Swiss-AS Tech Paper

Reaching new technological heights



At a glance

- Rising to the next level of innovation by introducing a new technology stack
- Cross-platform mobile development with Flutter/Dart revolutionising app development
- Beautiful native apps in record time
- AMOSmobile/STORES incl. offline capabilities in POC phase.

Deep within every crisis, there are opportunities. Over the last months, the tech experts within Swiss-AS have spent substantial time on evaluating, testing, and finally selecting our future AMOS tech stack. A long requirement list for the choice of a new frontend technology was set up, which included such criteria as

- (i) how appealing and consistent is the UI
- (ii) how big is the effort to implement and maintain the solution
- (iii) which libraries are existing
- (iv) how flexible is the technology in supporting the different operating systems including platforms like Fuchsia
- (v) how adaptable is the solution regarding different device types
- (vi) can the framework access camera, geolocation, fingerprint reader, Bluetooth device etc.– to name just a few criteria that had to be adhered to.

Choosing the right platform for app development is paramount, and the right choice depends entirely on the nature of one's business. The Flutter framework combines both state-of-the-art technology with the assurance of being future-proof. Cross-platform app development (over hybrid or native app development) has been selected as the best approach for AMOS. It allows developers to write code once and reuse it for different platforms with secure, stable, and easy to maintain and iterate features. With the cross-platform app development approach we will be able to equip the large AMOS community with apps that have all the advantages of native UX, that are easy to implement, and are the product of cost-effective development.



It was a little over three years ago, when the alpha version of the open-source framework Flutter was released, initiated and today pushed by Google. Since that day, the world has seen Flutter as a framework grow into a massive community of millions of people. Dart is the programming language for Flutter, providing a UI toolkit for building beautiful, natively compiling mobile, web, and desktop apps from a single codebase. Flutter is basically a software development kit (SDK) and is considered as one of the most efficient tools to build native apps in record time. The apps made with Flutter are platform independent, i.e. made for iOS and Android environment. Support of PWA (web deployment) and desktop operating Systems (Windows, Linux and MacOS) are currently under development.



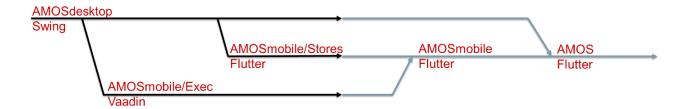
Taking such tech decision triggered that the first screens of the new AMOSmobile/STORES suite were developed with this new tech stack, which has lived up to its promises. The AMOS users will enjoy a completely new user experience due to material design language. The POC phase of AMOSmobile/STORES will be finished at the end of this year and with the issuance of Release 21.6 in summer 2021 AMOSmobile/STORES will be mature enough to be implemented in the AMOS community and will include off-line capabilities.



Once the POC phase of this pilot project has been successfully completed, the new front-end technology will also be rolled out to AMOSmobile/EXEC, our mobile suite for line and base maintenance management, while introducing to this business context all the potential of this new framework.



And here the process does not stop. We have already identified other high-priority areas where we will start using this framework and programming language. Our long-term vision is to extend the deployment of Flutter / Dart over the whole functional set of AMOS while thereby ultimately replacing the current AMOSdesktop technology.



It goes without saying that there will be a period where we will develop new apps with the new framework, while maintaining the existing apps in the current technological framework. To be able to grant the best possible user experience during that transition period, we are currently evaluating different bridge technologies that will allow us to bind the different tech stacks into a uniform user interface.

For Swiss-AS as a software supplier, the choice of a sustainable tech stack adding to our competitive edge is as important as adding new functions to AMOS to ensure the product's longevity. One of the many testimonials published in the web summarizes the use of Flutter from a developer perspective as follows: "We can build expressive UIs with the help of Flutter. It uses Material design for Android and Cupertino widgets for iOS. It has rich motion APIs and smooth natural scrolling. It has in-built feature to develop our application very fast with fully customizable widget." We believe in the long-term future of this tech stack and look forward to delight our end-users with "beautiful apps created in record time".

About Swiss AviationSoftware and AMOS

AMOS is a comprehensive, fully-integrated MRO software solution being developed and distributed by Swiss AviationSoftware. Swiss-AS, a 100% subsidiary of Swiss International Air Lines, has more than 190 customers worldwide and belongs to the industry-leading MRO software providers. Our loyal customer base includes pure operators of all sizes, major low-cost, regional and flag carriers, large airline groups and MRO providers. In the Americas and in Asia, AMOS is distributed through a partnership with Lufthansa Systems. For more information, please contact us via marketing@swiss-as.com or visit us at **SWISS-AS**.COM.

