

infopulse

Part of TietoEVERY Group



**COACHING &
CONSULTING**



CASE STUDY

Reimagining Solution Architecture for Global Personal Coaching & Consulting Platform

Achieving better user experience and performance of the core product with migration to React

Client: Global leader in life advisory services

Industry: Online advisory platform

Size: 50+ employees

Location: USA

CLIENT BACKGROUND

Our client is one of the global leaders in life advisory services, providing a comprehensive B2C consulting platform to a million unique users every year. The platform allows for 24/7 chat consultation sessions with life coaches on a variety of topics. With more than 20 years on the market, the company has gained industry recognition connecting experts with end-users worldwide, including the USA, South Asia, and Europe.

BUSINESS CHALLENGE

Having been 20 years in business, our client nowadays is a comprehensive consulting platform with a complex ecosystem. To meet customers' needs and provide them with exceptional user experience and extended functionality, the service can be delivered in five different ways: via web-based desktop and adaptive mobile versions, iOS and Android applications, and a separate app intended for experts. With the growing popularity of the service and an increasing number of users, it became more and more challenging to ensure an uninterrupted customer experience with 24/7 chat availability across all platform versions.

Besides supporting the existing solution, the company anticipated further development of the product with new features and updated functionality. However, the growing business needs and objectives could not be satisfied due to limited technical capabilities, which restrained the efficient scalability of the product. A leading advisory platform reached Infopulse in their search for an experienced IT service provider with relevant expertise that would contribute to the platform development and

ensure that it aligned with the business strategy of the company, namely:

- Facilitate the development of the strategic product on a new technical platform to suit the emerging business needs;
- Ensure stakeholders engagement and close collaboration with decision-makers to accurately implement product vision;
- Enable high efficiency and uninterrupted functioning of in-app chats;
- Allow for high scalability and 24/7 service availability to support the consistently growing load, as well as occasional peak loads in view of continuous audience growth;
- Support existing platform infrastructure to achieve better performance;
- Reconsider legacy components of the solution and define areas for improvement;
- Strengthen the company's internal development team.

SOLUTION

Infopulse specialists worked closely with the company's experts to help achieve the set objectives and strengthen the market position of the product. Our team performed full cycle product development, provided extended support of the existing infrastructure, and took over the role of an R&D center for further product development.

PERFORMANCE OPTIMIZATION

One of the project's key objectives was to ensure better platform performance that would allow our client to welcome the growing audience and minimize associated risks. Having inspected the existing solution, Infopulse addressed the challenge by reconsidering and upgrading legacy components and thus eliminated bottlenecks in platform performance:

- Defined areas for improvement and potential risks with constant app monitoring and analysis, including response time, user experience data across countries and regions, page render speed, etc.;
- Initiated code optimization of the main app components, including web- and mobile-based applications. Implemented up-to-date approaches to development while refactoring the solution;

- Updated the .NET framework for the billing service. Reviewed and refactored the code, aligned it with the new standards. Optimized the component's resources by introducing an asynchronous programming model instead of multithreading;
- Shifting to asynchronous programming also accelerated the cache service. Moved from an exclusive to an optimistic lock for faster data processing;
- Performed technical SEO optimization of the web-based applications: configured site routing and ensured generation of user-friendly URLs, enabled page indexation by search engines, introduced meta tags;
- Conducted a comprehensive Google Tag Manager audit and optimized the tag usage for maximum efficiency;
- Configured the billing system to calculate the final fee, based on a flexible system of discounts, tariffs, and personal bonuses.

SYSTEM SUPPORT

The advisory platform provides its users with any-time-anywhere access to chats with experts, demanding a high level of operational stability. Considering an extensive solution ecosystem, which included five web and mobile versions, it was crucial to ensure the seamless performance of every component for the best result.



Infopulse team provided end-to-end support of the service:

- Conducted regular technical audits of the solution to define potential risks, including a comprehensive analysis of the current codebase;
- Initiated redesign and refactoring of mobile-native applications (iOS, Android) based on the audit results;
- Reconsidered the existing functionality of the solution by rewriting and perfecting its features to suit the growing business needs;
- Ensured the consistent quality of the software with comprehensive QA and QC;
- Implemented blue/green deployment strategy utilizing four servers to enable seamless system maintenance with zero downtimes and no impact on end-user experience;
- Provided ongoing support of web-based and mobile-native applications;
- Ensured backward compatibility of the upgraded components with the existing solution;
- Eliminated security risks defined by the internal cybersecurity audit;
- Improved the Microsoft SQL database performance by optimizing stored procedures.

NEW FEATURES DEVELOPMENT

Along with enabling better performance and consistent business processes, our client entrusted the strategic development of the product to the Infopulse team as well.

In close cooperation with the client's product owners and UX designers, our team:

- Provided business and technical assessment of the suggested functionality, estimating potential risks and development costs;
- Analyzed current setup and initiated a step-by-step migration of the solution to React;
- Started the process of migrating the advisors' chat from the desktop solution to a platform based on React and .NET Core;
- Developed migration strategy and created architecture documentation for moving the core application from ASP.NET to React;
- Mapped out the upcoming migration to the new billing system;
- Set up integration with data-driven marketing analytics platform Optimove "Brain" for real-time behavior user analytics;

- Implemented Content Delivery Network to achieve low latency for global users when delivering static content;
- Enabled integration with third-party payment systems Google Pay and PayPal. Provided capability to implement Apple Pay when required;
- Ensured user-friendly authentication with Facebook Connect, Google Sign-In, and Sign in with Apple;
- Contributed to technical roadmap creation;
- Developed and implemented new features.

TECHNOLOGIES & TOOLS

- **Main Programming Language:** C#
- **Back-End:** ASP.NET Core WebAPI, ASP.NET WebAPI, WCF
- **Front-End:** ASP.NET WebForms, React.js, TypeScript, HTML/CSS/JavaScript/jQuery
- **Native Mobile:** Swift (iOS), Java & Kotlin (Android)
- **Databases:** Microsoft SQL, Oracle
- **End-User Runtime Monitoring and Reporting:** NewRelic, Loggly, End-to-End Automation
- **Other:** Couchbase (NoSQL Cache Provider), RabbitMQ (Message-Broker (AMQP))



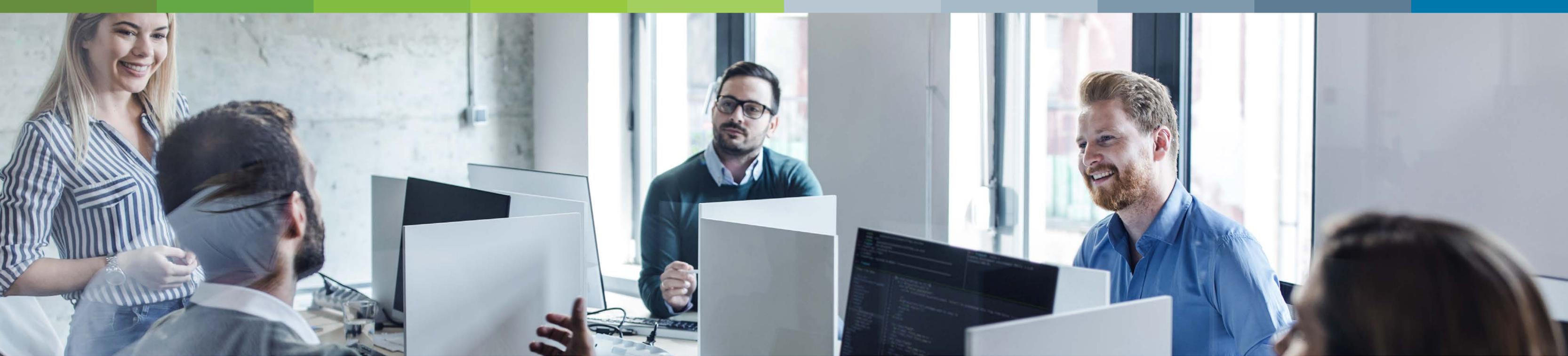
BUSINESS VALUE

Our client achieved a significant market advantage with boosted solution performance:

- High system resilience: **up to 3,000 chats** daily with zero downtimes thanks to consistent support and improved infrastructure;
- **30% better solution performance** achieved by components redesign and optimization;
- Ensured technical capability to **handle 5X more users** on current setup without reducing the app performance with room to scale up further;
- **Up to 2X faster page load** after implementing Content Delivery Network, page rendering optimization, and a new approach to Google Tag Manager usage;
- Reached **Top ranking in global search engines** thanks to better system optimization and implementing SEO best practices, improving audience reach;

- Consistent product development with a regular update of the existing features and implementation of new functionality;
- Enriched customer experience thanks to third-party integrations with payment services, extended connectivity options, and data-driven user relations management;
- Continuous solution development and deployment without affecting end-users' experience with blue/green deployment strategy;
- Enhanced information security.

Thanks to our dedication to this project and significant contribution, a global leader in life advisory services is eager to continue cooperation with Infopulse, as one of their reliable IT partners, to further develop and perfect their solution.



ABOUT INFOPULSE

Infopulse, part of the leading Nordic digital services company TietoEVERY, is an international vendor of services in the areas of Software R&D, Application Management, Cloud & IT Operations, and Cybersecurity to SMEs and Fortune 100 companies across the globe. Founded in 1991, the company has a team of over 2,000 professionals and is represented in 7 countries across Europe and North America. Infopulse is trusted by many established brands, such as BICS, Bosch, British American Tobacco, Citrix, Credit Agricole, ING Bank, Gorenje, METRO Cash & Carry, Microsoft, Mondelēz, OTP Bank, Raiffeisen Bank Aval, SAP, UkrSibbank BNP Paribas Group, VEON, Vodafone, and others.

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