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Large Canadian engineering school, ETS, adapts digitally to meet industry demands

Located in the heart of downtown Montreal, the École de technologie supérieure (ETS) is the second largest engineering school in Canada. With more than 11,000 students in engineering alone, ETS helps companies get on their feet technologically and find simple solutions to complex problems. It has a major technological and economic impact on our society.

But with today's explosion of new technologies and the urgent need for a skilled workforce, what is this institution doing to meet these growing needs ?

"If a university wants to stand apart from the rest, it needs to continually improve its processes and be as efficient as possible. And to do that, you need to try new things!" says Jean Belzile, Director of Strategic Development and Resources who, along with the Secretary General, Cédrick Pautel, shared with us the secrets that allow ETS to further its mission and expand in Montreal.

Sharing knowledge with businesses

"Our strength lies in our ties to the industry. (...) We have 1,500 companies that welcome our interns each year, in addition to the many research projects that our professors carry out with our industrial partners." – ***Cédrick Pautel***

You only have to look at the course offerings to understand that ETS is a university that combines theory with practical experience. At ETS, students participate in hands-on learning. In fact, engineers in training must do a four-month internship within a company each year.

And this practical vision of engineering is also embodied in the many research projects that ETS undertakes in partnership with the industry.

Adaptive reflex to meet industry demands

Jean will be the first to tell you that ETS currently receives more requests for resources from businesses than it is able to provide. And it won't be slowing down.

By 2030, it is estimated that with automation, energy policy changes, world population growth, and the advent of information technologies, engineering professions will be increasingly in demand and above all, essential to our collective success.[1]

Cédrick and Jean are feeling it. Our society has never had so many technological needs while at the same time lacking the manpower to meet them.

"The labour shortage is more severe among engineers and computer scientists than anywhere else!" – Jean Belzile.

To meet this challenge, ETS continually adapts its university programs. Since it is firmly anchored in the industry, it is better equipped to meet industry expectations.

"Our programs are evolving faster. Our research projects align more quickly with the industry's needs." – Cédrick Pautel

As a result, ETS offers dozens of programs such as environmental engineering, automated manufacturing engineering, aerospace engineering, and software engineering. As technological discoveries open up new disciplines, the university is constantly on the lookout for the latest developments, particularly in the creative and design fields.

To keep up with the fast pace, the university constantly hires new professors and creates new agreements with companies. Cédrick and Jean admit that this requires both administration and the exchange of a lot of privileged information. In addition, by virtue of its practical philosophy, the university offers a range of housing options to offer flexible and affordable accommodation to students.

"We have a very developed residency system unlike other universities. Because of this we have a very large volume of leases, and our students are free to terminate their lease when needed in order to facilitate internships abroad." – *Jean Belzile*

It is this adaptive reflex that has allowed ETS to meet industry demands, but today's engineering needs are so great that the university, which has doubled in size in just ten years, had to optimize its administrative processes to continue to fulfill its mission.

" (...) Now, with 15 pavilions and more than 1,000 employees, we just couldn't keep doing things the same way." – *Cédrick Pautel*

ConsignO Cloud: A platform for superior technologies

To manage its growing needs, ETS set up a digital document management system. With many engineers working together, the process has been fully thought through, questioned, and evaluated.

"There were several things that were problematic. With the volume of transactions we were making, it was becoming difficult to find the original copies." ***– Jean Belzile***

By evaluating the market offer, the university carefully identified its electronic signature needs. The platform had to be easy to use, meet the institution's high legal standards, and ensure that documents could be archived long-term. ETS quickly turned to ConsignO Cloud.

"Our legal affairs department studied the platform thoroughly before authorizing us to use it. It held up under the scrutiny of thorough and competent lawyers." ***– Cédrick Patel***

To facilitate platform's rollout, the team started with a pilot project within the departments that were the most keen, but the results surprised the management team.

"The platform was adopted so easily that people were raising their hand to get it! (...) It is one of the best technology rollouts we've ever had and with the least amount of questioning whether it was a good choice." ***– Jean Belzile***

Electronic signatures have gradually become an everyday tool for the institution's employees. Today, all service contracts and the 1,100 student-signed leases go through the platform.

ConsignO Cloud also facilitates contractual relationships with companies. Contracts, non-disclosure agreements, research agreements, documents related to intellectual property, and everything related to business partnerships are signed electronically using this platform.

"The world is accelerating. We don't need to waste two or three weeks anymore waiting for signatures because the envelope is in the mail, the person is out of the office, or for any other reason." – *Jean Belzile*

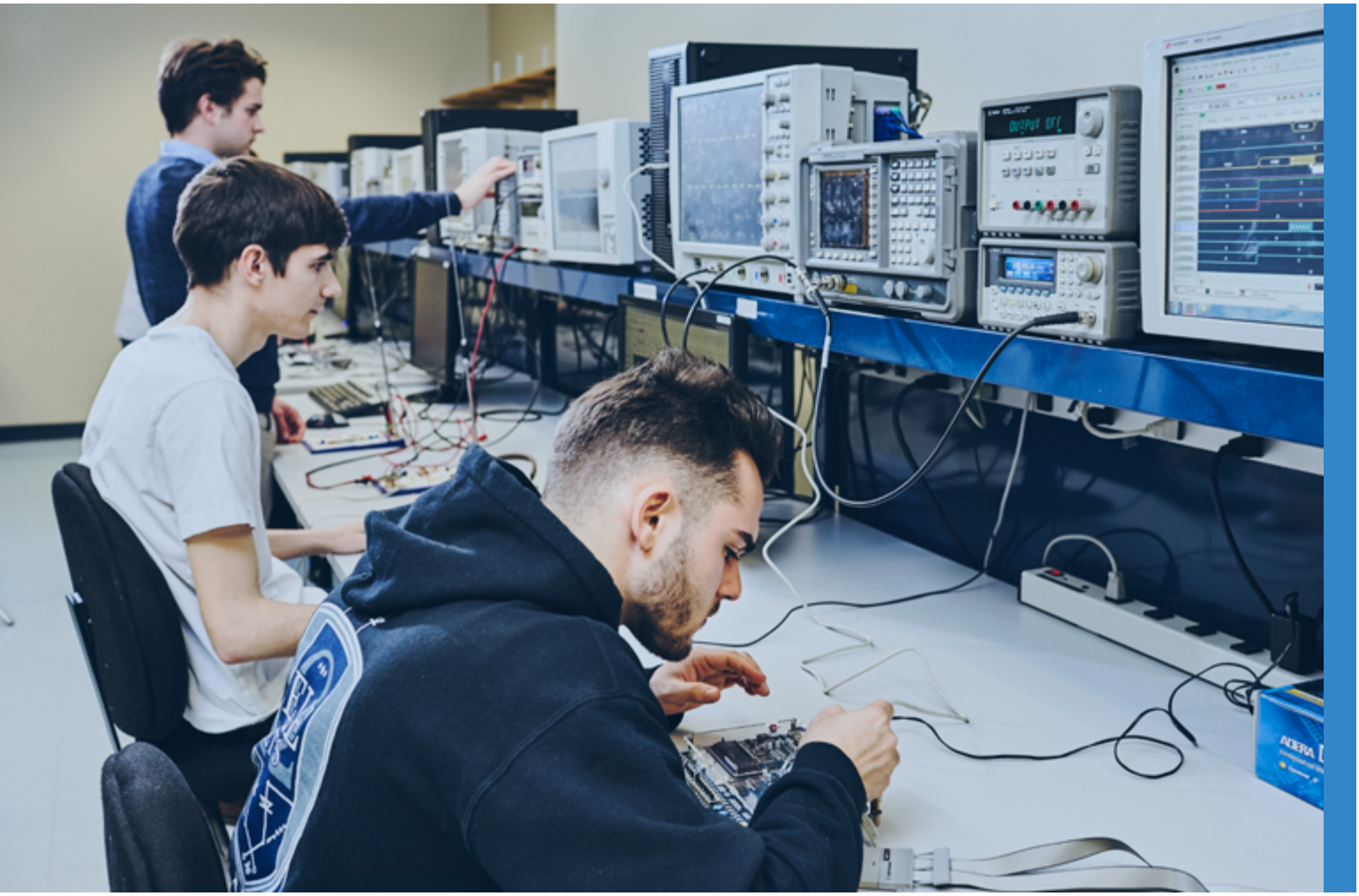
But where ConsignO Cloud stands out the most for ETS is that it ensures that information is retained. In fact, all documents signed using our platform exceed industry standards for electronic archiving.

For an institution that has research and intellectual property at the centre of its activities, documentation traceability and validity are foundational elements that can't be left up to chance.

"For example, if a seven-year study leads to a patent, we need to find the people who worked on it, their confidentiality agreements and, depending on the case, their termination of rights, among other things. These are generations of students that we need to be able to find. And above all, those agreements need to stay valid the entire time!" – *Jean Belzile*

For everything that ConsignO Cloud provides in terms of legal requirements, Cédrick and Jean also point out that the platform's user-friendliness is what makes it very popular. It's a tool that can be used anywhere at any time since it allows you to sign right from a smartphone.

"I had anticipated that it would be more difficult to integrate this technology because change is always hard. But honestly, it happened very naturally. It's very user-friendly, and this really testifies to the product's maturity. It's working and ready to use instantly." – *Cédrick Pautel*



Keeping up with engineering's cultural revolution

This digital document management system in which ConsignO Cloud plays a role is the very embodiment of the kind of thinking that ETS subscribes to.

There is a culture of thinking outside the box at the very heart of the university. In fact, before the 1970s, only large companies could afford engineers. The technicians could operate machines, but did not have the tools to modify or redesign them.

"ETS is a real breakthrough. Initially, it was a pilot project that we didn't think would succeed. We created a new way of seeing engineering through technology. Today at ETS, we have technicians who become engineers." – *Cédrick Pautel*

Cédrick and Jean don't hesitate to say that this state of mind and tolerance for failure is what allows ETS to choose the best solutions and better serve innovation in engineering. This desire to try and test new approaches is very stimulating for the university's professors, students, and employees, but also for its industrial partners.

"I've rediscovered the joy I had at the beginning of my career at ETS. It's continually evolving, and anything is possible here. If you have a good idea, we'll try it. That's an engineering attitude. It's very inspiring to work in this kind of environment." – *Cédrick Pautel*

ETS's digital reinvention is clearly a continuation of the same technological spirit that it set out to create. It can now count on greater administrative speed while ensuring the legal reliability necessary for its development.

"People wanted to go paperless fifteen years ago. But now it's actually happening!" – *Cédrick Pautel*

Ultimately, ETS is prepared to welcome more future engineers, optimize its research projects, and to keep its programs flexible.

This is a true win for Montreal's technological and economic development.

[1] McKinsey Global Institute, "Jobs lost, jobs gained: What the future of work will mean for jobs, skills, and wages" on the website mckinsey.com, 2017 [online], https://www.mckinsey.com/featured-insights/future-of-work/jobs-lost-jobs-gained-what-the-future-of-work-will-mean-for-jobs-skills-and-wages#part1 (Page consulted on August 24, 2021)