



DEVELOPMENT OF PLC SOLUTION FOR AN ELECTRONICS AND MONITORING SYSTEMS MANUFACTURER

About Our Client

Our client manufactures mechatronic, electronic and electrical products and supply a variety of hydraulic cylinders, hydraulic systems and hydraulic components as well as condition monitoring systems, etc. They have over 20 different products which are marketed across various European industrial companies. With over 700 employees already, they are now venturing into the areas of vehicle technology and special vehicle construction as well as technical building equipment.

Scope /Challenge

The requirement of our client was a PLC based application specifically developed with Beckhoff TWINCat, which can be used to build class libraries by our offshore PLC developers. HMI user screens were also within scope of the development. These class libraries were used to enhance the existing functionality available within the TWINCat and provide to end users of our client to operate industrial machinery. Several other features like dashboard monitoring, displaying status of different process areas, changing control parameters, integrating with a central CRM system were also part of the scope.



The main challenges faced during this project include lack of expertise available with TWINCat product since it's new in the market and it is quite different from other traditional PLC development tools. The developers had to attend several trainings over the years from Beckhoff to meet all the technical needs of the customer. Furthermore, there was not much online help on technical issues, and developers had to find some way of resolving technical development issues they would get stuck at.



Solution

TAAL Tech Automation Team engaged a team of 3 developers who underwent several trainings, and were able to deliver 5 fully functional libraries, that cater to different modules like hardware, input output, testing, etc. the HMI screens evolved over the passing months of development and looked very matured near the end compared to initial phase. The PLC logic was top notch and our client also mentioned that they received great feedback of the PLC from their end clients. Some of the key features of the solution are as follows:

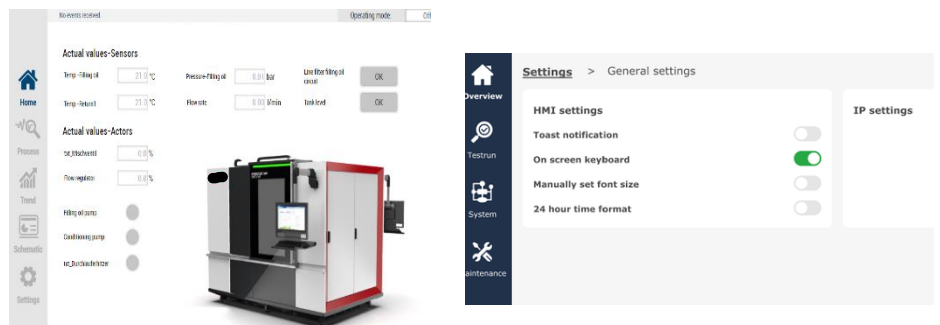
- Display high-level status of a process/area
- Change control-level parameters of a process/area
- Popup screens to view or modify certain set-points of a specific device
- Display Current Alarms and Alarm History for monitoring
- Customized user-access with different access controls
- Rest API development to seamlessly integrate with other applications

The technology stack was used to develop the solution: **Beckhoff TWINCAT v3.1, TC Unit, JavaScript, HTML, CSS, GitLab, Jira**

The team that worked on this project comprised of 3 PLC developers.

Results Delivered

TAAL Tech Development Team was able to develop 5 libraries that can be easily imported to our client's end users' systems and get the full HMI experience developed from our offshore office. This saved a lot of time for our client to make custom modifications from their end every time. The data received from PLC was integrated into the customer's CRM system which helped them receive vital data about their machinery which they utilized for predictive maintenance of their machinery.



About TAAL Tech

TAAL Tech is a niche Engineering and Technology solutions provider serving global corporations in their pursuit for faster innovation. Our vision is to be a leader in providing innovative, high value engineering & technology services to global corporations. Meet our team and learn more about us.

