CASE STUDY

"Software analysis and evaluation of a business-critical large-scale application in the public sector" with the aid of Seerene

Case Study Seerene SaaS for Code & Development Analytics and ZL Associates Consulting

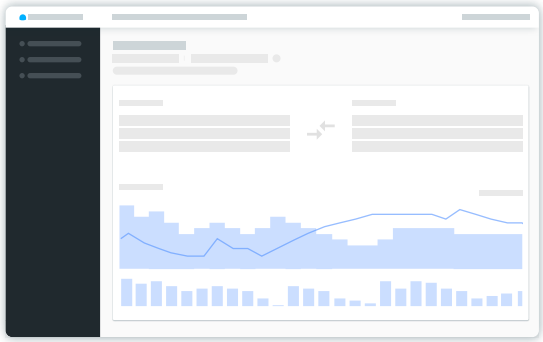
ZL associates
BUSINESS · IT · SOLUTIONS

seerene

1. Problem

One of the largest government agencies in Europe operates its most important business processes with several core applications. In recent years, these software systems have been developed, enhanced and maintained mainly in cooperation with external providers. In order to improve risk management, minimize the outage risk and create more transparency regarding future development and maintainability, one of the large core applications has been analyzed in detail using Seerene as part of a proof of concept (PoC). The focus of the PoC was to use Seerene to achieve greater transparency with regards to the quality of the software and its development progress. Also, to answer the question which software risks were accumulated as technical debts in the recent years before the start of the project. Furthermore, the costs and efforts for ongoing maintenance and further development seemed too high. In addition, statements on developer costs should be validated collaboratively with the service providers.

From summer 2016, ZL Associates Consulting and Seerene have been part of a feasibility study commissioned with the use of Seerene, and the analysis of fields in one of the large core applications. In addition, from autumn 2017, the PoC have been extended to several peripheral systems connected to the core application, e.g. the ticket and test system, in order to obtain even more well-founded, data-based findings.



2. Key data of the analyzed systems

The following key data shows the scope of the legacy systems analyzed, both technically and from a business process perspective.

The central application is a document management system (DMS) with **more than 1 billion documents,** of which more than **half a million documents** are processed **per day** on average by a decentralized circle of **approx. 100,000 end users.** The software system runs on **more than 500 networked servers** and manages a data volume of almost **1,000 TB.** The code basis of the system consists of **approx. one million lines of code.**

Originally, the focus was on the upper and mainly, the middle management levels of the agency as the primary contact persons and stakeholders. In the course of the project this focus has expanded. The detailed development of use cases has resulted in additional fields of application for Seerene at the operational level:

- Release comparisons for software architects
- Requirements tracing for product owners
- Trend analysis for software developers

Retrospectively, this use-case-based approach has proven to be very valuable, because during the project it was possible to gain important insights into the system landscape, the quality of key figures and the maturity level of the software development process.

3. Goal and solution

It has been important for the first-line and middle management – consisting of the process manager, the lead architect and the senior system developers – to achieve the following goals:

1. Early detection of risks in order to minimize them (“before the damage occurs”)
2. Transparency over the entire code base, including the code evolution and development activities
3. Collaborative analysis of the service in terms of quality, technical performance and effort deployed
4. Identification and evaluation of software risks, in order to minimize the probability of failure
5. Data-based analysis for re-factoring decisions
6. Establish a management tool to validate the maturity of the software development process
7. Create a basis for the introduction of a continuous improvement process, and steer it with measurement parameters (KPIs, target values and quality gates)
8. Locate knowledge monopolies and avoid possible “vendor lock-in”
9. Continuous evaluation of the effectiveness of improvement measures

In the course of the analysis it has become evident that each operational unit benefits from the use of Seerene. For example, software architects can now immediately analyze and decide whether code segments in the software landscape are suitable for re-factoring. The product manager directly sees how the KPIs relate and behave with each commit via his individual dashboard and can (if necessary) take immediate corrective action. Software developers use Seerene as a quality control tool to validate their own work. Seerene supports the operational level not only with data-based evaluations, but it is also recognized as a motivational tool because even small successes, such as “well-programmed code”, become visible. Thus, Seerene indirectly raises employee satisfaction, and ultimately the productivity of software development.

4. Results and outlook

After completion of the PoC at the end of 2018, Seerene will be operationalized and rolled out as a control and quality management tool for future projects. This will enable, for example, the developed software to be delivered in a high quality by adhering to quality gates.

In addition, Seerene provides the management levels of the agency with reliable key figures and insights for mapping them with strategic success factors (e.g. risk minimization, reliability, time-to-market) and for achieving operational goals. Another important aspect to be addressed with Seerene is vendor management. In a collaborative approach with the vendor, KPIs are to be agreed on, which will later be used in the agile environment as measures for the delivered software. Based on coordinated KPIs, the collaboration should be strengthened but also critically questioned where necessary.

To achieve this Seerene offers the aforementioned functionalities, which already create real added value from the customer’s point of view.

About ZL Associates GmbH

ZL Associates GmbH (ZLA) was founded in Frankfurt am Main in 2014 (moved to Eschborn in 2016). Since its foundation, ZLA has supported clients from the public sector, industrial companies and financial institutions in various professional and technical issues and has implemented these both conceptually and operationally within the framework of (change) programs or projects. The ZLA has been Seerene's partner since 2015. Several customer projects have already been successfully implemented together.

Contact

Uwe Zell, Managing Director
Mobile: +49 179 7055908
Email: uwe.zell@zl-associates.com
www.zl-associates.com

About Seerene

Processing, analysing and producing judgements for code and coding activity, Seerene's software platform provides analytics for the entire software development process, from requirements to deployment. Founded in 2015 as a spin-off from the HPI, Seerene has since been recognised by McKinsey and Google as B2B Start-Up of the Year, and has 80+ employees across the globe.

Contact

Torsten Fritz, Client Director
Mobile: +49 151 16795135
Email: torsten.fritz@seerene.com
www.seerene.com