XFurniture

OFFERING THE MES APP

Drawn up

1.12.2022

Valid until

30.01.2023

Xfurniture is building a new automatic line, because of which they will be able to increase production capacity and flexibility. The main components of the new line are the Lancio and Trix machines built by the Italian company and the Porter machine produced by the Ferro Gruppo. These machines are connected by a conveyor belt. XFurniture wants to get software that can control the operation of all machines simultaneously and is connected to their ERP system, from which orders arrive. The main goals of the application are reliability, efficiency, flexibility to support new lines/devices that will be added in the future, and a convenient user interface for the operator. Company visited the XFurniture plant in November and in the process got an overview of current systems and plan for the future. Based on XFurniture wishes, we will describe the solution we offer in detail below.

Time Frame

Development activities are divided into four phases:

1. First phase - March-April 2023
   1. Technical analysis, confirmation of architecture with all parties
   2. User interface design and design approval
   3. Preparation for development work - setting up the environment, creating a database structure
   4. Communication with Ferro Gruppo and Bitto, set up queries and commands
2. Second phase - May-June 2023
   1. MES application development
   2. Integration with ERP
   3. Create a database
   4. Building Porter warehouse logic in the MES application
3. Third phase - July-August 2023
   1. Integration with Porter
   2. On-site testing at the factory- Porter and tray machine line process
   3. MES app development (Porter-machine)
   4. Preparing for Lancio / Trix integration
4. Fourth phase - September-October 2023
   1. Integration with Lancio / Trix machine
   2. On-site testing
   3. Transfer of the MES application
   4. Active end of the project

Job description and budget

| Technical analysis and architectural development |
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| Setting up the development environment, creating a database and database structure, installing and configuring it on a server |
| Integration with XFurniture ERP information system |
| User interface design and design approval with XFurniture |
| User interface Front-End development |
| Back-End app development |
| Integration with Lancio / Trix machine |
| Integration with Porter, component storage logic in Porter stock |
| Factory system testing |
| Project management - Daily project management work and communication with XFurniture, Bitto and Ferro Gruppo |
| TOTAL 475\* hours |

475x65=30875 EUR + VAT

*\*This time estimate has been made based on the information available to us.*

Communication Tools

During this project following communication tools are used:

* Email for one-on-one conversation
* Weekly status reports
* Document repository
* In person meeting

Special Cases

As this is a new line that has not yet been completed during the bidding process, we do not have the opportunity to validate the real data available from the equipment. Accordingly, we will not be able to fix the indicated cost. The cost is a calculation based on the best knowledge of the current situation. If it happens that in the course of real work, obstacles arise that increase the time spent on creating an application, then we will additionally price them with hourly accounting. The price of one working hour is 65 EUR. All works that exceed the initialet evaluation will be approved in advance by both parties.

Warranties

After the final completion and delivery of the application, a 6-month warranty will apply. During this time, the elimination of all errors that occur in the application is at no additional cost caused by our development work. This assumes that the third party has not independently modified the application we have built. After the end of the warranty period, all additional work will take place by common agreement.