

# SCHOOL MANAGEMENT SYSTEM

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

**educar**



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# Challenge

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**In 2017, the Ministry of Education (Argentina) expressed the need for a school management system in Argentina that could provide assistance for every public school, at Primary and Secondary education levels.**

Several management levels were requested: State, Nation, and Region.

Based on a hierarchy of users, it is possible to provide them with access to different sets of information. For instance, a high level user might be able to award academic degrees. Low level users could enroll students, upload marks, roll call, student personalized follow-up, transfer requests, creation of boards to display metrics and statistics to help the decision making process at a National level, support for rural schools with no access to internet, send out notifications to parents, among other functionalities that complement school management at all the levels aforementioned.

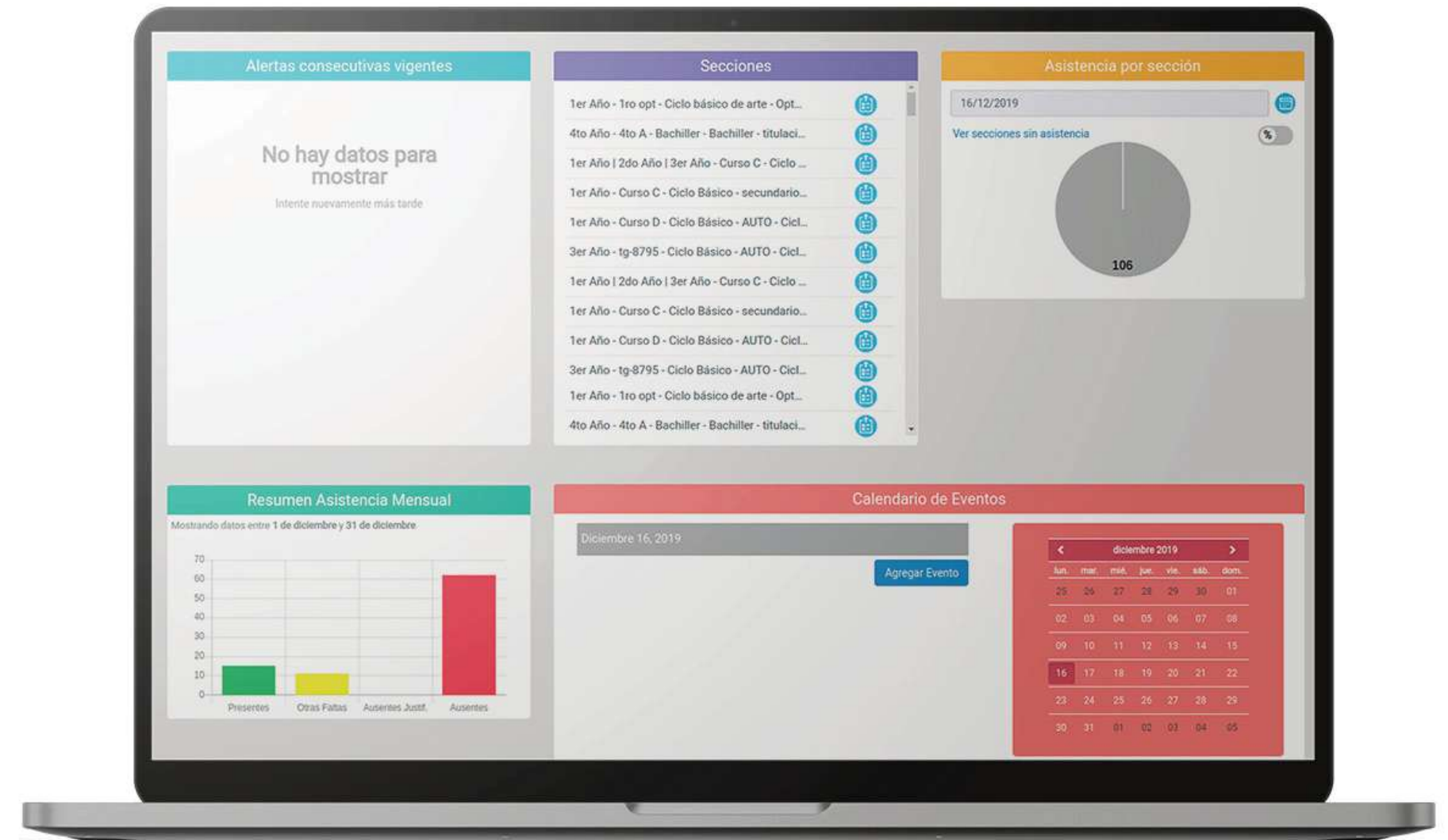
# Proposal

We helped them to define and design an scalable system for more than 50,000 users, along with a complex architecture and open source technologies.

We defined architectural strategies in order to handle each state separately.

Thus, each jurisdiction had the ability to choose which system modules they were going to use.

In addition, for rural schools with poor internet connectivity, we suggested a different architecture and the use of devices, called hubs, located strategically.



## Resumen Asistencias

Seleccione el filtro correspondiente

Año lectivo en curso 1/01 - 16/12

Jurisdicción: Buenos Aires



Asistencias Inasistencias Otras Faltas

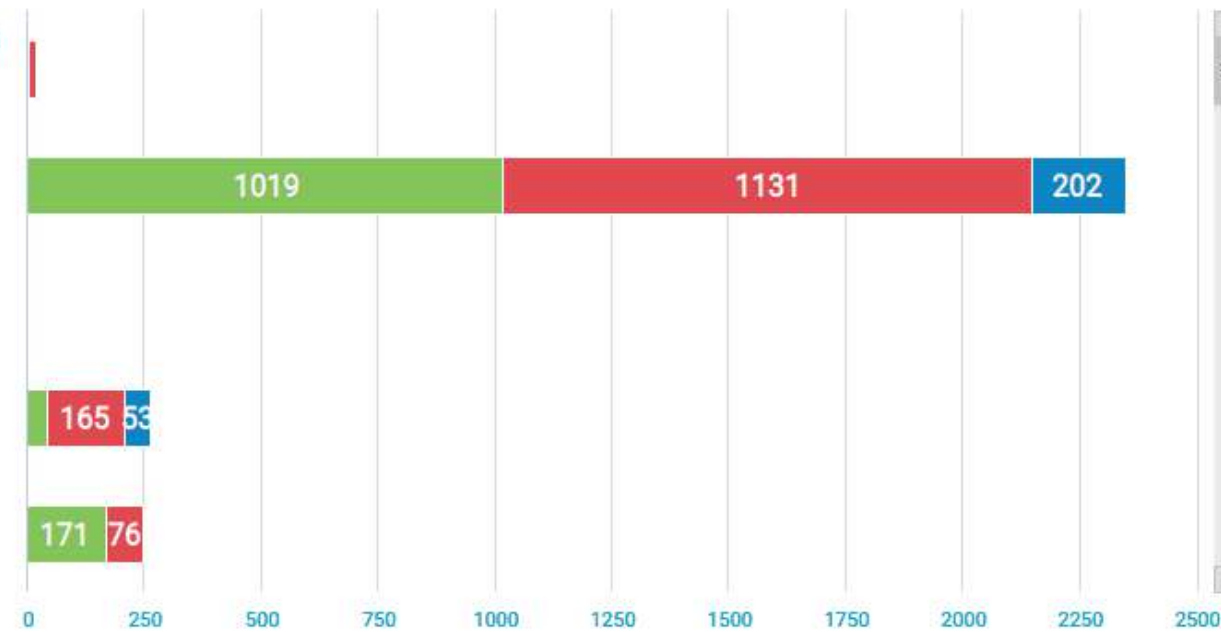
ESCUELA DE EDUCACIÓN PRIMARIA N°2 "DOMINGO FAUSTINO SARMIENTO"  
Total: 25

PEDRO BONIFACIO PALACIOS ALMAFUERTE  
Total: 2352

ESCUELA DE EDUCACIÓN PRIMARIA N°26 "JUAN PASCUAL PRINGLES"  
Total: 1

ESCUELA DE EDUCACIÓN PRIMARIA N°23 "REPUBLICA ORIENTAL DEL URUGUAY"  
Total: 263

CENTRO EDUCATIVO SIGLO 21  
Total: 252



## Tabla Resumen

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

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

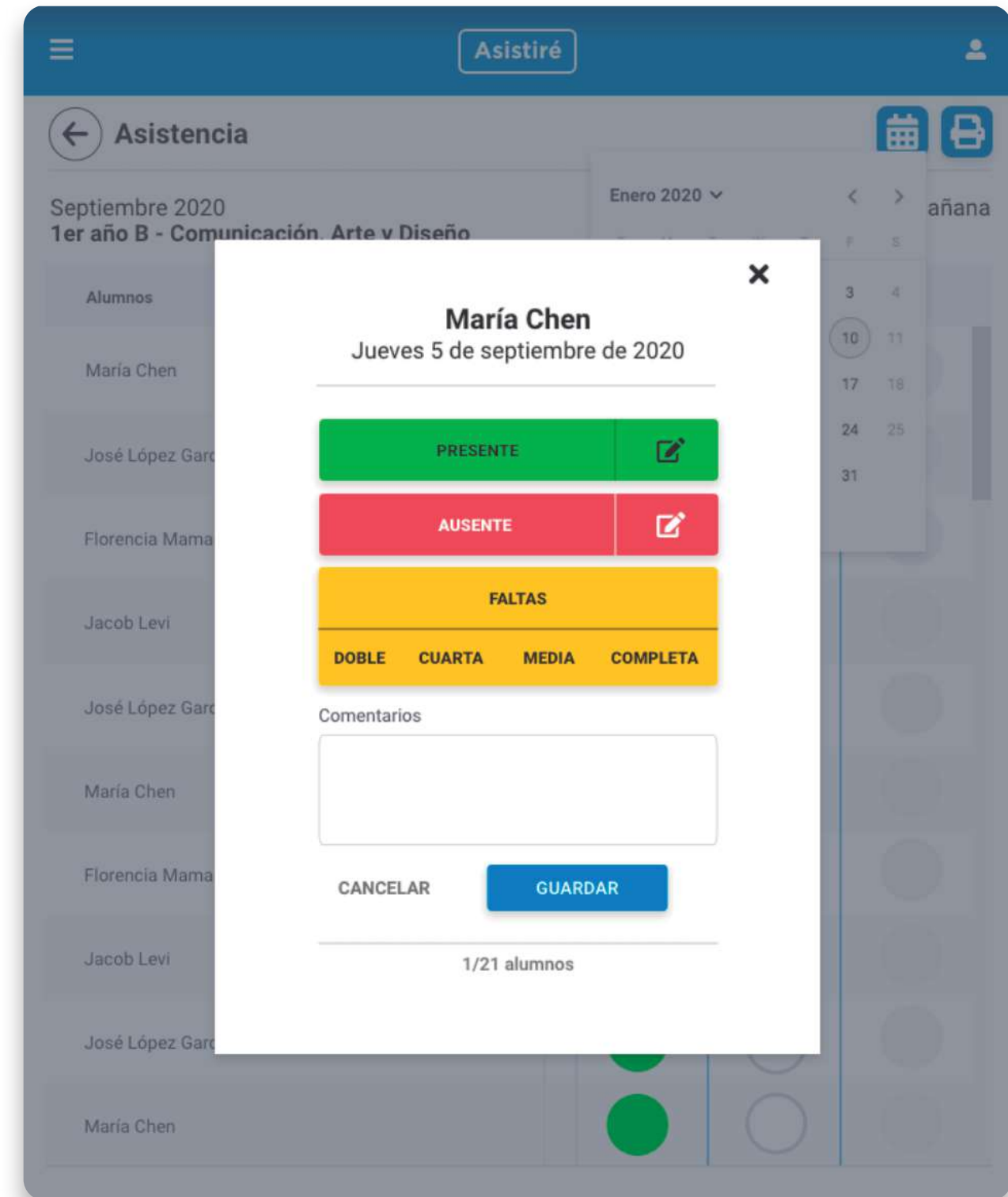
Scalable system with detailed information.

To increase the number of users accessing the application simultaneously, an optimization strategy was carried out in order to improve the web response time.

We made sure that, in this application, the user experience was in line with the end users' needs.

For some states, we implemented a migration and integration strategy to consolidate data between the new systems with the pre-existing.

In order to guarantee continuous client feedback, and to provide support for their suggestions in an easy, low-cost way, our teams work applying incremental delivery methods.



# Results

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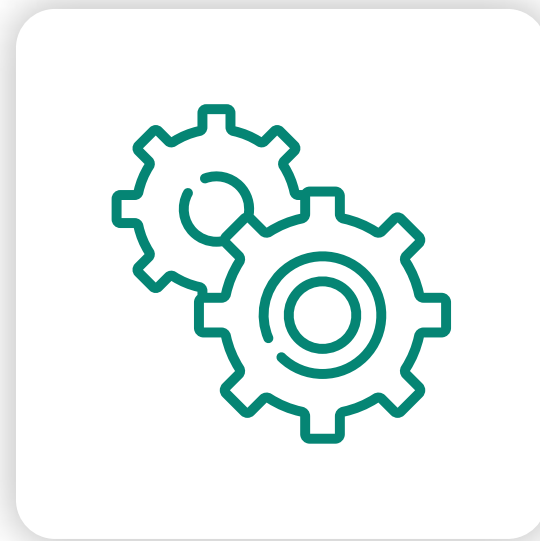
**As a result of our architects research and experience, we were able to design a complex architecture for the system to support 50,000 users.**

We suggested and defined which technologies were going to be applied.

With our UX/UI experts, we designed screens and clickable wireframes.

During the development process, we interviewed end users at key stages to minimize costs regarding changes in the system.

Agile methodology to prioritize client satisfaction and communication.



**We developed the system going through all the stages for software creation: Back-end, Front-end, QA, Architecture, requirements gathering, team management, infrastructure and DB.**

Support and maintenance for the production environment.

Current development of new Mobile functionalities.

Migration and integration with pre existing systems, such as Anses.

Product verification and validation carried out through the most advanced testing and automation techniques. Performance and Quality.



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