LMS Architecture Modernization For a SaaS Company

Industry:
Education

Duration:
11 months

Budget:
$200 000+

Team:
three FTE engineers, two QA specialists, project manager, business analyst

How dividing legacy monolithic architecture into **microservices** helped a global LMS producer to hop on the train of remote work with their updated LMS application for staff training and raise the number of customers worldwide by 37% without risking **business continuity.**

Context

With the client's LMS platform, users can access up-to-the-minute data, staff training results, average test scores, personal tests, performance appraisals, surveys, and financial data with comparative reporting. It allows every manager to train, track and communicate with employees, plus control company compliance nationally and globally.

Challenge

Our client has been planning to modernize some parts of their LMS for a while and, as is often the case, they haven't gotten around to it until recently. However, the delay was no longer an option since Adobe Flash, where one of the modules was written, was on its way out. Major browsers have been slowly pulling support for years now, and Adobe itself has announced that it would be stopping the development and support of Flash at the end of December 2020.

So, at that point, modernization turned from a vague long-running goal into a clear necessity, that would prevent the loss of customers. At the same time, the client wanted to leverage the situation and not only make an updated application, supported by all browsers, but also implement a bunch of new features, that would be beneficial for end-users.

The client chose *instinctools since they wanted to lift the burden of managing the project off their shoulders and put it on a Tech partner providing a dedicated team, who would take responsibility for what they do and where the project goes.

Objectives:

- Make a module for presentation editing supported by all browsers
- Implement a new proposed design that improves the UX
- Implement a working product by the end of December 2020
- Keep performance on the same level
- Switch from Flash to modern technology
- Turn the presentation tool into a standalone application, that will function as a separate microservice.

Solution

*instinctools dedicated team has developed a cross-browser application supporting mobile devices and tablets. The solution was based on new secure and scalable technologies. At the final and most challenging stage of the project, we migrated all the digital assets from a legacy system to a new structured microservice application without any loss.

Key features

- modern and engaging design
- completely customizable assets
- ability to export presentations as printable documents (PDF)
- ability to undo/redo most recent actions
- copying, pasting, deleting, and rearranging multiple slides simultaneously
- selecting and manipulating multiple elements at the same time
- copying selected elements from one slide to another while maintaining the original positioning of each element from the original slide
- ability to use keyboard shortcuts

Business Value

With the brand-new version of the application delivered just in time when remote work was a rising trend, it's become possible for its users to create inspiring and meaningful content that makes remote or in-person activities way more impactful than they used to be. It helped our client to increase loyalty to a product and gain new customers globally.

Encouraged by our collaboration, the client plans to continue improving the software module by adding new features in subsequent phases.

Technologies

Angular	TypeScript	Nrwl Monorepo patterns	SCSS
RxJS	Moveable + Selecto	Angular Material CDK	
HTML	SVG + Svg.js	NgRx + Immer	Jest + Cypress

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