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🎓 An Education Case Study

Modernizing a Management Information System for schools and colleges

Rearchitecting and building the MIS modules



PROJECT BACKGROUND

A London-based school MIS (management information system) and student performance tracking device provider wants to enhance their current functionalities. The company caters to schools and colleges, and as part of their solution capability improvement plan, they want to add and enhance modules including Administration, Student Registration, and Student Attendance. Furthermore, they want to make some enhancements in their core product framework to make it future-proof and extensible.

The management also wants to offer these MIS modules as independent products in addition to as a suite of applications. To do that, they need a trusted technology partner who can bring a strong experience of product engineering and Microsoft expertise for the architectural changes that would be required.

VATSA SOLUTION

Rearchitecting and building the MIS modules

Vatsa Solutions did the initial due diligence and prepared a plan for making changes in the existing MIS modules. Vatsa defined the scope, priorities, and roadmap, and did end-to-end product rearchitecting and development. The transformation of the older system required understanding the business impact of the architectural changes and aligning the changes with industry practices and end-user behavior.

As part of the solution, Vatsa brought strong technical expertise to build state-of-the-art software solution for the education industry. With strong product engineering and Microsoft expertise, Vatsa rearchitected the existing Assessment, Registration and Attendance modules. With the new and user-friendly interface, schools were able to analyze, track and follow their pupil's performance closely. Also, Vatsa improved the registration and attendance modules and made them much simpler and faster. The administration staff had real-time visibility into the morning and evening attendance registers.

Further, based on this experience, Vatsa also built newer modules, including Reports, and Parent Portal. The Reporting module of the system was integrated into the MIS solution and pre-designed into each section of the system for more flexibility. Every report within the system could be scheduled to run automatically and be sent over email or were available at login.

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The Parent Portal module provided parents with real-time visibility into their child's performance and communication with the school.

Vatsa also rearchitected the product's core architectural framework that was initially designed by the client to make it extensible and future-proof. One of the key challenges was to understand the data structure complexity and user experience. Each small change in the data structure of one module had a larger impact on the entire suite. Vatsa's Solution Architects worked diligently and made multiple careful modifications to the data structure and entity relationships without breaking the integrity of the system. A testing team drafted test cases that supported these changes and ensured full coverage of code and workflows across its multiple components. The planned activity ended with the delivery of a fully operational and optimized system without issues.

RESULTS

The complex and delicate nature of the implementation was supported by the technological expertise and commitment from Vatsa's team, and the company has become a trusted partner for the customer. The engagement has lasted a long time, and Vatsa continues to develop and improve the various MIS modules and make enhancements. This has resulted in a lot of benefit for the client, including:

- Intuitive, user-friendly interface to analyze and track pupil's performance
- Improved flexibility to the customer with a full suite of MIS modules that can also be offered independently to schools and colleges
- A modern, cutting-edge system that can quickly accommodate current and future customer requirements
- The client's management could focus on continuous improvement of the product based on customer feedback, which has led to a large and happy customer base for the company

TECHNOLOGY AND TOOLS

Microsoft .Net, C#, SQL 2008 R2, MVC architecture





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We do this through our talented pool of people, impeccable services and innovative solutions. Our commitment to quality and excellence is evident in every assignment we deliver. With our agile work culture and professional ethics, we have built high level of trust in our customers, which has resulted into repeat business.



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