

SCHOOL MANAGEMENT SYSTEM

Software Factory (UX/UI, DEV, QA, DBA, DevOps, Support and Maintenance).

educar



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Challeng

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In 2017 the Argentina Ministry of Education shared the need for a school management system to provide assistance for every public school to both primary and secondary education levels.

As part of the specifications province-wide, nation-wide and regionalized approaches of management levels were requested.

It was determined as a possibility to provide access to different sets of information based on a hierarchy of users. Higher level users could award academic degrees, lower level users could enroll students, upload grades, roll call, perform students personalized follow-ups, request transfers, create boards to display metrics and statistics to enhance the decision making process at a National level and even send notifications to parents among other functionalities that comprehend the school management.

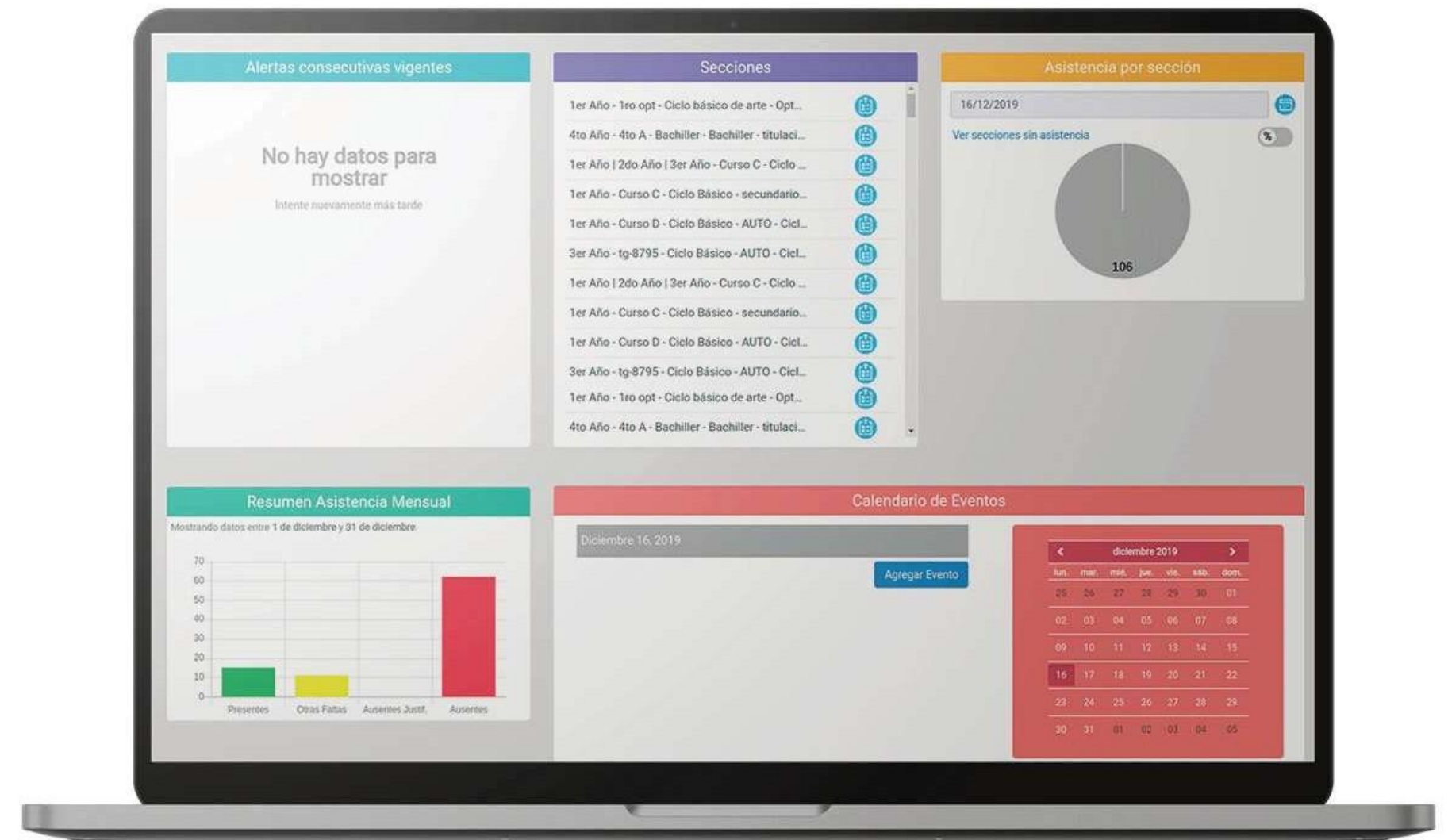
This solution would also provide support for rural schools with no access to internet.

Propos

al We helped define and design a scalable system for more than **50,000 users with a complex architecture and open source technologies.**

An architectural strategy was outlined to handle each state separately, thus, each jurisdiction has the ability to choose which system modules will be used.

For rural schools with poor internet connectivity we suggested a different architecture and the use of hub devices strategically located.



Resumen Asistencias

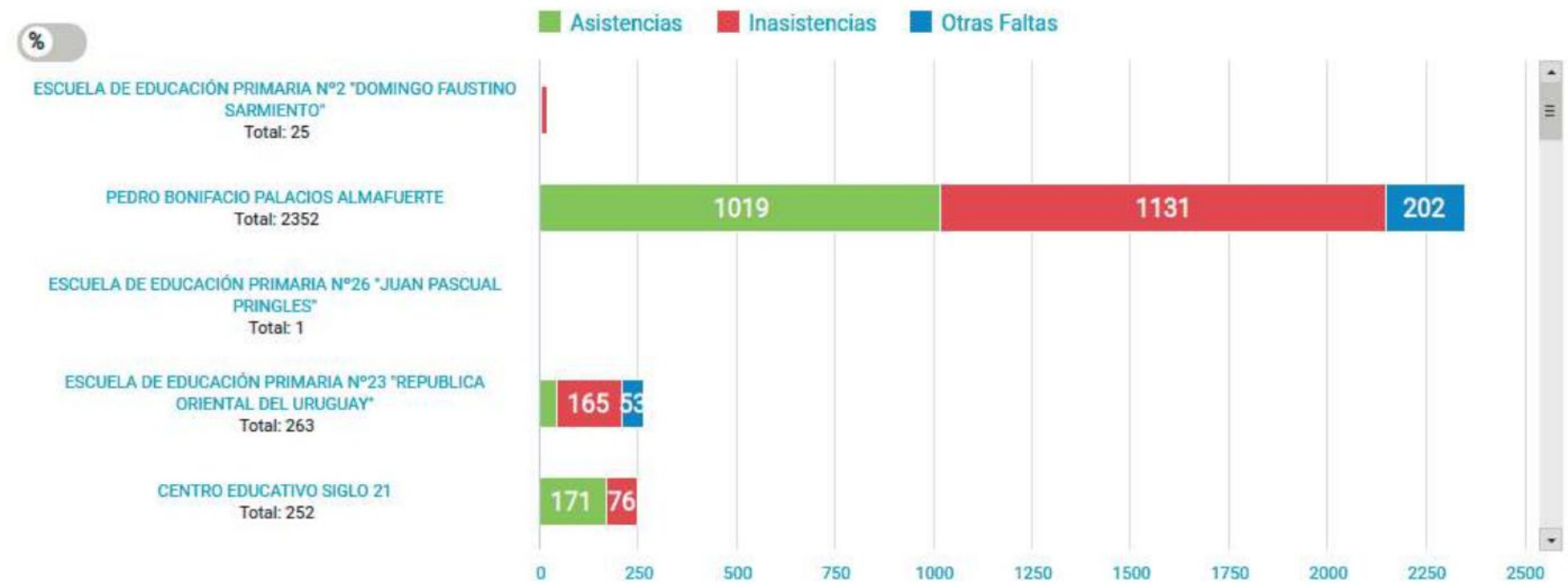


Tabla Resumen

Tipo	Cant.	Pct.
Asistencias	10777	44.53%
Inasistencias	11156	46.1%
Otras faltas	2268	9.37%
Totales	24201	100%

La tabla presenta los valores consolidados del gráfico de la izquierda.

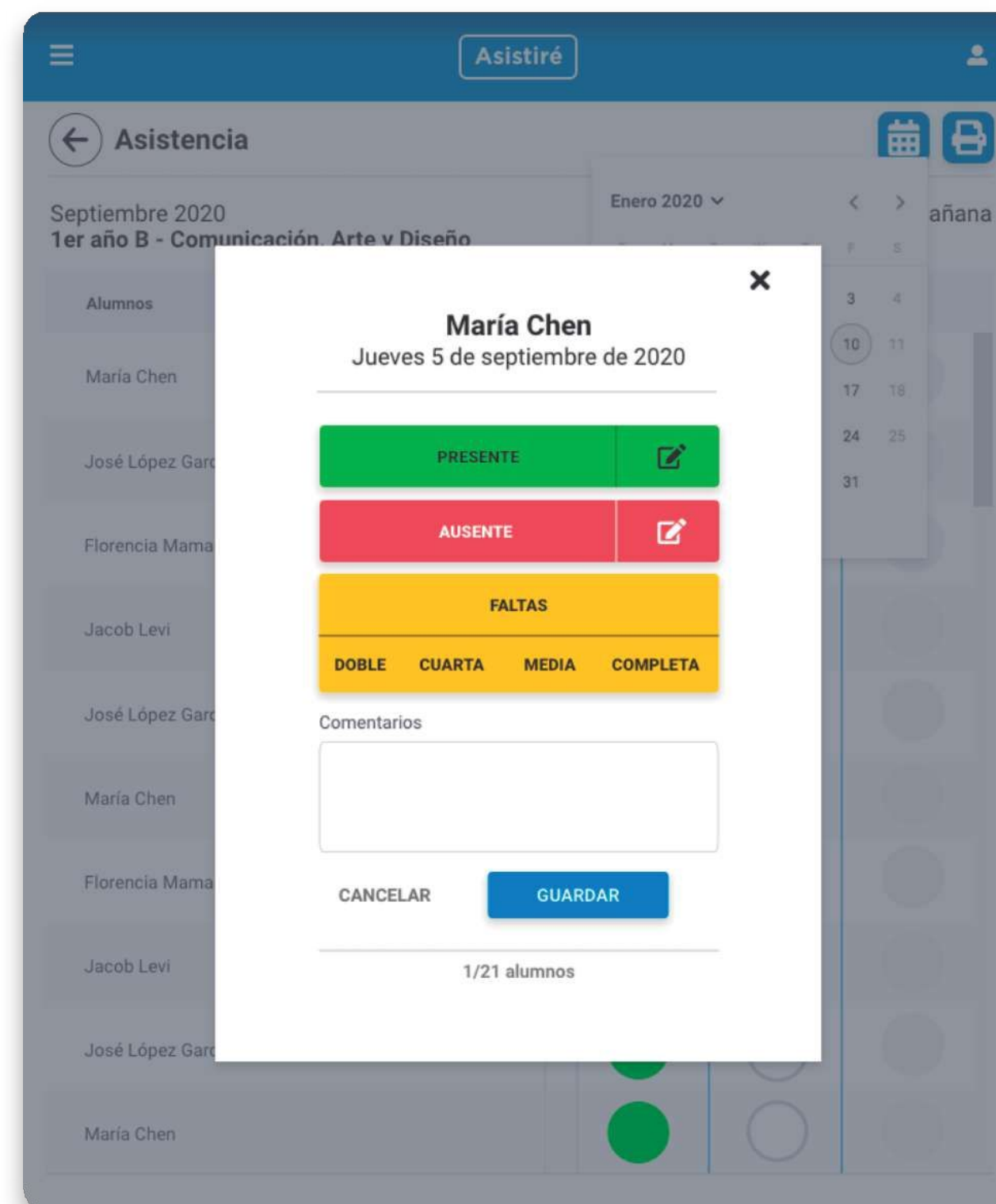
Scalable system with detailed information.

An optimization strategy was also developed to improve the web response time and allow a higher amount of users to simultaneously access the application.

We ensured also the user experience was in line with the end users' needs.

A migration and integration strategy was also implemented to consolidate data between the new systems with the already existing ones for some provinces.

Our teams worked applying incremental delivery methods to secure continuous client feedback and provide support to their suggestions in an easy low-cost way.



Result

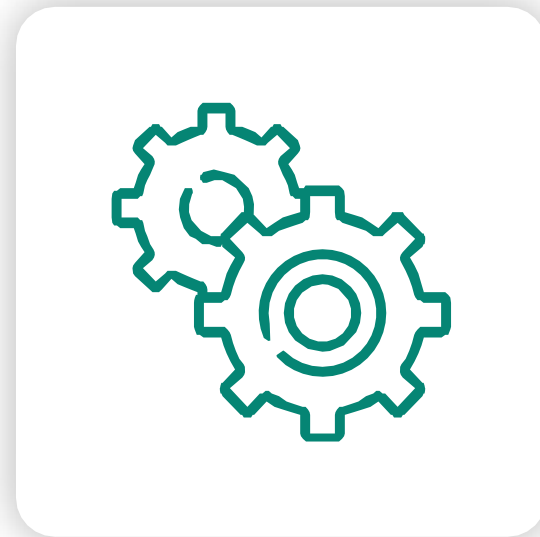
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After performing an extensive research and leveraging the experience of our architects we suggested and defined which technologies were going to be applied to design this complex architecture for the system.

The UX/UI team designed screens and clickable wireframes.

During the development process we extensively interviewed the end users to minimize costs associated with potential changes in the system and applied Agile methodologies putting client satisfaction and communication at the core.



We ensured E2E best practices for all stages of software development -requirements gathering, back-end, front-end, QA, architecture, infrastructure and DB- elaborated team management strategy to closely follow up the progress.

Support and maintenance for the production environment.

Development of new Mobile functionalities.

Migration and integration with existing nation-wide inhabitants records systems.

Product verification and validation carried out through the most advanced testing and automation techniques to ensure performance and quality.



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