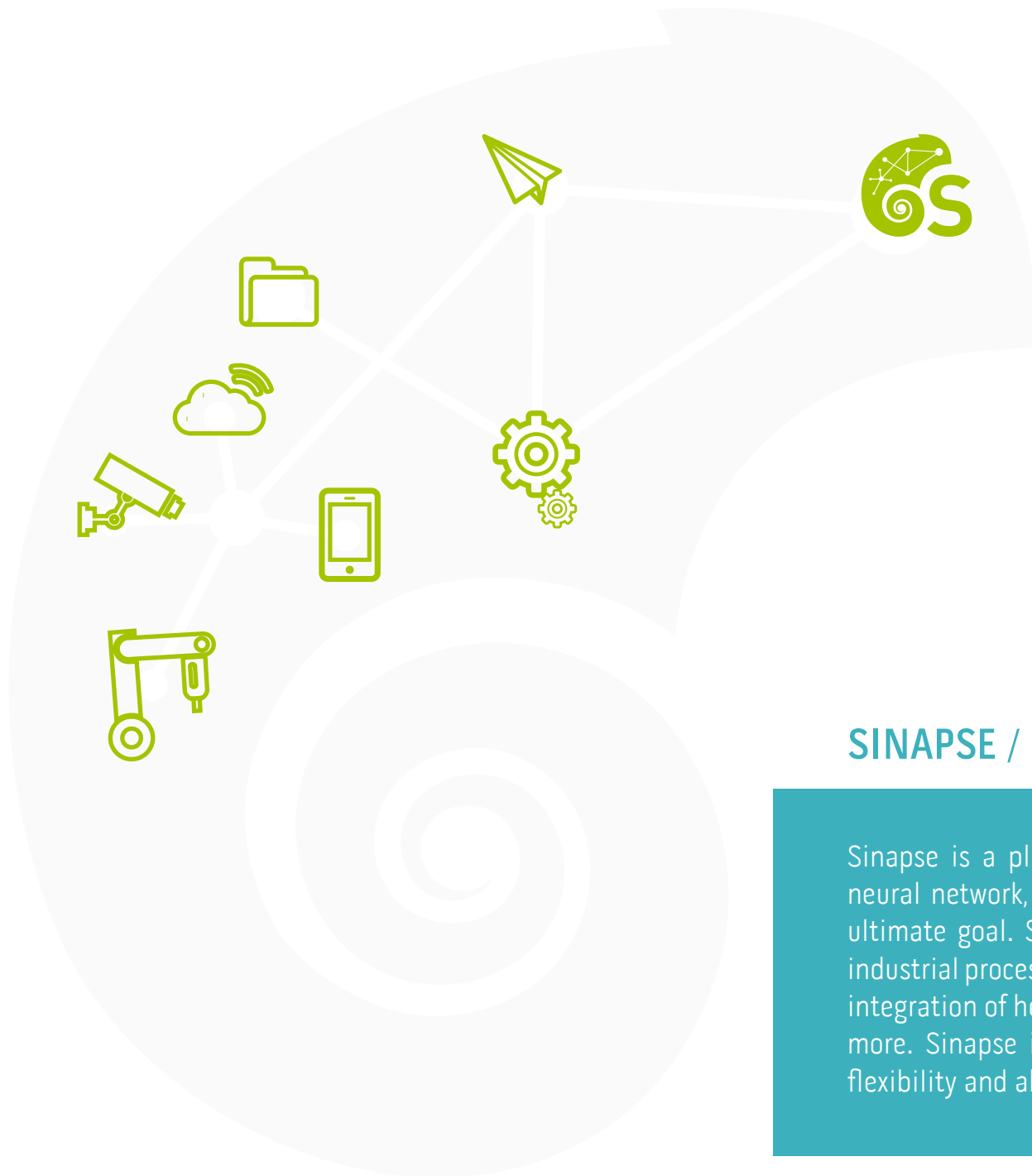


# THE BRAIN BEHIND YOUR BUSINESS



[www.sinapsesystem.com](http://www.sinapsesystem.com)



## SINAPSE / OVERVIEW

Sinapse is a plugin based software system who connects, like a neural network, simple entities that work together to achieve the ultimate goal. Sinapse is naturally suited to satisfy many needs: industrial process control and management, MES, ERP management, integration of heterogeneous systems (Enterprise Service Bus), and more. Sinapse is based on a multi-functional logic that ensures flexibility and ability to fit the needs of each customer.



## SINAPSE IN A NUTSHELL

### SIMPLE

The configuration GUI is intuitive; it allows you to select different types of plugins and insert them in the execution chain using drag&drop;

### EXPANDABLE / SCALABLE / OPEN

Sinapse offers a rich set of plugins and ready-to-use graphical objects, which are configurable for the individual needs of the customer. In case of specific needs, such as to communicate with an external system, it is possible to develop new plugins easily and intuitively using a special development toolkit;

### ROBUST

Each plugin runs in an isolated environment in order to safeguard the operation of the system in case of anomalies of the individual components;

### RELIABLE AND HIGH PERFORMANCE

Sinapse can guarantee the computational load distribution across multiple servers while it maintains the system active in case of failure;

### STANDARD

Sinapse bases on proven standard technologies, such as OPC-UA, WPF, and .NET.

# SYSTEM COMPONENTS



## SINAPSE SERVER HOST

Sinapse Server Host is the server component that hosts the plugins functional components; it runs following the defined topology. Sinapse Server Host can run in interactive, or Windows service mode, and communicates with the clients connected by using the standard OPC-UA, defined by the OPC Foundation.



## SINAPSE CONFIGURATOR

Sinapse Configurator allows building system configuration through a simple and intuitive graphics, extensible with plugins and graphic objects. Using the Sinapse Configurator, it is possible to:

- DESIGN EXECUTION CHAINS
- CONFIGURE AND UPDATE THE FEATURES OF EACH PLUGIN
- MANAGE GRAPHICAL OBJECTS THAT SHOW THE DATA
- UPDATE THE SERVER CONFIGURATION AND SEND COMMANDS
- EDIT THE SCRIPTS RUNNING WITHOUT INTERRUPTION OF SERVICE, VERIFYING THEM IN PARALLEL TO THE SYSTEM RUNNING IN PRODUCTION
- DO MANY OTHER THINGS.

*Sinapse Configurator is the only component authorized to make changes on the server configuration.*



## SINAPSE CLIENT RUNTIME

A graphical interface that provides the user with the information and functionality included by the system, simply connecting to the Sinapse Server Host. Sinapse Client Runtime, automatically, transposes changes from the server configuration.



## POLYMORPHIC PLUGIN

Each plugin of Sinapse system contains the functional and the graphic component: Sinapse Server Host uses the first one in the execution network, Sinapse Configurator and Sinapse Client Runtime to display information and provide the functionality to the end user use the second one. The two components, of each plugin, interface to each other using the OPC-UA communication protocol, a new standard of OPC Foundation; MASES is Corporate Member (<https://opcfoundation.org/members/view/241>).

## SINAPSE / KEY FEATURES



**UPDATE ONLINE WITHOUT SERVICE INTERRUPTION:** this is one of the main features which drives the development of Sinapse; it ensures the possibility to update the server configuration without disrupting its functionality or check on a new parallel configuration before applying it on your system into production;

**CENTRALIZED CONFIGURATION:** the configuration is centralized on the server; this allows you to connect multiple clients and download them from the common repository without doing any local configuration;

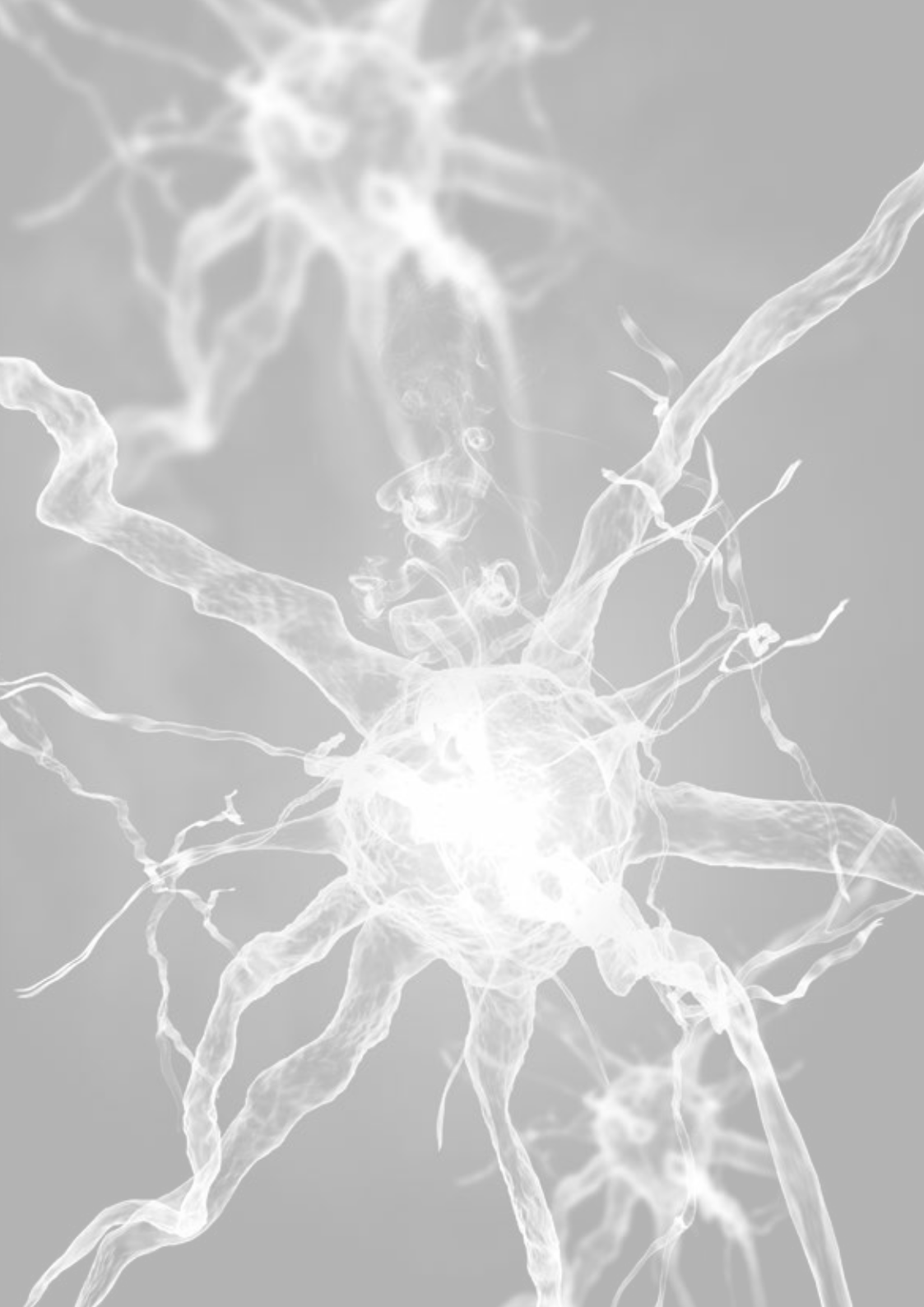
**USER MANAGEMENT:** every client has the ability to connect with different credentials to view and retrieve information by role;

**SYSTEM BASED ON .NET FRAMEWORK:** Sinapse is based on .NET framework to ensure its usability in supported operating systems;

**WPF BASED CLIENT:** the client portion is based on WPF and XAML code which can be written to expand the capabilities of the new components like graphics and plugins within the framework chart;

**LOCALIZATION:** all plugins are able to locate your appearance in order to describe its information in the target language of the product;

**AVAILABILITY ON IPHONE / IPAD / ANDROID:** it is possible to customize the graphic interface for use on mobile devices at the customer's request; communication with Sinapse server is simple using the standard OPC-UA.



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