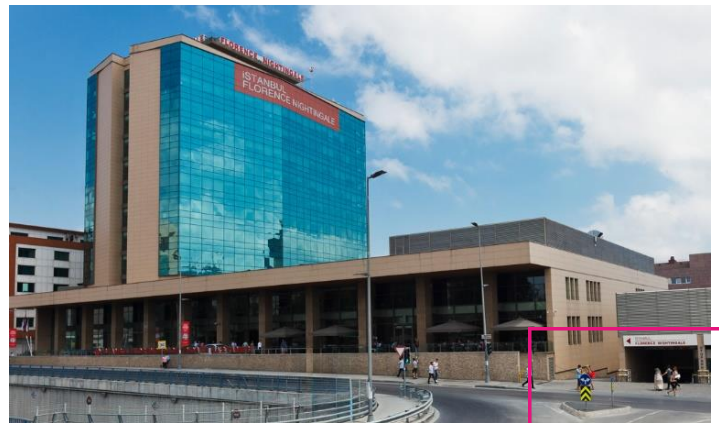


# Customer Spotlight: Gupta Porting by fecher From Legacy Application to Leading Edge for Group Florence Nightingale Hospitals

**Application Modernization project by fecher brings 30-year-old Gupta application of the Turkish hospital group to .NET and the web**

*With four maximum care hospitals, two medical centers, and a university, Group Florence Nightingale Hospitals is one of the leading healthcare providers in Turkey. The hospital information system (HIS) FN-Gate ensures the smooth processing of data for 70,000 inpatients and 250,000 outpatients per year. Developed as individual software in Gupta Team Developer in the 1990s, the software is tailored to the specific requirements of the group and has been continuously developed over a period of around 30 years. While the functionality thus always remained up-to-date, there were recently serious doubts about the future viability of Gupta as an application platform. Under the project name "Florence 2.0", fecher therefore ported the extensive software with its 2,000 users to the modern .NET platform within six months. In addition, web enabling ensured that medical staff can now also work with the solution from external locations and with mobile devices.*

"Our group is unique in many ways," emphasizes Gökdeniz Gür, Deputy CEO and responsible for the Digital Transformation Project "Voyage". "That's why individual software is and remains the only sensible solution for our IT requirements." When it became clear to those responsible a few years ago that the old platform would no longer have a



**Group Florence Nightingale Hospitals is one of the leading healthcare providers in Turkey**

future, they had looked around for alternatives. "Even then, there were hardly a handful of Gupta programmers left in the team, and on the open market you couldn't find anyone in the whole of Turkey who still knew their way around it," Gür recalls. Accordingly, a switch to commercially available software would have been natural. However, the solutions of the large international providers were inflexible and expensive, while those of local Turkish providers were not mature enough. And in any case, major setbacks would have had to be accepted in the functionality individually developed for the hospitals.

The second alternative was therefore a new development of the complete individual software on a modern platform such as .NET. "Even in our most optimistic estimate, the development time for this would have been several years," reports Gür. "And of course, we had to expect possible delays." The budget for this undertaking would have been immense and the old software would have had to be further developed and maintained during the entire runtime. In addition, it was completely unclear whether a new development would even be able to fulfil its purpose in the end - after all, not all of the functionality of the 30-year-old legacy software was comprehensively documented.

### Porting Brings the Solution

At the beginning of 2022, another possibility for modernizing the application surprisingly opened up: Under the name "The Porting Project", the German provider fecher offered a tool-supported conversion of the Gupta solution to C# on the .NET Framework. "This approach made it possible to convert the application in a shorter time and at affordable conditions," says Filiz Güler, Director of IT & Business Operations, who had established contact with fecher. "Above all, we ran no risk of losing any of the proven functionality that our users urgently depended on."

Güler and her team selected some representative parts of the software and had them ported by fecher as a test. "As a result of this fine analysis, we were already able to see our solution running under .NET. fecher extrapolated the effort to the entire solution and created a fixed-price offer for us, so that we knew from the outset what to expect," explains the IT manager. In addition to the conversion to .NET, fecher had also offered so-called "Web Enabling". In this process, the ported application is additionally lifted to the Wisej.NET

framework and can then be executed directly in the web browser. "The option of accessing their appointment scheduling and patient data from outside and with mobile devices was particularly attractive for our medical users," Güler knows.

Thus, the decision for the porting project with fecher was made in spring 2022. The entire application with around half a million lines of code, 800 screens and 550 reports was to be ported to .NET within six months. It was also agreed that in a second step, the modules relevant for the doctors would be made fit for use in the browser and on mobile devices in a web enabling.



**Filiz Güler, Director of IT & Business Operations at Florence Nightingale, (center) and her colleagues**

### The Project Gets Underway

At the beginning of June 2022, fecher received the complete Gupta code of the application. While the modernization specialists began working on converting it to C# and .NET using tools, a small team was assembled in Istanbul to create screen videos with application examples. "In the end, we had recorded 71 videos that guided users through our HIS system," explains Güler. These videos were later

used by fecher to verify the correct functioning of the ported software.

First, however, there were still the usual manual rework tasks to be done before the .NET project could be compiled without error messages in July. This was followed by a test phase with bug fixes, initially internally at fecher and then from August onwards also by the group's test team in Istanbul. "The constant coordination between fecher and us in weekly Teams meetings and via the specially created Sharepoint platform was worth its weight in gold," reports the IT Director. "Despite the language barrier and communication in English as a foreign language, the project management by fecher worked wonderfully."



**Thanks to fecher's Web Enabling, medical staff can also work with the solution via mobile devices**

In addition to the basic fixed-price agreement, the partners had agreed on flexibility for the course of the project. "We deliberately allowed ourselves to deviate from the original planning whenever we came across better approaches or unforeseen challenges," reports Dr. Sinan Aran, the General Manager of Florence Healthcare Technology. In such cases, he received an informal offer from fecher and was able to order the additional work. "Often

times, however, this was not necessary at all, because we were able to find more efficient solutions together that remained within the original scope." This was the case, for example, with the deployment of the application on the group's IIS web server or with problems with printing from the web application, which were due to installation errors.

### Full Speed Ahead from Now On

The desktop solution was thus fully tested and accepted by the end of the year and could go into production in the largest hospital in Istanbul on January 1, 2023. If something had not worked, a switch back would have been possible at any time—after all, the ported software was based on the identical database structure as the old Gupta solution. However, this joker did not have to be drawn. On the contrary, the users were very satisfied and particularly praised the better performance. After some last bugs were fixed, the other hospitals in the group also quickly received the new software in the course of the first quarter.

In the meantime, fecher had pushed ahead with web enabling, so that the browser modules could also be delivered in the summer. "To make the new software palatable to the doctors, we had prepared short videos explaining how to use it," says Güler. "They quickly recognized its advantages and have been using the mobile functions with great enthusiasm ever since."

For the IT Director, the porting project was just the beginning of the modernization, she says: Web enabling has proven to be so successful that it is now also being extended to the functions for the nursing staff. A dictation function via smartphone is to be added for the doctors in the near future, and BI functions for evaluations and more meaningful management reporting are to be implemented in

the medium term. "Now that we have arrived at .NET, so many new possibilities are open to us," says Deputy CEO Gür, laughing: "Our last two Gupta developers will probably be able to take more vacation soon."

### The Porting Project:

#### Key data

- **Software:** FN-Gate, comprehensive hospital information system for four hospitals
- **Timeframe:** June 2022 to July 202
- **Source Technology:** Gupta Team Developer 6.0
- **Target Technologies:** C#/Visual Studio, partly Web/Wisej.NET
- **Scope:** 500,000 SAL items or lines of code
- **Screens:** 800
- **Reports:** 550
- **Report Engine:** Crystal Reports

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