



„agosense.symphony has become the backbone of the whole tool chain for software development. We knew that if we wanted to successfully establish the best-of-breed solution, we would only be able to do it using agosense.symphony“. *Engineering Lead, Swiss High Street Bank*

The subject of this case study was a large Swiss financial institution (the Bank), which for over 150 years has been successfully offering financial services for private banking, investment banking and asset management. For private banking, the Bank had constructed a software production facility, creating a modern development environment that employed over 2000 developers in three centres across the globe. Using the agosense.symphony integration platform, they linked development tools from different software manufacturers, integrating them into a continuous process chain.

So far, the Bank had entrusted its application lifecycle management to a range of products from one single software producer. Although the tools all came from the same manufacturer, there was only a low level of integration, with a major source of complaint stemming from the need to manually maintain these connections. Additionally, all the products being used were unable to meet the unique requirements of each project team. It was time for a rethink.

Problems needing to be solved

With more than 400 locations and almost 50 000 employees world wide, the decision to select new tools instituted a massive evaluation project, with an instrumental role played by the sector head for Process & Tool Engineering. There were a number of error sources and challenges to be resolved: the existing system limited automated synchronisation to once per day, previous integrations were inflexible and were either unable to be adapted or, where this was possible, then only with considerable effort and time. Connections between data had to be established and maintained manually, which resulted in inconsistencies. The most errors and inefficiencies however resulted from the many manual steps and media discontinuities. Developers were able to skip individual process stages, and data was often not up to date at the time it was required. Processes between different tools were often nothing more than a simple data synchronisation from one tool to another, resulting in data being stored multiple times.

There could be no compromises with regard to functionality for individual divisions in the process of implementation, rather, every stage needed to be able to work with the most appropriate preferred tool. After considerable evaluation, the decision was therefore made to adopt the „best of breed“ strategy, requiring the Bank to step away from the product range of a single software producer or an integrated ALM suite, and to integrate specialised tools for the individual areas of operation.

Requirements that needed to be met

Every new strategy revealed a host of challenges. Adopting a range of tools from different software producers, including some internally developed applications and programs meant a flexible system was needed to link them together. Additionally, the integration of

GOAL

Replace the existing software development tools and integrate new best-of-breed tools into a continuous process chain.

ADVANTAGES

- The integration platform is based on standards such as BPEL, XML and JEE applications server, providing the flexibility needed to deal with future expansion.
- The adapters are platform-independent and can be used with other base technologies like Oracle Fusion
- Processes and inter-process operations are automated and significantly accelerated
- Data exchange occurs in real-time, not only once a day
- Users do not need to install plug-ins or additional programs
- Data exchange and synchronisation processes run invisibly in the background

all tools required a standardised technology that could be adapted and managed internally by the IT department. The Bank therefore sought a stable, high-performance solution to master the frequent synchronisation processes, massive amounts of data and large number of software developers. The pivotal importance of the integration platform meant that this solution needed to be based on standard technologies and supported by an expert software producer.

agosense provided the decisive advantage

Ultimately, the Bank implemented a new integrated tool chain that extended over the whole solution delivery process and beyond, covering requirements, test, modelling and change management, version control and error reporting. As the various software producers themselves could not provide adequate interfaces between the different tools, the Bank chose to use the agosense integration solution. Using each platform and a specific adapter for each tool, a continuous tool chain was developed, consisting of Polarion’s requirements management, test management from the Hewlett Packard Quality Centre (HP QC), Atlassian Jira’s defect and change management, the Sparx Enterprise Architect modelling tool and Subversion for software versioning and revision control.

Fig. 1: To manage application development in the private banking division, new product features and change requests from a variety of sources, including from business units, operations, and quality management, were adapted using Atlassian Jira and Confluence to form the central project collaboration application. Request management organised, prioritised and assigned each new product or product approval to the relevant application in accordance with defined processes, so that the corresponding applications and requirements engineers could be automatically transferred to the project chosen for implementation.

Regardless of the development methods being used - iterative, the traditional waterfall model, etc. - development areas involving requirements engineering, solution architecture, software engineering, test engineering and the corresponding configuration management were consistently involved in the process to adapt the applications at hand as part of the product lifecycle. This was the only way the Bank could not only initially install hundreds of applications (Java, Mainframe and other platforms) but also maintain them throughout the duration of their service life.

This was done by ensuring that requirements engineers were initially assigned amendments in the form of change requests from the requirements management system (Polarion Requirements) in order to create the specifications and applications necessary for further development. Corresponding UML models were created by the requirement engineer in Sparx Enterprise Architect and automatically synchronised with Polarion Requirements. New status information on the requests is regularly provided by the collaboration application in Atlassian Jira, keeping the user who originally made the request informed of its progress.

The software architecture team use the change requests from Polarion Requirements along with additional information from the technical analysis in Sparx Enterprise Architect to validate the architecture of the application and adapt it where necessary, thus ensuring a consistent documentation trail throughout the whole life cycle. Software engineers use the requirements specifications, architecture and design documentation for the actual process of software development. This allows the developers to see the project requirements and requests directly from Atlassian Jira, to change them, and to link them with code

changes. At the same time, requirements that have been released are transferred into the test area in HP QC/ALM, for testing by engineers using newly created test cases or adapted existing test cases, with all planning for testing being synchronised with the project planning in Atlassian Jira. Once the coding is completed, applications are checked according to the test cases and test plans in HP QC/ALM. Any unsuccessful test automatically generates an error report, which is automatically sent back to the project team for further development. This process of transferring the test results required by the developers to allow them to analyse and correct bugs continues until a successful test result signifies the end of the development cycle.

The tools used in the different roles in this software development process are continuously modelled and managed using agosense.symphony with errors and conflicts being dealt with as they arise. In addition, depending on the process definitions, data can be either synchronised directly via user interaction (eg. through change of status) or conducted according to a time schedule. This ensures that everyone involved in the process can spend the majority of their

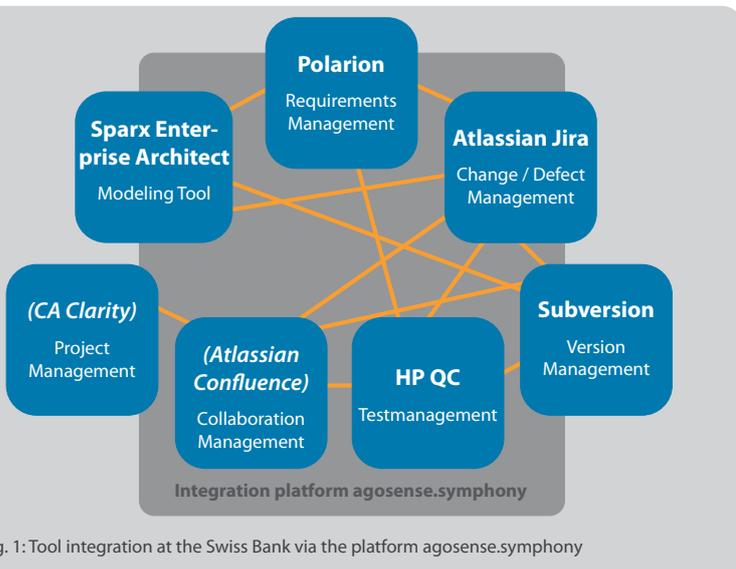


Fig. 1: Tool integration at the Swiss Bank via the platform agosense.symphony

working time using their specialised software tools, while retaining access to all necessary information without having to switch tools or user interfaces.

For further extension of this tool chain, the integration of Atlassian Confluence, CA Clarity and other applications via the integration platform is being analysed.

Result

The integration is now uniform, highly automated and flexible. Maintenance has also significantly improved, as there is only one integration technology for all applications. The advantages for both users and the development division are clear:

- Everyone has access to the information they require in „their“ tool
- Data is exchanged in real-time, not only once a day
- The user does not require plug-ins or additional programs
- Data exchange and synchronisation processes run invisibly in the background
- Users do not require extra training
- The platform is based on standards such as BPEL, XML and JEE applications server, making it flexible and able to accommodate future expansion
- The adapters can also be used with other basic technologies (eg. Oracle Fusion) regardless of platform
- Processes have been automated and significantly accelerated
- Data currency and integrity is ensured

In contrast with integration approaches used by other software providers, within two days, agosense was able to develop and implement a flexible solution that reflected the individual requirements of the Bank as part of a Proof of Concept. Their efforts surpassed the expectations of the Bank's IT representatives, not least because of the low cost and swift implementation of their requirements, but also because of the number and functionality of the available adapters and the potential for future expansion of the adapter portfolio, including the opportunity to integrate internally developed tools. The Engineering Lead in reference to the experience said, „Working with agosense was seamless from the planning stage through to implementation - cooperation with Support and Consulting is very professional. The response time and quality of the advice given is exemplary“.

POTENTIAL

For the future, the agosense.symphony platform allows this Swiss financial services provider to also implement the following integrations and requirements:

- Tools such as Atlassian Confluence, CA Clarity, Methodpark Stages and other applications can be networked via the integration platform
- Integration of offshore partners, to ensure appropriate security measures for data exchange and data sharing
- Migration of existing repositories by means of a platform (eg. Subversion)
- Conversion of the Investment Banking division to the integration platform agosense.symphony with additional tools and some internally developed applications.

Supporting the whole tool chain

Following implementation of agosense.symphony, employees report a greater level of job satisfaction. They now work with the tools that enable them to best do their jobs, processes have been made much simpler, needing much fewer manual adjustments. Costs have been markedly reduced, firstly because users no longer need to work in multiple applications at the same time, and secondly because the previous tools were for the most part replaced by new ones, which carried lower licensing and maintenance costs. Overall, it has led to a significant increase in productivity and a higher level of flexibility. Putting it in a nutshell, the Sector Head Process & Tool Engineering said, „agosense.symphony has become the backbone of the whole tool chain. We knew that if we were going to successfully establish the best of breed tool solution, we would only be able to do that with the help of a solution like agosense.symphony“.