



B O N C O D E



**simacan**

# **SIMACAN TARGETS TECHNICAL DEBT AND QUALITY CONSCIOUSNESS FOLLOWING BONCODE SOFTWARE ASSESSMENT**



# Executive Summary

Senior management at supply chain software specialist Simacan wanted an independent evaluation of the company's code. After nearly ten years of development, they wanted to make sure future developments and development velocity are not impacted by code quality or maintainability issues. Keen to get facts—instead of hunches and opinions—they engaged BonCode for a static code analysis.

Our [automated technology agnostic code review](#), followed by interviews and a detailed report, provided Simacan with actionable software quality insights. Outcomes included the prioritization of projects to eliminate technical debt and improved quality consciousness amongst developers.



*"BonCode's software assessment provided independent facts and insights, confirming the need for improvement measures that we were already initiating. Moreover, the process has increased quality awareness across the team."*

~ **Silvie Spreeuwenberg**, Chief Technology Officer, Simacan



## 3 Development Teams

Improved quality consciousness



## Mission Critical System

Real-time logistics track-and-trace platform



## Independent and Objective

Automated software quality analysis





## THE PROBLEM

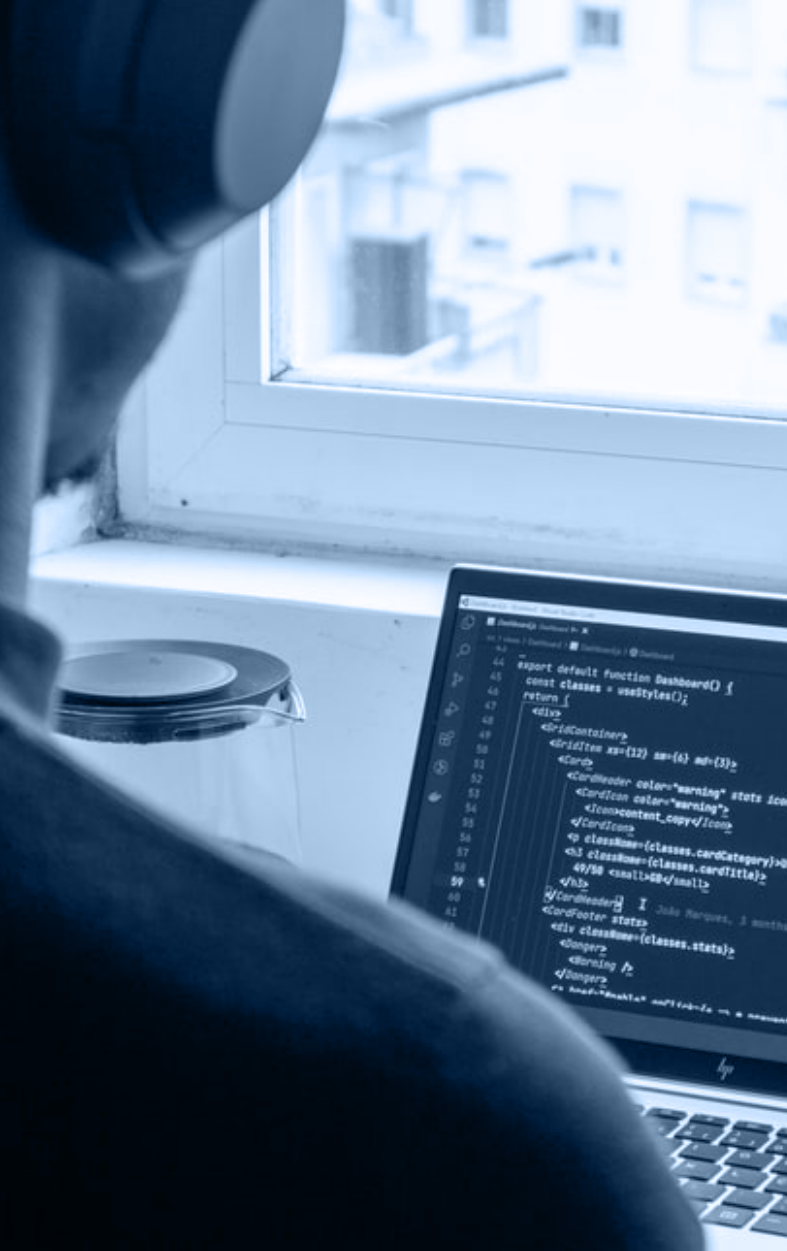
# Work with Facts Rather Than Opinions

Simacan was founded in 2013 with the mission to transform time-critical transport operations. The company's vision was to create an open cloud-based data harmonisation platform combining maps and traffic data. The result would be real-time logistics information that supermarkets, carriers, and other transport-intensive businesses could use to improve collaboration and streamline logistics.

Simacan's end-to-end supply chain platform has grown over ten years and now supports many leading supermarkets, connected logistics companies, and post/parcel companies. In addition, Simacan powers the ANWB traffic information used for the mainstream broadcasting through radio and internet.

The Simacan platform is, in every sense, a mission-critical system. It supports over 30 million logistics stops every year, providing real-time monitoring of vehicles, their cargo, and predicted arrival times.





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*“Our customers rely on the Simacan platform to know exactly when vehicles will arrive at warehouses, distribution centers, shops, construction sites, and home deliveries. We integrate with numerous logistics systems to enable this and enrich with minute-by-minute location tracking and traffic information.”*

~ Silvie Spreeuwenberg,  
Chief Technology Officer, Simacan

Up-time is crucial. If the system becomes unavailable, logistics firms, supermarkets, and other customers would lose track of vehicles and arrival times, quickly leading to chaos in warehouses and stores across Europe.

Additionally, as Simacan is paid per delivery rather than via traditional software fees, there's added pressure to ensure this “as-a-service” platform delivers mission-critical uptime.

Silvie Spreeuwenberg joined Simacan in late 2019, initially as Program Manager for an EU-sponsored project for further International expansion. In mid-2021, Silvie was promoted to Chief Technology Officer, responsible for a long-established team of developers, tech leads, and software architects.

With this planned International expansion, the company agreed that it was time to assess its software more formally from a quality and maintainability perspective. “We wanted external support from impartial software quality experts,” explains Silvie. “We didn’t want to wait months for a technical audit.”

These goals led Simacan to BonCode and another software quality specialist. The company chose BonCode as its management preferred their approach, which was much more cost-effective.



## Why Simacan Chose BonCode



### Independent Expertise

BonCode consultants provide impartial, fact-based, technology-agnostic software quality expertise.



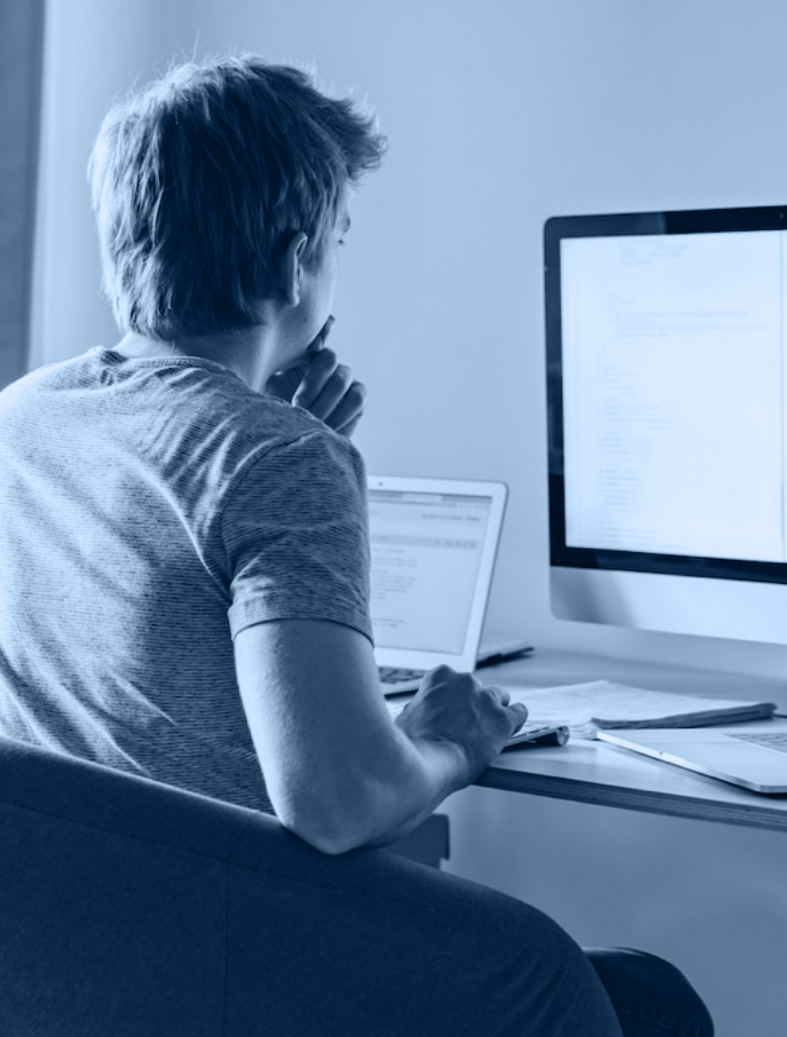
### Evidence based

BonCode provides insights from objective and transparent sources, so decisions are based on facts, not assumptions.



### Actionable for any role

BonCode provides concrete follow-up recommendations useful for developers and managers.



THE SOLUTION

# Software Assessment Using Automated Code Review

By engaging BonCode to review the Simacan platform's underlying code, Simacan gained the benefits of independent and unbiased analysis. Thanks to BonCode's automated source code analysis platform, "BonCat," the company would get rapid results in a comprehensive report.

Asked what the company hoped to learn from the study, Silvie said, "To assess potential risks for future feature delivery, you can look at many potential causes. Is the team size and its capacity sufficient? Is it skill gaps in particular areas? Perhaps feature requests and user stories are poorly defined. All these things can be observed, but we wanted to go deeper and understand the product from a technical perspective."

Going into more detail, Silvie says, "We've used three main languages, Java, Scala, and TypeScript, and various frameworks including React, Spring, and Akka. We needed a technology-agnostic approach, which BonCode supported. We're using microservices, and we probably have complex interdependencies. Understanding how these things were impacting productivity would help the team prioritize appropriately."



*"Front of mind was also that a client or prospect could insist on this analysis as part of their due diligence. Rather than reacting to an externally imposed audit, we wanted to get ahead and be on the front foot."*

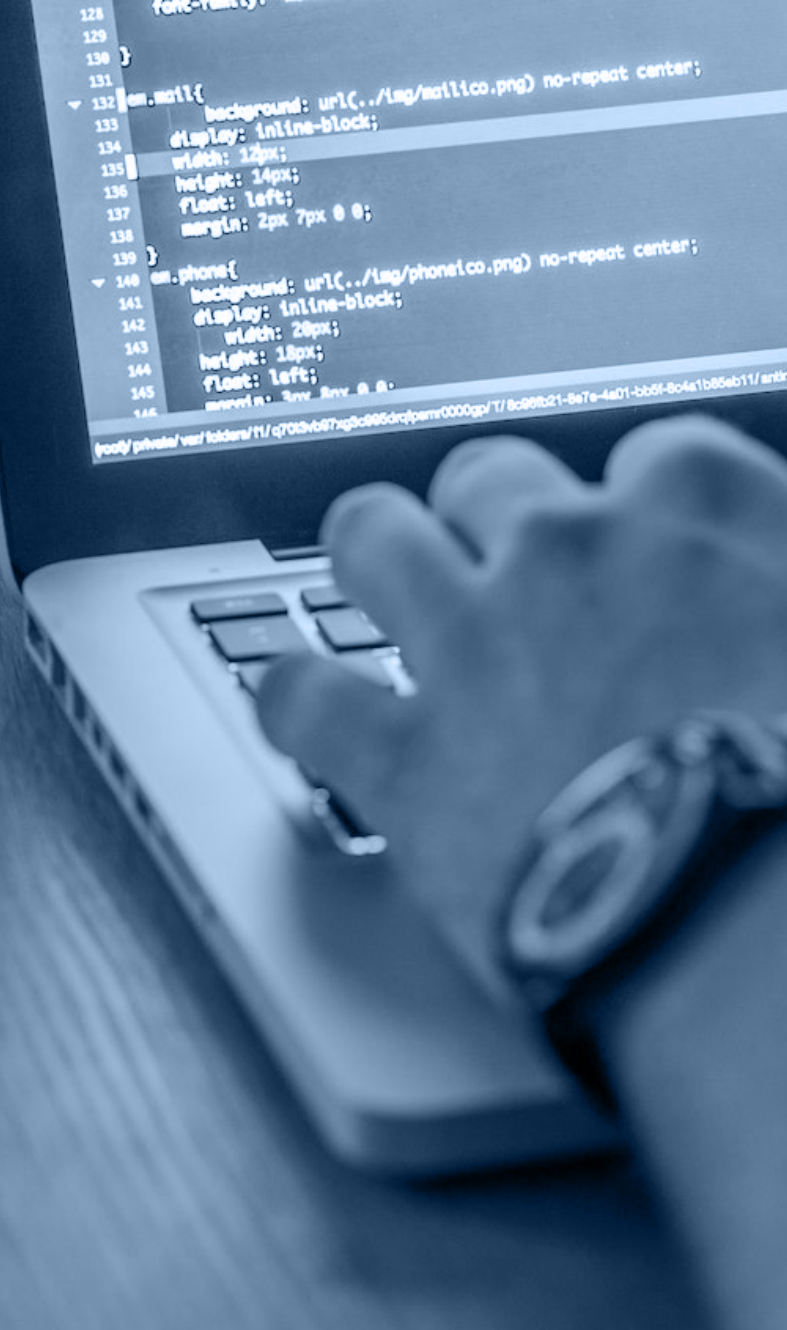
~ **Silvie Spreeuwenberg**, Chief Technology Officer, Simacan





The software quality analysis started by loading the source code into BonCat, followed by several days of remote analysis. Then there were three meetings between BonCode software quality consultants and lead engineers to discuss and validate the reasons behind various technical decisions and drill into several findings.

Ultimately, BonCode delivered a detailed assessment, which Silvie and the engineering leads could discuss with developers. Aspects of the report helped Silvie get management support for changes she needed to implement.



## THE RESULTS

# Tech Debt Prioritization and Reinforced Quality Consciousness

Asked about the main benefits of the quality assessment, Silvie says, “It was a relief not to get any big surprises. We knew there were aspects we could improve on, particularly some areas of technical debt. The BonCode report helped as it was independent and factual rather than hunch and hearsay.”

“The BonCode report helped us make a case for the time and resources needed to improve the maintainability of our software,” explains Silvie. “By eliminating pockets of technical debt, we’ll raise the productivity of the whole team.”

As a result of the assessment, Simacan now has a prioritized set of upgrade projects, which will improve developer productivity. And, Simacan’s engineering leads have used the findings to support developer quality coaching.



*“I think raising quality consciousness amongst the developers is a major benefit from this study. It’s not just the study that achieves this; you must act on the results. We’re keeping focus with internal surveys to gauge developer opinion about different modules and where we need to pay attention.”*

~ **Silvie Spreeuwenberg**, Chief Technology Officer, Simacan

Asked about lessons learned to share with other CTOs, Silvie says, “I’d definitely do this again to make sure future development ambitions are supported by adequate software quality. BonCode’s software assessment provided independent facts and insights, confirming many measures needed to improve quality. Moreover, the process has increased quality awareness across the team.”



# Contact

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