CASE STUDY: EDUCATION

How 'smart classrooms' are being established and maintained in 42,000 schools with the help of Başarsoft's specially designed GIS-based data environment

Client: The FATİH educational technology project, sponsored by the government of Turkey
Challenge: To monitor distribution, use, and maintenance of tablet computers and other infrastructure delivered to 42,000 schools
Solution: Başarsoft scalable GIS data environment, synthesizing all data into an instantly updatable system providing easy monitoring, analyses and planning

eğitimde fatih projesi
Fırsatları Artırma Teknolojiyi İyileştirme Hareketi

FATİH GIS-BASED INVENTORY PROJECT: YEGITEK General Directorate of Innovation and Education Technologies

Executive Summary

The modern education system is affected by changes in technology. In Turkey, the Ministry of Education wants to adapt to these new technologies. The Ministry made tenders and got intelligent boards and tablets, and built infrastructure for these.
Obtaining and distributing all these systems throughout a large country like Turkey is not so easy. This FATİH GIS Project aims to monitor the whole infrastructure, schools with locations, registration of hardware in each school, logistics, and life cycle management of this huge system.

Business Challenge

The Movement of Enhancing Opportunities and Improving Technology, known in Turkey by the acronym FATİH, is among the most significant educational investments in the history of the country. The FATİH project proposes that the "Smart Classroom" be put into practice in all schools around Turkey. Through the FATİH project, 42,000 schools and 570,000 classes will be equipped with the latest information technologies and will be transformed into computerized classes.
Turkey has initiated the FATİH project with the aim of providing equal opportunities in education and improving technology in schools for the efficient use of ICT tools in the learning-teaching processes.The idea is to appeal to more sensory organs in preschool, primary and secondary education by providing tablets and LCD Interactive boards. In-service education for teachers, transformation procedures, and educational e-content are going to be formed in accordance with the current teaching programs.
Among many other targets, the GIS project aims toward
• Providing equipment and software infrastructure
• Conscious, reliable, manageable and measurable ICT use
• School, region, district and province based comparisons for monitoring, via map, the status, effects and changes seen in the project.
Başarsoft provided a street level map database, checked and updated new school locations on the map, and developed software for monitoring.

Customer Profile

YEGITEK, the Ministry of National Education's General Directorate of Innovation and Education Technologies, has been working for the use of optimal technology for 60 years. It does research studies for changes and improvements in education technologies, both in Turkey and throughout the world.

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CASE STUDY

Solution

In the FATİH project, thousands of 'smart classrooms' have been created. The primary need was to locate all schools on the map. The amounts of fiber optic cable networks needed to connect these schools were calculated by using existing coverage and map analysis.

School addresses, numbers of classes, existing devices and new devices to be installed, dates of installation and other essential data are monitored via custom-designed GIS applications.

Numbers of students, teachers, classrooms and labs, tablets, and smart blackboards were reported in the list and on the map. Also, custom query and analysis functions were created.

Maps of devices requested, devices installed and devices not installed were produced.

The system is open for entry of new schools and devices. Extension of the system is possible.

Results and Achievements

All schools listed under the Ministry of National Education were mapped. All the students, teachers and inventories can be monitored on the map.
A map-based decision support system was created, and the number of students or number of classes per number of devices supplied can be compared and shown on the map to provide an optimal solution, and a monitoring system is also provided.
Logistic support and distribution of devices have become easier with Başarsoft's solutions, custom designed for the FATİH project.

Technology Used

Oracle as a Spatial Database.
MapInfo Professional is the leading Desktop GIS solution.
MapXtreme is the powerful web-based GIS application software development kit (SDK).
MapXtreme is the leading software development kit (SDK) for integrating location intelligence with existing business systems. It allows developers to build custom mapping applications, provide tailored views of geographic data and automate and augment business processes.
MapXtreme's powerful spatial capabilities are geared toward solving real business problems, with a powerful, user-friendly feature set. Flexible deployment options include both desktop and web from a single SD.

About Başarsoft

Başarsoft designs and supports software environments that enable businesses to synthesize all data geographically. This way, all available knowledge becomes easily and instantly usable for day-to-day operations and strategic growth. Başarsoft was founded in 1997, currently has 250+ staff serving 1500+ clients in Europe and the Middle East, and has years of experience working with partners including Google, Yandex, MapInfo, and all telco operators in Turkey. Başarsoft is ready to provide geographic perspective for your company's vision.

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