ARTS ET METIERS: Integration of MES COOX on a educational platform

ARTS ET METIERS is a general engineering school which trains engineers after a Baccalaureat +2, and which recruits by competitive examination. In Lille, its campus is at the heart of a dynamic industrial ecosystem.

The Hauts-de-France region is indeed one of the national leaders in several fields of activity: the steel industry, glass, the rail industry, but also the automobile, energy, health, and food industries. Its geographic location allows it to develop international trade with the countries of northern Europe, such as the Netherlands, Sweden and Denmark.

The COOX solution from ORDINAL Software was chosen with the aim of integrating an MES into an educational platform, a space bringing together automata, robots and connectors.

Project's context

Among the various lessons delivered within ARTS ET METIERS, there is a thematic "Industrial Management" but for which there was no illustration at the level of practical work (unlike the mechanical sector for example which has benches of test to perform tests).

Also, we decided to implement an MES on a robotic line already in place in order to see in real time how information is managed in a factory, how we process a production order, how alarms are managed...

There is nothing more frustrating when you are in an Industrial Management sector, when you tackle tools like PGI or MES, not being able to touch one or see it in working condition in real time.

Moreover, often in job offers, we can see "PGI experience desired", "MES experience desired" so it seems logical to me that our students can actually use production software. It makes sense to teach them to use it.

Getting started and implementing the tool

Getting started and implementing the tool From the moment we understand the concepts of COOX, it seems simple. That is to say that it is enough to identify and understand what the views and models are, you have to imbibe them, appropriate them and then you can make your own project. Compared to other COOX solutions has certain advantages and it is for this reason that we chose it. The choice of COOX was not made at random.

- **Simplicity of implementation**

3 days of product training was enough to get started with the tool. Add to that a little personal training, some application exercises and we can estimate that in 2 weeks, we are operational. Which seems coherent when we have to set up a project with the students in a horizon of 6 months! Knowing that our students have a 4 hour practical session to understand all the elements, they cannot only do training for 4 hours to learn how to use the software! Other publishers offered at least 2 weeks of training. So even if obviously this represents work, it is not reduced to zero, it is still clearly minimized.

- **One and the same software**

COOX and its modules form a single platform, made up of one and the same software. For other competing solutions, it is a platform made up of several software. We did not want to add complexity to our project. COOX seemed immediately adapted to our small structure: on our platform, we just have a line with a dozen devices. We didn't need a gas plant!

- **Software opening**

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Software COOX is open software and it is the only one that offers this architecture. We do pedagogy, development and if we need to add our own bricks in JAVA, we can do it! And that is really a plus.

ORDINAL's "Special Education" offer is particularly attractive. It provides 25 licenses of all COOX modules at a very affordable price. This too was decisive in our choice. »

Interview with Estelle Serre, Platform Engineer, responsible for developing educational materials