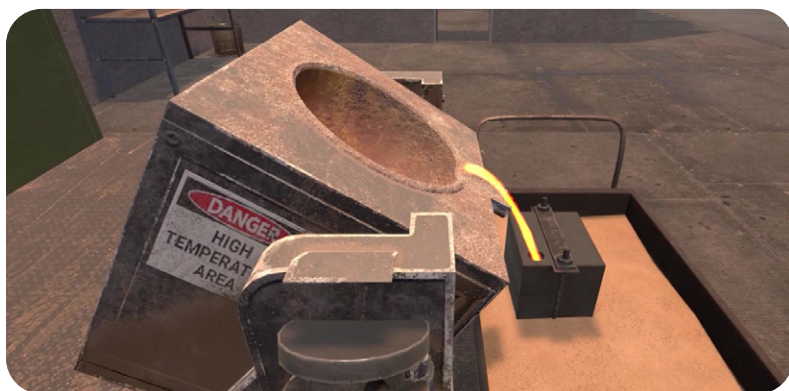




## Use Case: Onboarding Class

Complex manipulations, high temperature equipment, and potentially fatal maneuvers are an integral part of a metallurgist's everyday tasks; so, it goes without saying that training is of prime importance.

As such, Quebec's Metallurgy Sectoral Workforce Committee (CSMO-M), located at the CÉGEP de Trois-Rivières, decided to take an immersive turn. In collaboration with OVA, the organization completely revised the training courses offered to its members in order to recreate them entirely virtually. With the majority of its trades being complex and rather dangerous, training in a simulated environment proves to be a safe, efficient, and less expensive solution than on-site training, in addition to facilitating the onboarding of new metallurgists, and helping general staff retention.



Comité sectoriel de main-d'œuvre  
de la métallurgie du Québec

### Client

CSMO-M

### Industry

Metallurgy

### Technologies

Virtual Reality,  
Digital Twins,  
Video Streaming

### Challenge

Fidelity

### Solution

A virtual 101 course

### Benefits

- Better learning
- Improved safety
- More confident

A series of courses, considered fundamental to the industry, were identified, thoroughly researched, and digitized. The result? An introductory metallurgy class, acting as a springboard for students wanting to begin or improve their technical training.

## Laying solid foundations

Using our platform StellarX, we reproduced the whole manufacturing sequence for a single piece of equipment (including sand casting, metal casting, radiography, VTR, and quenching and tempering) 100% virtually, for a total run-time of about 45 minutes. This course, presented to students in the classroom, allows them to learn and execute complex maneuvers concretely and to start over as many times as needed, before laying hands on any real equipment.

The 101 course was first identified as the perfect introduction to the field; however, many other activities would benefit from being digitized, given that the metallurgical field is especially vast.



Our Art Team made sure to reproduce all 1:1 environments, installations, and equipment used for the training of future metallurgists, including machinery, boilers, a foundry, scans and inspection rooms, security switches, and more. With an authentic learning environment, the student's simulated interactions are almost identical to the ones they would be performing in a real-world context.



The whole procedure can also be live streamed using the [video camera](#) asset, which is already integrated to StellarX. Thus, both students and teachers can access training sessions via videoconferencing, through any remote meeting platform (Zoom, Meet, Hangouts...).

## Results

Preparing students for the use of heavy and potentially dangerous machinery makes them more experienced and confident metallurgists for the rest of their school curriculum and, eventually, for their entry into the workforce. In addition, the digitization of the 101 course should reduce the risk of injury associated with first-time use of heavy equipment, all while allowing students to get more practice, faster, and in much greater numbers simultaneously — real machinery often being too expensive to procure a sufficient number. For the organization, this initiative means substantial monetary savings: a reduction in losses associated with on-site training, in equipment damages due to inexperience and, thus, in overall long-term training costs, are to be expected.

## Related links

