

Case Study

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Protel's Cloud-Native PMS Migration



The Client

Our client is **Protel hotelsoftware GmbH**, an internationally renowned company. Protel hotelsoftware has been developing and selling technology and service solutions specifically for the hotel industry and related sectors for more than 25 years.

The consistent focus on the demands of a single industry makes Protel one of the most experienced and successful hospitality technology providers at the forefront of every innovation and hospitality trendsetting.

They are widely recognized as one of the leaders in implementation of information technology solutions with more than 14,000 hotels in 93 countries running the Protel Property Management System.

The Protel hospitality platform is the best-in-class for hotels and hotel groups that want a sophisticated solution for their ecosystem, with flexibility and world-class quality. It connects all types of hospitality technologies into one standard, accessible framework. In order to stay sharp through challenging periods of fast technology advances whilst keeping its highly maintained reputation, Protel management deduced that they needed app migration and modernization.



Responsibilities

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From the business point of view, application modernization meant greater flexibility, easier maintenance, better user experience and simplified use of the whole system. One of the key things our client needed was the seamless implementation of new functionalities while the main system was running. It means that the system isn't frozen while being technologically modernized but is supplemented with new options for end users.

For this complex endeavor, Protel's in-house digitalization team needed trusted outsourced partners instead of direct hiring or onboarding their own teams of developers. That's when they found out about Serengeti through a recommendation.

WHY SERENGETI?

Key factors which differentiated us from other software development and consultancy companies were our experience in the hospitality domain, our ability to quickly deliver resources, to the ability to provide guarantees, and our client's review of similar existing projects. Before anything else, our extended experience with microservices and the implementation of new front-end frameworks proved to be dealbreaker in Protel's decision to cooperate with us.

Serengeti's front-end scrum team, including the team lead and four developers, together with back-end team with four developers (focusing on specific microservices) were promptly onboard.



Technologies

Background microservices

It was defined that Java monolith should converse to Java Spring microservices architecture. A scalable architecture was considered necessary for the next planned development phases. The user interface needed complete rewriting using Angular. User experience (UX) improvements and refreshments were also planned, as was the final deployment of the whole solution on AWS using AWS CI/CD.

With Protel's internal team guidance, Serengeti participated in the design and overall development of both background microservices (back-end) and application modules of the new platform (front-end).

The development of background microservices is based on Java 11 and the Spring Boot framework. Microservices are proxy REST APIs in a way that they represent the backbone between other (internal and external) services and platform as a "single source of truth".

With the help of AWS, they are part of aggregated microservices system, functioning as a back-end support to the developed platform.

The development of the solution (front-end) application modules is done within the Angular 11 + development environment, with some additional technologies like Angular Material and Formly. Generally, for application and service development, Postman was an indispensable tool due to the variety of external services, which - in addition to the classic REST API - are often based on, for example, Elasticsearch or GraphQL.

Source code versioning and deployment are done by GIT and include the development phase with environmental separation (Dev, QA, Production, ...), so that each module and microservice gets a separate and fully functional development environment (within the AWS).

Solution

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In cooperation with the client's team, Serengeti developed a modular hotel management system platform that offers a set of solutions that hoteliers use to manage their day-to-day hotel operating activities such as:

- Reservations
- Front desk
- Housekeeping
- Maintenance
- Billing and invoicing
- Analytics and reporting.

All of these activities can be labor and time-intensive, so one of the goals of this new platform is to increase revenue through time and money saving opportunities for end users. It is specifically designed to act as the hotel's command center for distribution, availability, pricing, reservations, guest interactions, housekeeping, reporting, billing, communication, and ad-hoc services.

Two applications of the platform were designed and developed:

Channels is a new application of the new platform that acts as a middleware between solution and external booking sites. It contains a list of channels, detailed information about the channels, their current statuses, statistics, and a general overview. It enables the user to manage statuses, activate/deactivate channels as needed, and to map the platform's resources (room types, rates, rate groups and various other properties) with the external resources of different booking engines.

Interfaces are also a new application of the solution that allows users to list, view and search for logs and statuses of hotel interfaces. It also enables users to restart or initialize data sync operations for desired hotel interface.

Both applications contain their back-end service application that encapsulates multiple different data sources from different endpoints into a single source of truth allowing the platform to retain its simple user interface while enabling a scalable architecture for the next planned development phases.



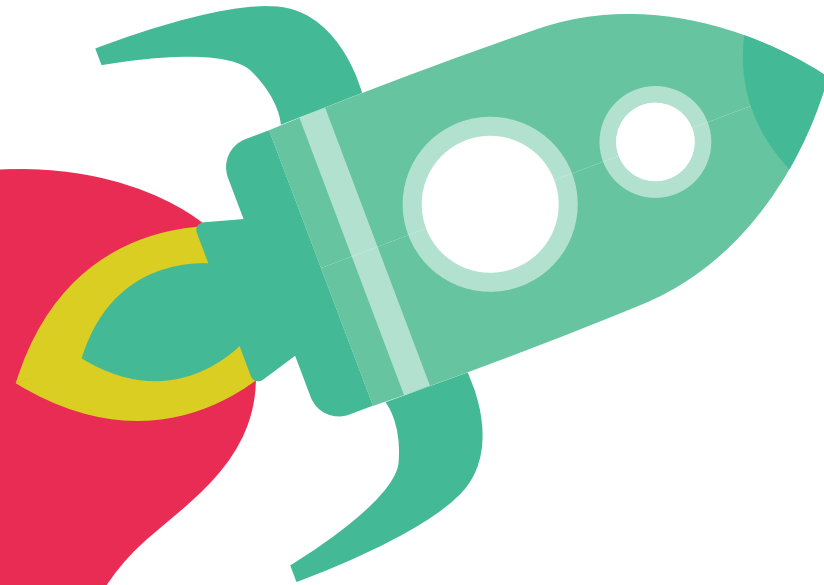
Top Benefits for the Client

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Faster time to market for our client, who was able to migrate 2000 existing customers to the new software.

Faster delivery of an all-in-one platform that speeds up processes and saves money for our client's end users in the long run.

Seamless integration of new functionalities for the end-user while the app is being modernized



Accelerating business transformation through innovative technology

Serengeti d.o.o. is a software development nearshoring and consulting company. For the past 20 years, we have been partnering with our clients to reinvent their business models using innovative information technology. We work according to the principles of DevOps, implementing disruptive trends in our specializations. Our experience and business acumen comes from successfully working on over 300 projects.

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