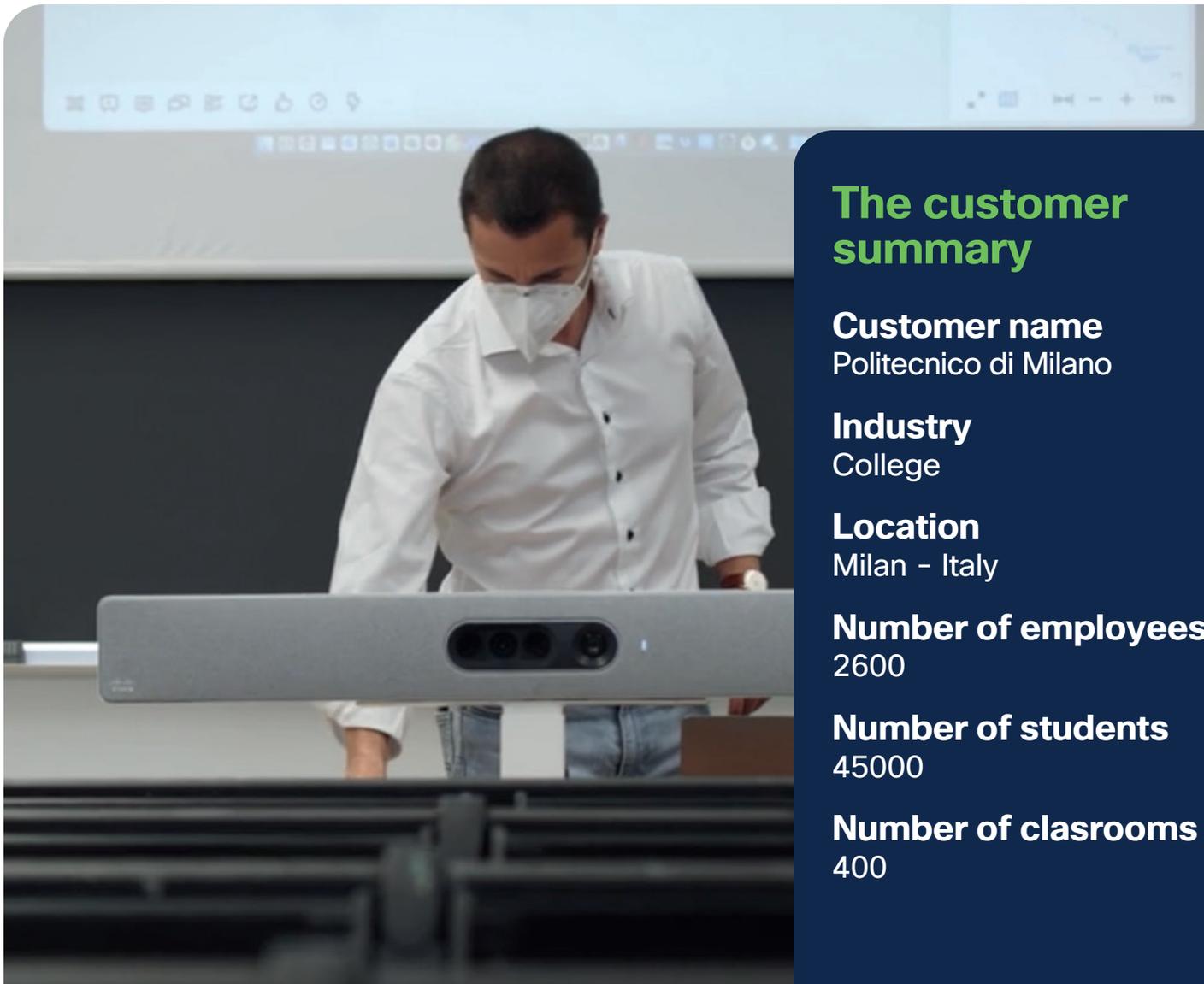


Cisco & Politecnico di Milano | V. 1.0

There's a need for transformation that cannot be overlooked.

Founded in 1863, Politecnico di Milano is nowadays a large, open laboratory located in the heart of Milan.



## The customer summary

**Customer name**  
Politecnico di Milano

**Industry**  
College

**Location**  
Milan - Italy

**Number of employees**  
2600

**Number of students**  
45000

**Number of classrooms**  
400

## Politecnico di Milano's approach

There's a need for transformation that cannot be overlooked. This motto details Politecnico di Milano's approach to innovation in its present and for the future. Founded in 1863, Politecnico di Milano is nowadays a large, open laboratory located in the heart of Milan and one of the most prestigious scientific-technological universities worldwide, according to the latest global rankings for higher education.

Donatella Sciuto is Executive Vice Rector at Politecnico di Milano. "We always believed and invested in innovation; yet, now more than ever before, we are facing tough challenges, for which we need flexibility and technological innovation. It is in our destiny to seize the day and pioneer the change," she firmly asserts.

Sitting amongst the top higher-education institutions in the world for engineering, architecture and design, each academic year Politecnico welcomes within its campuses more than 45,000 students from 100 different countries enrolled in over 70 technical undergraduate and graduate programs.

"Since its foundation, our university proudly pledged on research and experimentation in its programs and teaching methods; we always believed in innovation as pivotal to actively contribute to our country's future. In these times of uncertainty, we stand firm to this commitment and this vision, which aided us to face the Covid-19 emergency thoroughly equipped."

**"Yet, now more than ever before, we are facing tough challenges, for which we need flexibility and technological innovation."**

### Donatella Sciuto

Deputy-Prorector at Politecnico di Milano

## Culture of innovation

Politecnico di Milano held on to its promise. "The latest phase of our digital transformation commenced in 2013 when we launched Polimi Open Knowledge (POK). This MOOC (Mass Online Open Courses) platform marked a new chapter in establishing and nurturing a culture of innovation through digital education at our university," Sciuto reports.

"POK, however, had only a limited impact on our regular face-to-face teaching activities; still, Politecnico's new governance worked alongside METID (the university's center for innovative learning methods and technologies) to cultivate our community's awareness and adoption of online resources and digital tools in our academic activities."

"It is a multi-sided, long-running project that encompasses our entire teaching environment: from external software and resources to internal reporting systems, to physical infrastructural changes. Nonetheless, it already delivered notable results with renewed interactive teaching methods and experimental classrooms, equipped with video-conferencing communications and interactive blackboards, which proved invaluable in light of the current pandemic."

## Digital transformation process

Susanna Sancassani leads the METID team that manages and overviews this digital transformation process gave a relevant contribution to the operations continuity during the ongoing pandemic. “Differently from what happened elsewhere, amidst the first lockdown, we successfully switched from face-to-face to fully remote and blended teaching, rather swiftly. Anyhow, this shift did not start from scratch, but engrafted into a development process of our tools, community, and faculty culture that was already in progress.”

Notwithstanding the recent successful outcomes of Politecnico di Milano's digital metamorphosis, Sancassani emphasizes the importance of progressive, vision-led implementation. “Our ecosystem revolves around a variety of infrastructures, tools, and stakeholders, namely our students and our faculty. Even under ordinary circumstances, this evolution would have been demanding; Cisco provided us a technological basis to seamlessly and effectively integrate the physical and virtual classroom experience in the blended teaching approach.

“Speed and intuition are embedded in our DNA. Hence, since the initial reports of Covid-19 in February 2020, we promptly set our organizational machine in motion and planned our strategy to keep classrooms running remotely. The approach we chose was methodological. We provided our faculty with the right training tools and guided them through these necessary changes towards adopting technologies that resulted in higher-quality

teaching standards. Notwithstanding the boundaries of the physical experience, together with Cisco and other technological providers, we developed a dynamic, collaborative, and, I dare say, meaningful new learning experience,” Sancassani continues. Donatella Sciuto illustrates how NTT Ltd., leveraging Cisco solutions, proved to be a valuable IT partner throughout the process. “Covid-19 urged us to redesign our classrooms and programs to fit a virtual environment. Yet, we needed to keep the infrastructure flexible. Should the conditions allow, we had to revert to a face-to-face mode rapidly or to blend those physical and virtual approaches, also considering the 30% of our enrolled students that lived abroad and were unable to reach Milan due to ongoing restrictions in international travel.”

Albeit Politecnico di Milano initially vetted various video-conferencing and collaboration tools, none of these adequately fulfilled the diverse needs of its technical curricula, characterized by different required levels of interaction between students, lecturers, and working groups. “Our choice landed on Cisco Webex platform. In just over six months, METID worked side-by-side with Cisco and NTT Ltd., our IT technical implementation partner, to adapt our 400 classrooms to blended teaching, in an extended classroom experience with both face-to-face and online attendees,” she remarks.

**“Amidst the first lockdown, we successfully switched from face-to-face to fully remote and blended teaching, rather swiftly.”**

**Susanna Sancassani**  
METID supervisor

## Remodeled its didactic experience

Harnessing NTT Ltd.'s competences and expertise in translating client's needs into technological solutions, and the power of Cisco Virtual Room Kit, equipped with Cisco Intelligent cameras and Webex video-conferencing and collaboration platform, Politecnico di Milano remodeled its didactic experience also to fit the different teaching styles of its faculty. "All of us have a personal approach to teaching," Sciuto explains. "Some of our more tech-savvy professors prefer a dynamic, interactive mode using online materials, slides, and graphic tablets; some others, instead, prioritize a human interaction, following a more traditional dialogic approach. Both these methods eventually reflect on our students' physical and virtual classroom experience."

"No matter the approach, thanks to Cisco for the design, and to NTT Ltd for configuration and set up, Cisco's hardware and software infrastructure adapt the individual style of our faculty members while following them in class in great visual detail," Sciuto adds. Indeed, the Cisco TelePresence Cisco Intelligent cameras with 10x optical zoom and dynamic lock-in, feature the highest video quality in the industry under all light conditions and with an exceptional range, perfect for large meeting rooms and classrooms.

"Students attending lectures from their homes could follow every single step of the professor moving on the dais and catch every minute detail of the visual materials shown, with superior imaging and audio quality. They also could maintain full interaction and connectivity with the presenter and access to didactic resources at all times via the Webex embedded capabilities and other useful digital tools. Even remotely, students could experience a life-like lecture," Sciuto concludes.

## Product list

- Webex for Education collaboration cloud platform
- Room Kit Plus and Pro collaboration solutions for hybrid classrooms
- Intelligent Cameras with AI-based features and flexibility for optimized video collaboration experiences
- Webex Control Hub centralized admin for provisioning devices, detailed analytics and reporting, security and compliance policies.

## Opportunity to improve our teaching methods

A strong advocate for didactic innovation and one of the first faculty members to implement blended teaching powered by Cisco is Guido Micheli, associate professor of industrial plants engineering and management at Politecnico di Milano. "While not loved by anyone, the current pandemic has for sure represented an incredible opportunity to improve our teaching methods, use of technology, specific devices, and software applications," he comments.

"Blended teaching still features several open challenges. One is, for sure, concurrently paying attention to the content and the technological side of the lecture. Secondly, teachers have to deal with students in class and students at home, potentially invisible. Lastly, faculty members had to redesign courses specifically for this approach. As professors, we greatly benefited from Cisco's technological solutions, which enabled us to teach and to focus on the content of lectures, rather than on technological aspects of lecturing."

### Blended teaching

Prof. Micheli is, however, earnest in clarifying how the benefits of blended teaching widely outnumber its challenges. "In these puzzling times, blended teaching allowed us to provide the best feasible quality educational support to our students, both in Milan and all around the globe; it would have been nearly impossible by any other means. It also facilitated the presence of international speakers and revealed new international development opportunities for our courses, which by their global nature, feature a distributed class composition."

To conclude, Prof. Micheli explains how the key takeaway from remote and blended teaching is that the higher education environment is complex and multi-faceted. Innovation, faculty readiness, and the expertise of selected technological partner are essential factors. "We all must be ready in terms of competencies and skills, teaching methods, and technology. Together with high level technology partners as Cisco, Politecnico is now ready to evolve into a new future for education. We must push forward; we must stay switched on."

**"Blended teaching allowed us to provide the best quality educational support to our students, both in Milan and all around the globe "**

**Guido Micheli**

Professor at Politecnico di Milano

## Video case

