SMARTBEAR
SwaggerHub

SwaggerHub & LISI Automotive:

Using API Lifecycle Management to Drive Excellence & Innovation

SMARTBEAR

If you ask anyone at LISI what makes the company different, the answer will always be the same -- innovation. Always bringing something more to the table has brought LISI to the forefront of the automotive industry.

With factories around the world, LISI is a truly international enterprise. It's all part of their strategy for excellence and innovation -- to be where their customers are to simplify logistics and to react quickly to their needs.

An International Scope

When you're talking about the automotive industry, you're talking about mass markets. You're talking about products that are sold by the millions.

As you can imagine, with 21 separate plants scattered across five continents, logistics and planning at LISI don't happen on a small scale. Sebastian Gadot, Head of Development at LISI, is the man tasked with updating the LISI information systems to provide internal stakeholders with the ability to create and shape the innovation they need to compete in the global market.

"My scope lies all around the company for every service. All the applications related to production," says Gadot about his mission-critical role. With his end-user base ranging from the plant floor to regional managers and the company's top directors, Gadot and his team of developers are responsible for the flow of information that keeps LISI competitive.

Breaking Free of the Legacy

It became clear early on that the limitations of their existing software were holding LISI back. "We started with legacy code, very complicated code, which did nothing. Basically Excel files." The goal was clear -- to transition from their current low-value reporting to high-value specific applications.

Starting from scratch on a smaller internal web application project, using both Angular and Spring Boot, Gadot and his team hand coded both the front and back ends of the initial application.

The problems came with integrating the two. They were spending too much time on technical issues, not the least being security, which was being implemented at both ends.

Enter Swagger

While the UI improvements derived from Angular were well received, functionality and development efficiency were still sorely lacking.

Gadot's team asked themselves, "How can we change that? How can we provide added value to what we're developing, and how can we do it better?"

Using Swagger, an open-source REST API design framework, the team were able to improve their API documentation, scaffold the client code and improve back-end integration.

Design and presentation of their applications also improved. "Swagger was a nice fit for that," he says, "We were able to mock the clients, export them, and lock down the front end -- before beginning the back."

Despite the benefits to the client-side, development on the back-end was still lagging and Gadot was

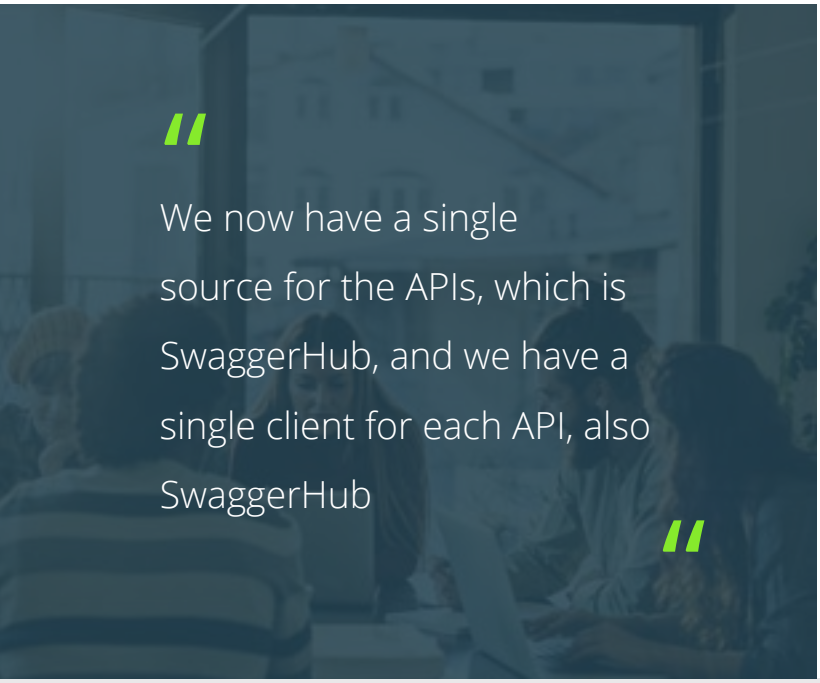
unsatisfied. “Mocking the server was time-consuming and the server code was still a lot behind what we have for the front.”

Making the Commitment to SwaggerHub

As new requirements emerged to support larger, more complicated applications, Gadot and his team realized they had outgrown the capabilities of the open-source Swagger product and made the decision to switch to SwaggerHub, a more robust commercial version with the same origins as the original OpenAPI Specification product. After a brief trial, the benefits were clear. There was no going back.

“We developed the rules templates for the back-end server,” essentially automating back-end generation. Moving quickly from the design phase to a running application, he could present to stakeholders that the new server was now a reality.

Using SwaggerHub as their platform, they were able to consolidate all their old API definitions in a central location, which opened the way to reuse APIs from one app to the other.



> “We now have a single source for the APIs, which is SwaggerHub, and we have a single client for each API, also SwaggerHub”

With their client code all in one place, the development team at LISI had new freedom to create applications quickly and efficiently, reducing their release cycle by allowing them to reuse components or create new ones as required from within SwaggerHub. “Now we can compose and reuse all the APIs from all applications, directly inside the same repository.”

The need for special APIs was reduced to around 10 and, like all their other APIs, using SwaggerHub enable them to be well-documented and well-organized.

As Sebastian puts it, “Now everything is centralized. There’s only one way to access the data, so no concern when we develop the applications. It’s automatic.”

Benefits and Results

The benefits of Gadot’s decision to champion API-based development and SwaggerHub within the LISI organization couldn’t be clearer.

- **Rationalized APIs** – In a remarkably short time, they rationalized their entire API library using SwaggerHub, automating their once-difficult documentation process and allowing their APIs to be reused easily in other applications.
- **Shortened release cycles** – With SwaggerHub automating API mocking, the team slashed their release cycles. Both the client and the server are now generated automatically. The once problematic backend was “done once and done correctly.”
- **Secured data** – The security integration problems they had wrestled with since the inception of the project were now a thing of the past, with a centralized security model behind a single-API gateway.

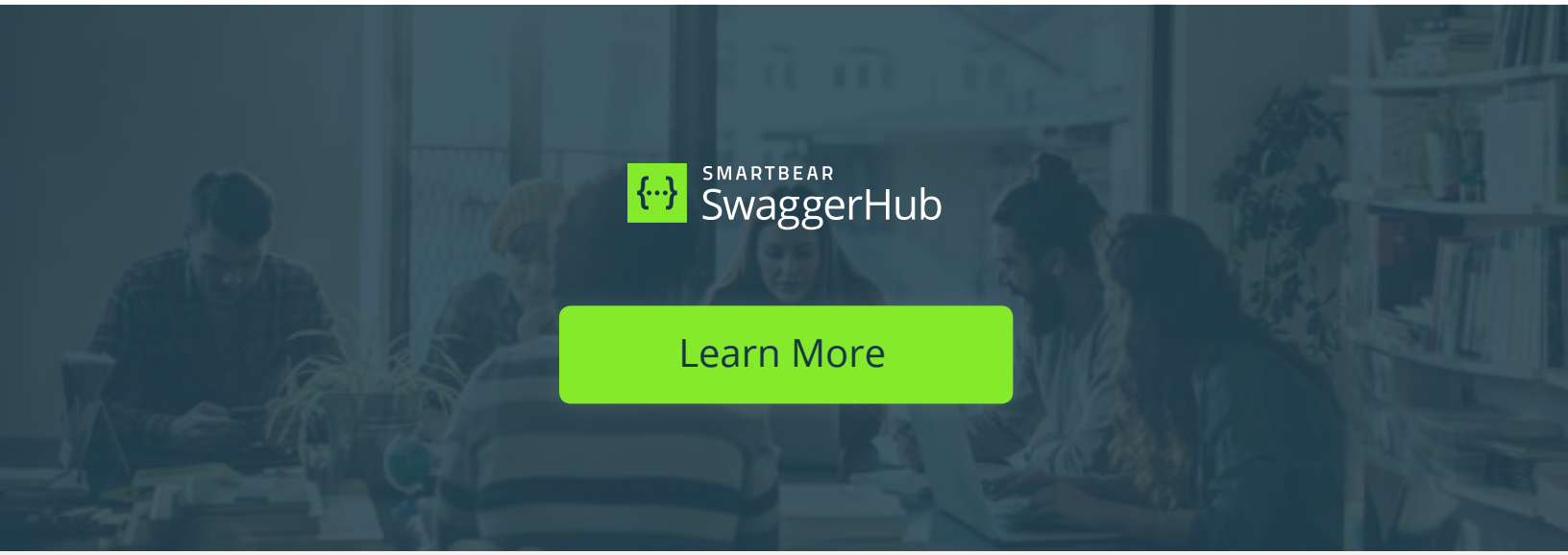
Common codebase – Having everything in one place allowed for simpler, better overall design and more consistency. The development team at LISI could now deliver more running, tested features per iteration, and deliver them more consistently, with less risk. As Gadot puts it," Developing an app is now down to picking existing APIs or writing new ones and picking pre-developed components."

User Experience Transformed

The best way to track the success of a project is in the reaction of the users themselves.

"What came out of this was that the web was light years ahead in terms of user experience," says Gadot about the changes to the way LISI communicated.

His users now separate the way things are achieved within LISI into two distinct eras -- before Swagger and after Swagger.



About SmartBear

At SmartBear, we focus on your one priority that never changes: quality. We know delivering quality software over and over is complicated. So our tools are built to streamline your process while seamlessly working with the products you use – and will use. Whether it's TestComplete, Swagger, Cucumber, ReadyAPI, Zephyr, or one of our other tools, we span from test automation, API design, collaboration, performance testing, test management, and more. Whichever you need, they're easy to try, easy to buy, and easy to integrate. We're used by 7 million developers, testers, and operations engineers at over 24,000+ organizations – including world-renowned innovators like Adobe, JetBlue, FedEx, and Microsoft. Wherever you're going, we'll help you get there. Learn more at smartbear.com, or follow us on LinkedIn, Twitter, or Facebook.