



# saie



## KEYNOTE v2019 AUTOMATION OF INDUSTRIAL MACHINES

SAIE E & A realizes software for the control of automatic industrial machines by following these steps:

- PLC HW configuration (Siemens, Rockwell, OMRON, WAGO ) and all I / Os and peripherals on the BUS,
- configuration of electric axes drives,
- PLC programming (ladder, list of instructions, functional blocks ) according to its own standards or requested by the client,
- programming of vision systems and instrumentation on the machine (Keyence, Datalogic, Sick ...),
- configuration and development of HMI panels (Siemens, Proface, Omron, Hakko, Delta).



### SCADA SW

programming with creation of customized synoptic pages. The know-how acquired by SAIE E & A has allowed the realization of the command and control of industrial machines in different application fields and followed by all the procedures necessary for their correct use.

The systems realized in this way provide for a preliminary phase of writing of the software, a debugging and testing phase in the workshop and, subsequently, the commissioning by the final customer, that concluding the validation procedure.

Last but not least, the personnel in charge of the machine operations are provided with all the supporting documentation and the manuals.

### Open-source philosophy:

The objectives set by SAIE E & A in the development of the software are:

- **Modularity;**
- **Configurability,**
- **Structuring.**



### Modularity

Fundamental importance is to develop the software in a modular way, that is to create modules independent of each other, each one having its own: I / O, local data and control system. The modules are then interconnected with each other via appropriate recall variables.

This technique favors both the expandability and the extrusion / exclusion of each single sub-station, without having to overturn the software of the same station or line, allowing, if the customer wants it, also to continue production without using the use of a station or a part of it.

### Configurability

Each module is organized to be configured indifferently through HMI or recipe, each type of setting is not fixed, but always supported by variables that allow modification even in real time, this allows you to adjust times, thresholds, counters, repetitions , priority controls, sequences, etc. ... etc ... without having to intervene through a programming PC or other technical instrumentation, but using the available human-machine interface.



### Structuring

This is what is obtained automatically by following the two points described above. Using independent modules and making them configurable allows the final clinician to have a well-defined structure and open to future implementations and / or changes by internal staff. It is possible to expand, divide or move the machine, without having to modify what is already working but only intervening on the areas directly affected with extreme rapidity.



## Traceability and monitoring

The traceability of each single component processed and of the work carried out is increasingly important.

The structure set by the **SAIE E & A** allows to historicize at the end of each processing and at the end of the production process:

- every single processing carried out,
- outcome of individual processes,
- outcome data,
- datamatrix, serial, part number, batch, work order, etc ... etc ... of each component that you want to track during processing.

It is possible to display the number of stops for each individual station and sub-station, thus optimizing its maintenance as well as the current and past production cycle time.



## World sitee

**SAIE E&A operates system integration centers in Savona Via Della Nunziata 4.**



# KUKA



**we realize the commissioning of automatic line with KUKA robot handling.**

**2 software People are qualified as "SPECIALIST TECHNICIAN ABOUT THE PROGRAMMING ROBOT", with the completion of the specific course at Kuka Roboter Italia S.p.a**



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