



NEORIS
education

**Digitize
education**
to enhance
learning in the
classroom



The Context

We worked with a leading company in the European educational sector which provided interactive digital tools and support services that enhance students' learning experience in classrooms with a strong innovative approach, focused on delivering high-quality educational materials for schools, teachers and students.

As a part of its international expansion strategy, the company chose to collaborate with NEORIS to design an innovative technological solution that would add more value to its interactive digital resources and simultaneously enable positioning in the European market. With this challenge in mind, we created a platform that allows teachers and students to efficiently manage their daily tasks, saving them time while also enhancing the quality of the company's educational materials.

The Challenge

The organization aimed to develop a solution that would simplify the distribution and interaction processes of digital textbooks within classrooms. To achieve this, it was necessary to create a platform capable of:

- 1. Meeting the common needs of classrooms,** making tasks for teachers and students easier, and simplifying administrative procedures for schools.
- 2. Serving as a perfect complement to the traditional paper book,** providing high-quality educational and interactive content to enhance students' comprehension and learning.
- 3. Implementing features** to enhance the daily experience for students, teachers and administrators, while also removing technological barriers for users with limited internet access.





Our Proposal

NEORIS had already been collaborating for years with the company in developing technological tools that efficiently address the needs of teachers and students in innovative ways.

Leveraging the deep knowledge and experience from the existing collaborative relationship, **a platform was developed enabling teachers and students to quickly and intuitively access** supplementary educational resources beyond what is taught in the classroom.



Phase 1

In the initial phase, user interviews and meetings were conducted to customize the platform's design and usability according to user needs. This process resulted in the creation of the system's screen design and the definition of its usability and navigational aspects.

Phase 2

In the second phase, periods of limited system usage, such as evenings and holidays, were identified. Subsequently, a serverless architecture was implemented to enhance cost efficiency and scalability, thus ensuring availability during peak demand periods. Additionally, BackOffice services were developed using Python, along with various security layers. Data caching services were employed to guarantee performance and fault tolerance, ensuring uninterrupted access to information.

Phase 3

Finally, in the third phase, Electron and Capacitor frameworks were utilized to generate various cross-platform desktop and mobile versions. Additionally, specific services were developed for controlling and downloading books in offline environments. A synchronization process was also implemented to update data when the user regains connection.



The Solution

The solution is defined by the following features:



Lesson Creation and Management

Facilitates teachers in the creation of unlimited lessons, including the ability to form groups and tutoring lessons in order to achieve common goals.



Book Visualization

Associates a digital book with each class, allowing interaction with physical books that have been previously digitized, while enhancing the educational experience with additional content to maximize learning impact.



Homework Management

Controls homework assignments, deadlines, and corrections, with automatic evaluation for interactive assignments and manual evaluation for customized assignments.



Attendance records

Offers a comprehensive system for attendance control, management, and validation of absence excuse notes, as well as the generation of personalized informational bulletins for each student.



Virtual Classroom

Enables the access of digital books with the option to download them. Additionally, it enables swift and straightforward content modification without needing to upload the entire book. This functionality is unique and unavailable in other platforms on the market.



Mobile Application

Offers an app allowing offline viewing of digital books, ensuring accessibility across diverse educational and family environments.



The Results

Currently, this platform has been implemented in a total of **10,000 schools across Europe** and is available to **more than 30,000 teachers and 250,000 students.**



The implementation of this solution has not only enhanced user experience but has also yielded positive outcomes for administrations and teaching staff in several ways:

- Enabled teachers to **efficiently manage classes**, while also providing greater flexibility in creating tutoring groups or preparing additional materials.
- **Streamlined homework management and grading through auto-correction** and automated recording of student grades.
- **Providing clear oversight of student learning** with a focus on challenging concepts in order to identify those that require additional attention.
- Facilitating centralized attendance **management for schools, teachers and students through bulletins and reports**, reducing administrative burdens on the institution.

Additionally, some of the main benefits for students include:

- **Facilitating digital interaction for students with their physical textbooks**, enabling them to perform the same activities in more user-friendly and intuitive digital environments.
- **Supplementing textbook information with interactive content and additional materials** to reinforce students' knowledge and facilitate comprehension of concepts.



The solution has successfully overcome existing technological barriers and adapted to diverse family situations **to ensure access to quality educational content for all families.**

Testimonials

“ This solution has marked a transcendental leap from the local to the international market, as we have not only successfully implemented it but also demonstrated that our local solutions are equally effective on a global scale. In fact, we are currently in discussions with several countries that have shown interest in our project, highlighting its global relevance. ”

Miguel Acero Herraéz - Director of Education at NEORIS Spain

“ Today, multimedia resources have become an essential component within classrooms, making this project emerge as a cutting-edge digital solution. Its intuitive design and ability to integrate dynamic and interactive content not only facilitate teachers' work but also transform students' learning experience. ”

Client - IT Director

