

Web Enabling by fecher

10.000 hour Web Enabling project saves Aareon UK from a 10.000 day software rewrite

fecher migrates QL Housing Management System from VB.NET to the Web, making it a fully integrated SaaS solution

In the UK, Aareon is among the market leaders in software for social housing organisations for nearly twenty years. In use at more than 100 customer sites, the latest release of their housing management system was QL Version 4, a traditional client-server software solution developed in VB.NET. Aareon was in the middle of a full rewrite of their software as a browser solution when government regulations forced social housing providers to implement a cloud-first strategy. To be able to compete and remain in business, they now needed to pivot immediately and, under enormous time pressure, quickly convert their software to a cloud solution. With a Web Enabling project by fecher, this goal was achieved with only 10.000 working hours and a

timeframe of just 18 months instead of the estimated 10.000 days they had been facing for a full rewrite.

“Moving to the cloud had been our focus for quite a while,” explains Hilary Stevens, Head of Application Development at Aareon UK. So when the cloud-first strategy came around, a full rewrite of the QL software in the Angular framework with a C# backend had already begun and the visuals for the new web-based frontend were defined. The development of QL Yuneo, as the new Software generation was named, took longer than expected, however. “Originally, we wanted to go to market in 2021,” Stevens remembers.

In their search for an alternative to spending additional years on the rewrite, Aareon’s German headquarters recommended fecher, a software modernization specialist based in the Frankfurt area. fecher’s offering included web enabling the existing WinForms solutions and making them ready for cloud hosting. All of this would take place within an outsourced project at a fixed price and within a predefined time frame. “This sounded perfect as it would speed up our move to the cloud without losing all the features and functionality of our very big solution,” Stevens sums up.



First, the proof of concept

At this point, the housing product's core processes that customers would use daily in their work had already been rewritten and worked well in Angular. However, important parts of the software such as back-office processes like maintenance forms and the entire finance module were still lacking and as such became the scope of a possible Web Enabling project.

During the initial meetings, fecher explained their procedure model. "They clearly delineated what our responsibilities would be, what fecher would handle, how it would all tie together and the timeline for what would happen when," Aareon's QL Development Manager Michael Llewelyn recalls. As a first step, a proof of concept was agreed upon. Aareon gave fecher the application code and picked three typical screens for them to web enable. The result worked well. Then, after evaluating all the lines of code in the entire application, fecher provided a fixed price for the project.

Immediately following the contract signing in March 2021, fecher were given the design guides that had been defined for the rewrite in Angular. From this, the software specialists created a project template and set up the project plan including milestones and target dates. Aareon's first responsibility in this project was to create screen videos of the application and upload them to the collaboration platform. This would let fecher see how to use the various forms and what their correct behaviour would be.

Web Enabling is teamwork

In parallel, the fecher team ran the source code through the winformPORTER tool, which replaces the WinForms presentation layer by calls to the

Wisej.NET framework, as well as handling some additional changes like implementing a session manager to manage the static objects. Due to architecture changes, further adoptions were needed, for example, replacing all local file access with calls to the cloud-based Microsoft Azure Blob Storage.

"Of course, not all of that worked automatically out of the box," Llewelyn emphasizes. The HTML5 representation of forms needed manual fine tuning on a case-by-case basis, some custom controls used resulted in the need to implement extensions to the Wisej.NET framework and the ported forms didn't always do what the original screen videos depicted. Weekly project meetings via Microsoft Teams helped both sides to keep track of what was going on and to get answers to questions as they came up.



Llewelyn sums up the porting phase: "We really hit all the milestones on time. fecher were great from start to finish, and even when we identified a number of forms that were not included in the original scope, they did them on goodwill." As the very last project step, fecher took the latest version of the original QL version 4 software, reconverted it and updated the new solution with all of the maintenance changes made during the 18 month project cycle.

Let the rollout begin

After a thorough testing phase, the cloud solution was finally ready to be used in production in September 2022. The first three customers started with their proof-of-concept in October. Aareon uploaded their data to the Azure cloud and let them have a play to see how the new software behaved with their own data. Once they were happy with it, the final migration took place. For 2023, the plan is to start the regular migration phase with two customers per month.

“The advantages for the customers are obvious,” states Stevens. With the new SaaS (software as a service) model, the client has no need to worry about software installation, database maintenance or buying new hardware to scale the system. Software updates are also painless. Every two weeks, the latest iteration of the QL Yuneo software is taken into the production environments without customers even noticing.

“What is also good for us is the subscription-based cloud licensing which provides a better revenue stream,” Stevens concludes. “But most important is that we can finally meet the market demand for cloud software, and we are again well prepared to fully catch up with the competition.”

Web Enabling project key data:

- Lines of code: 2.948.448
- Applications: 119
- Forms: 1.420
- Project Type: Fully Finalized
- Team Size: 3 to 6 people
- Original Source Version: VB.NET
- Target Platform: .NET / Wisej.NET / Visual Studio
- Target Architecture: HTML5
- Target Language: VB.NET
- Duration: 18 months (March 2021 - October 2022)

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