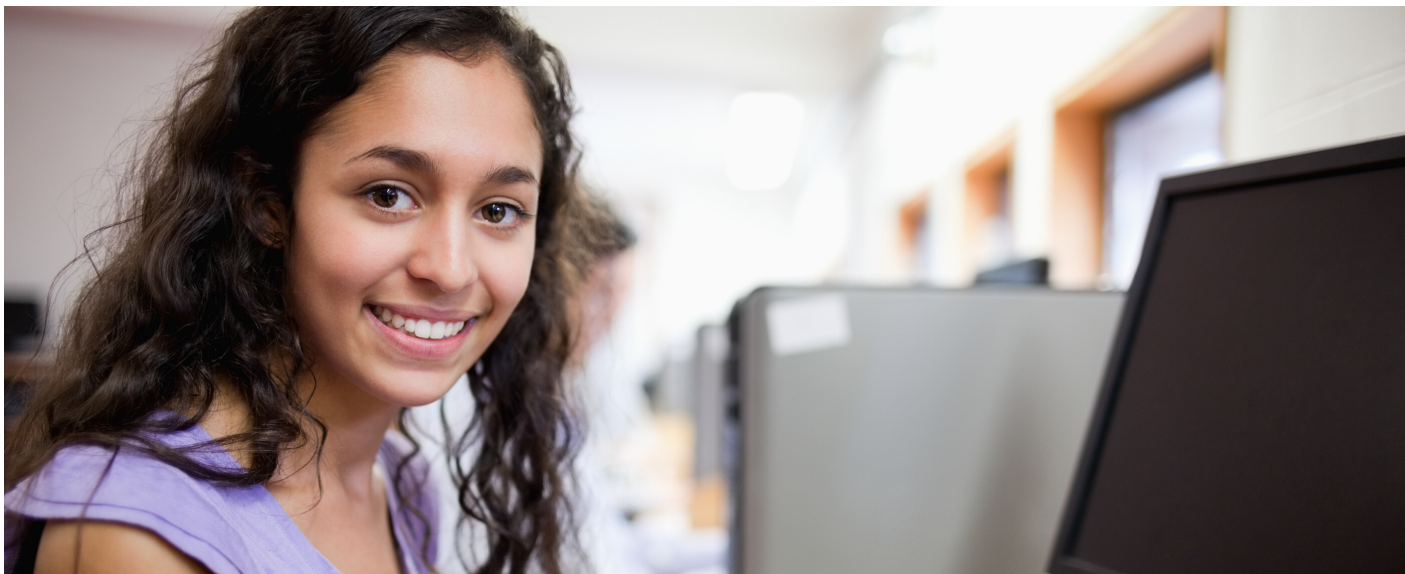# C3 MICRO-CLOUD IS IMPROVING DIGITAL RESOURCES FOR STUDENTS IN PARANÁ

CONNECTING STUDENTS TO KNOWLEDGE

INCREASING STUDENTS' ENGAGEMENT IN CHALLENGING ENVIRONMENTS

Paraná is one of the 26 Brazilian states, whose capital is Curitiba and has about 11 million inhabitants. This state, like the rest of the country, has always struggled searching for a well developed education system, and the education sector has been facing several challenges across the years.

In Brazil, access to basic education is nearly universal and secondary and higher education has been expanding. However, despite those notable achievements, Brazil has one of the largest shares of adults without upper secondary education, and enrollment rates fall sharply after the age of 14. Only 69% of 15-19 year-olds and 29% of 20-24 year-olds are enrolled in education. For every 100 students entering the first grade, only 47 finish the 9th grade within 9 years, only 14 complete high school without interruption, and only 11 will reach the university level.
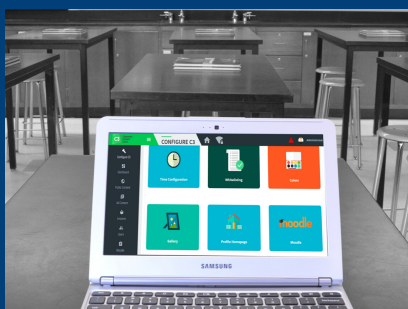
In recent years, Brazil has been focusing on promoting vocational education and training as a way to increase school rates and to provide young people with more tools to easily enter in the labour market.

VALUE PROPOSITION:

- Local content repository for immediate access to information

- Network/Internet management and control for security and streamlined operations

- Integrated Wi-Fi for easy connectivity form any smart device

This partnership offered, in the beginning of 2019, access to quality education by providing user-friendly learning devices for teachers and students. These devices are now in use in the classrooms, where they now have access to cloud-based educational content and resources. 1,338 schools received about 38,000 laptops and C3 Micro-Clouds (one per school), changing hundreds of students' lives.

Students have now the opportunity to leapfrog to a 21st century education where they can use world-class digital content and e-Learning tools in their classes.

We can't wait to see how this project will provide greater opportunities for students in the near future, improving education in Paraná and better prepare students for the future!

To overcome these difficulties, the Paraná government has set itself the goals of improving the Basic Education Development Index and making the public schools a national and international example of excellence in teaching and learning. To achieve that, among other measures, the government developed a project to integrate the use of technology in schools.

The project was largely made possible through a strategic partnership between Critical Links and Positivo Informatica, the largest computer manufacturer company in Latin America, headquartered in Curitiba, Paraná.

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The C3 Micro-Cloud provides local Wi-Fi infrastructure, applications and cached content to accomplish specific tasks even if the school's internet connection is down. Learning guides, videos, e-books and other resources are cached on the micro-cloud, so that they are always available for the e-Learning process regardless of "upstream" network connectivity.

As one teacher stated, "As a teacher, we are in a constant search for tools that can make our classes more dynamic and engaging. The C3 Micro-Cloud brought us all that! Students now are excited to be in class because of the learning games and vídeos that I can show them". Teachers' general feedback is that, "Technology and the new methods of teaching are dramatically improving teaching and learning". They also referred that the C3 Micro-Cloud improved the communication between students in the classroom with teamwork projects.

Students recognized the importance of using technology in the classroom by saying that, "Everything is easier now. We can apply what we have learned by playing educational games and by doing independent research on a certain topic".

Now, Paraná's students benefit from an education that is not limited by the old books they have on hand or internet connectivity problems. Attending classes became something challenging and fun!

This project is still being implemented in several schools of Paraná. We can't wait to see how it will improve the education system, generating new opportunities and allowing to better prepare students for the future!