Open source on the desktops of the Swiss Federal Court and Federal Administrative Court: Organisational challenges

In 2001 the Swiss Federal Court moved its IT infrastructure to Solaris by Sun Microsystems, using StarOffice as a text processor. This move was necessary, as the previously deployed all-in-one platform that was used since the early 1990s could no longer meet the needs of the Federal Court. With this also came the introduction of open source applications such as Gnome, Firefox and the Evolution mail client. Among the goals were vendor independence and the implementation of open standards. The IT solution was extended to the newly formed Swiss Federal Administrative Court in 2007, where it has struggled to find acceptance mainly due to organisational reasons.

Quick facts	
Name	Swiss Federal Court and Federal Administrative Court
Sector	Judiciary
Start date	2001
End date	Ongoing
Objectives	Improved IT/ New IT
Target group	Staff members at the two courts
Scope	National
Budget	NA
Funding	Federal
Achievements	Successful introduction of open source applications on the desktop. IT solution judged appropriate, efficient and forward-looking in KPMG audit.

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Introduction

Since the early 90s the Swiss Federal Court was using computers to facilitate its daily work, which mainly consists of writing documents and handling files, says Dr. Jacques Bühler, deputy general secretary at the Federal Court. Until 2001 the court had a simple all-in-one IT platform, which lacked greatly in functionality and ultimately became outdated. The Court's IT direction thus saw

the necessity to introduce a new IT infrastructure that would ensure sustainable standards in the future. During the analysis done as part of the planning process, open source software emerged as more sustainable than proprietary software, especially with regard to modularity and file formats. The use of open source software also ensured vendor independence and security, which are two very important aspects for a court.

In 2001, the new IT system running on the operating system Solaris by Sun Microsystems was introduced. With this also came the introduction of the office suite StarOffice, the Firefox internet browser Firefox, and the email client Novell Evolution, besides other more specialised applications. At the early stages of the migration, users had to get used to the new programs, but as the migration from the previous system brought numerous improvements, the process went relatively smoothly and was broadly accepted. Where some doubts about open source software existed in the beginning, these have mostly faded by now.

In 2007 the Swiss Federal Administrative Court was established. It consists out of 37 so-called recours commissions, which had previously worked independently. This newly established court not only faced the difficulty of coordinating the work of the newly combined commissions under one roof, but also to adapt to a single homogeneous IT infrastructure, which in most cases differed from previously deployed systems. As the Federal Court's IT was functioning properly and the expertise for the administration of such a system was available, the Federal Court was contracted to implement and supervise the IT infrastructure of the Federal Administrative Court. Since the Administrative Court had little say in this decision, it was sceptical of this arrangement from the outset. Manfred von Grünigen, who is in charge of the IT integration management at the Federal Administrative Court where he used to be the IT project leader,says   that [Federal Court's IT implementation] was decided upon by the project direction. We opposed that idea, and we didn't want it   . This was and still is reflected today in the general opinions expressed at the Federal Administrative Court about the IT infrastructure, which is supposedly lacking in functionality and compatibility. While this gave rise to many discussions not only within the two courts, management at the Federal Court in principle accepts that the arrangement is not ideal. The cooperation between the two is expected to end at the end of 2010, and the Federal Administrative Court will go its own way using a different IT infrastructure.

Organisation and political background

The Swiss Federal Court, with offices in Lausanne and Lucerne, is the highest instance in the Swiss judicial system. The court's competences are focused on the application of federal law. It is in charge of the supervision of the Federal Criminal Court and the Federal Administrative Court,

which was established on January 1, 2001, in Bern. The Federal Administrative Court is one of the largest courts in Switzerland with around 350 staff members that came from previously independent recours commissions. It was only established in January 1, 2007, and delivers judgement on matters of public law in the scope of the Federal Administration.

The Federal Court's IT is administered by a team of in-house experts. Most decisions concerning changes in the IT, including the migration to Solaris in 2001, are planned and evaluated within this team, and are then approved by the Court's direction. Daniel Brunner, assistant chief of the Federal Court's IT states that they have always followed an IT strategy that placed emphasis on open standards. This did not necessarily mean open source, but it ultimately led to it . The general support and maintenance of the IT infrastructure also fall under the responsibilities of the IT team.

When the Federal Administrative Court was founded, the project direction that coordinated this process decided to contract the Federal Court's IT team for the implementation of the newly established court's IT. As the IT system was functioning well in the Federal Court it was also applied in the new Federal Administrative Court. Besides the debate about the functionality and usability of open source software, it turned out to be problematic that this decision was made without the consent of the project leaders of the future Federal Administrative Court. The IT supervision of the Federal Court and its plans for the new court's IT infrastructure were considered a good fit by the project direction. This also meant that the Federal Administrative Court was to have no IT team of its own. This led to considerable discrepancies between the two courts, and eventually to the decision to end the cooperation on IT in 2010.

The Swiss Federal Court

This conflict between the two organisations is also reflected in their opposite attitudes towards open source software. While the Federal Court's IT team backs the open source infrastructure which it has built, staff at the Federal Administrative Court tend to reject the applications in question. With regard to the increasing acceptance and understanding of open source software, the Federal Court's Daniel Brunner says within the last 7-8 years, many things have changed, and when we have to take a the decision to go for open or closed source, we check for the capabilities and of those are the same, we go for open source . While von Grünigen at the Federal Administrative Court acknowledges that the IT has improved over time, he still considers the open source solutions as unfit for the requirements of his court.

Budget and Funding

The Federal Court is entirely founded by the Federal Parliament. The budget of the Court remained the same with the introduction of the new IT infrastructure in 2001, as no additional costs arose. The Federal Parliament also carries the additional costs incurred in the supervision of the Federal Administrative Court.

With regard to the concrete budget directed at the IT no statements could be made by any of the interviewees. Brunner however refers to a study that states that the savings generated through the use of open source software in a centralized IT-architecture amount to 5-10% of IT costs at the Federal Court. As such, it is very beneficial, and certainly operating in an economically efficient way.

Technical issues

As explained earlier, the Federal Court migrated its IT infrastructure to the proprietary Solaris operating system, which is developed by Sun Microsystems. The company was contracted to provide support. At first the graphical user interface (GUI) used was Motif. In 2005 the more modern GNOME desktop was introduced, bringing usability improvements.

As an office suite, the Federal Court chose Sun's proprietary StarOffice, which offers much the same functionality as Microsoft Office. At the time, OpenOffice was still rather rough around the edges. Also, StarOffice handled German-language *umlauts* better than the open source application, as its first version was developed by Star Division, which is a company located in Germany.

Assistant IT director at the Federal Court Daniel Brunner

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A very important aspect for their choice was the fact that StarOffice (like OpenOffice) uses open file formats. Our daily business is paper, and for us it was important that the format will still be readable in 10 years , Brunner says. This requirement was only considered to be covered by StarOffice, which saves its files in XML-based open formats.

To facilitate the work of the Federal Court and the Federal Administrative Court alike, the IT is using Sunray thin clients, also by Sun, which lets users to authenticate on machines with a smart

card in combination with a password. This enables every users to access his, or her distinct desktop from anywhere within the system, and in some cases even from home. The workplace is thus the same no matter regardless whether users log in in Lausanne, Bern, or Lucerne, and even the language set-up remains unchanged.

As the next step for the IT, theoretically in May next year [2009] we will migrate our desktops to OpenSolaris , Brunner says. OpenSolaris is an open source operating system based on Solaris. This is the most obvious choice for the future, Brunner explain, since it is the next step in the evolution of Solaris to some extent. At the same time, this will solve several problematic issues that remained.

One example of such issues that both Brunner and von Grünigen highlight is the Evolution mail client that has been subject to discussion. Accordingly the mail client lacks certain features; in particular functions related to the positioning of signatures in emails, and the coordination of projects. As Brunner explains, the two Courts are using Evolution 1.4, which is the 2004 version. Unfortunately the support contract with Sun does only include support up to this version of the mail client, which prevents them from updating. This issue will however be solved with the update to OpenSolaris, as this will include a newer version of the mail client that will include the missing functions, Brunner explains.

Other technical issues related to the IT platform are possible caused by the different requirements of the two courts. Whereas the Federal Administrative Court has frequent contact with the Administration, the Federal Court has a different clientele. While von Grünigen acknowledges that certain functions are certainly there , he states that the functionality [of StarOffice] is sometimes limited, has certain flaws, and it can be difficult to use [compared to Microsoft Office] .

Legal issues

For the decision to deploy open source applications within the IT systems of the two courts, no legal steps had to be considered. The Swiss Administration however set out a so-called Open Source Strategy, which states that for applications that are of critical importance for the work of the courts need to contract an external support partner. Especially with regard to the office suite, this was an obvious choice for the IT direction. The need for open file formats as well as the support for the application were basic requirements, Brunner explains. That's why we chose StarOffice, which is basically OpenOffice with support .

The same goes for Alfresco, the document management system used at the courts. Here the support provider is Alfresco, which delivers an easy to use system that meets all the functionality requirements of the IT. This arrangement offers open source solution with the support of a

commercial partner.

Change management

When the new IT infrastructure based on Solaris was introduced in 2001, a generic catalogue of questions was developed to define the needs of the users. The question which functionality does the user need? was always at the centre, Brunner says. Several different applications were tested before selecting each one.

Before the new architecture was introduced not many people had experience with open source software, Brunner explains. It is essential to inform the people about the choices and the capabilities of software, especially with open source software . As many users still considered open source software to be complicated and less compatible with other platforms, changing this perception was a key challenge. An audit of the Federal Court's IT solution by auditing company KPMG in 2008 also suggests that basically one can adhere that open source software with regard to user-friendliness (look & feel) can hold its own in comparison to the market leader (i.e. Microsoft in the case of office automation) .

Brunner explains the first step as follows: When we decided for the product, we invited all staff members [&] to presentations where we explained why we made the choice, and demonstrated the program . This way user acceptance for the open source solutions quickly grew, and initial fears and counterarguments could be addressed. At the same time, it showed the users the added value of the new software, which is also very important according to Brunner.

From the perspective of a user Dr. Bühler, the Federal Courts deputy general secretary, says that it enabled us to do things we could not do before . The migration was therefore considered to be a positive step ahead, as the system previously deployed did not have the functionality that Solaris and the new applications offered. Moreover the security aspects were highlighted as well. Open source software is less likely to be attacked by viruses, and is generally more stable Dr. Bühler explains. During this whole time the decisions of the IT team were supported by the Federal Court's management, which proved to be an essential ingredient for a successful introduction.

Before the actual deployment of the software, the users had to participate in training briefings. The IT team distinguished between users that had previous experience and users with no experience at all. As the new software was not considered too difficult, these trainings were kept short. The more experienced users therefore only received a few hours of training on StarOffice while the inexperienced group a whole day. This was enough for most users, and in case further questions still remained, the team is always available to help and assist. Looking back, Dr. Bühler says that the

functionality compared to proprietary software is not problematic. The interface is a bit different, and you have to find your way, but at the end what most users at the Court do is simply putting black letters on white paper. And what does this really require? .

At the Federal Administrative Court the IT platform had a more difficult start. Beside the fact that many users still had to adapt to the new structure of the organisation   one court instead of of 37 recours commissions   the software (and especially the business process management tool) also was new to them.   Initially we planned the project implementation differently, but then it was decided that we would have to work together with the Federal Court, and we accepted that, and built the IT together with them , von Grünigen remembers the early stage of the project. He was in charge of managing the IT solution that was provided by the Federal Court. Aside from the discontent about not being able to decide for themselves, the change management and the cooperation between him and the Federal Court's IT team was very productive, von Grünigen says. This however did not help in the general disaffection with the IT infrastructure in the Federal Administrative Court. All parties interviewed expressed that this situation implies a certain political discussion, which makes it more difficult to find appropriate solutions. Where Dr. Bühler finds that most problems remaining so far   are small issues that you can live with , von Grünigen sees that   the problems are not necessarily linked directly to open source software, but it is more about the way the architecture is set up, and the platform   in this specific case. Brunner concludes   if we were a *neutral* partner, things could have been easier . Eventually this is also why the Swiss parliament has approved that each court can decide on its IT independently, he adds. The Federal Court's IT maintenance and support will therefore run out at the end of 2010.

Effect on government services

As far as the daily work goes, the divide in the opinion about the IT infrastructure is felt in this area equally. So says Dr. Bühler that   the functionality of the applications does not distract, slow down or bother in any form the work that we normally do . He further ads   most users are not even aware that they are using open source software . Even issues related to the different file formats that can come up when the court is in contact with external parties are not considered a problem.   You just send it again, when the other person cannot open a file   he explains. When a new person is introduced to working with the computers at the court, a brief introduction is given, which is usually sufficient for the newcomer to get productive.

For many staff members at the Federal Administrative Court the transition from their previous workstations, which were mainly based on Microsoft software, did not go so smoothly. The adoption of business process management software was quite difficult, seen that some users were

only using tools like Excel or Access before. Here the problems related to conflicting file formats appear more evident. One may assume that their previous workstations were already more sophisticated than the all-in-one solution deployed at the Federal Court. In this light, the value added of the new IT infrastructure seemed less apparent, especially as some of the functions were no longer available, or features became problematic which had previously been functioning smoothly (i.e. the issue related to email signatures, the project coordination function, or spell check issues).

The KPMG audit found that the use of open source software at the court was appropriate, efficient and forward-looking, and that the open source solutions were equal in their functionality to proprietary applications. The audit found that different user groups hold different views of the usefulness of the IT solution, and highlighted that most problems were organisational (especially between the two courts), rather than technical.

Evaluation

Achievements / Lessons learned

The introduction of open source software in the two courts has been taken differently, as we have seen so far. This may not be so much related to the software solution itself as rather to the way in which the project was implemented.

Brunner reports that in the beginning of the project, especially in the pilot phase at the Federal Court, there were some difficulties that nearly brought the migration to a halt. A problem related to the copying of files in various directories provoked severe doubts, and negative publicity within the Court. Even though the issue was addressed immediately by the Court's IT team, a debate about the dangers of using an Open Source IT architecture came up. Where certain problems related to the IT may be considered normal on proprietary platforms, those issues easily become the target of debate with Open Source solutions. It was therefore essential for the IT team to believe in the success of this new IT infrastructure for them not to abandon their work so far. As it turned out today, Brunner says, most problems have faded away, and their infrastructure is more secure and enjoys broad acceptance at the Federal Court. By being able to fix certain bugs and address issues immediately in house, awareness and acceptance of the advantages of Open Source software was strengthened.

A crucial aspect for the success of a new software is informing the users. It is necessary to directly address aspects that are relevant for the users' daily work and highlight the added value that new software can bring. This is important as it can remove certain prejudices related to open source, and it makes people understand that a change is necessary and positive at the same time. Dr. Bühler

reports that this was done very successfully, and the improvements of the new IT were obvious.

For the management of any larger body, be it a court, company or any other institution, what is important with regard to the IT are four points, Dr. Bühler explains; security, [minimum] costs, user friendliness, as well as appropriate functionality. If these four points are met then the people in charge of an organisation support a change [in the IT], and then it will be successful. It is however important that all four are met .The Federal Court's migration required (and ultimately enjoyed) the backing of the court's directors, so the IT team had to convince this group of their ideas first. As for all projects, the support of the IT-team by the management of the Federal Court was an important factor for a successful achievement.

At the Federal Administrative Court the IT finds less appreciation. Von Grüningen explains that he is not stubbornly fighting for the introduction of Microsoft products, but that the set up as it is in some aspects does not meet all the requirement of the Administrative Court. I simplyhave the feeling that it isn't quite mature, and there are many things that need more work , he further explains. Moreover he sees a difference in going for open source software 100% and only doing it partially. By only using a certain number of open source applications, which may even be develop according to the Courts specific needs, they could avoid constant problems that are inherent with open source software. There, fixes are necessary continuously, and this is simply not the case for Microsoft applications. Moreover, as users are more familiar with the Windows platform, problems in everyday use are much less likely to occur, he opines.

The opposing perceptions of the IT solution at the two courts highlights that it is significant for an institution to have a certain degree of autonomy with regard to basic infrastructure decisions. This creates more acceptance for any decision within the institution, and can certainly facilitate the success of any change. The Federal Administrative Court did not enjoy this autonomy, which led its IT staff and users to develop a negative perception of the IT solution provided by the Federal Court. This is not a question of the licensing model used by the software in question, but rather of the way in which the setup of the Federal Administrative Court as an organisation was managed. For Brunner, no software is perfect. The positive point about open source is that even as a small customer you can get fixes in a fast and efficient way .

Conclusion

The introduction of open source software at the Federal Court initially faced the same obstacles as many institutions with similar dimensions do. These were mainly issues related to technical problems that occurred in the early stage of a project. The continuous support of the court's directors, as well as appropriate information about the strength and the added value of the software

infrastructure contributed largely to the success of the transition in the long run.

The problems related to the IT of the newly founded Federal Administrative Court eventually have two origins. Since the Federal Court's supervision was decided upon from the beginning, there was little autonomy for the IT choice of the Federal Administrative court. This lead to considerable disaffection of the IT platform, as no independent preferences were included in this process. As the new ways of working under one roof already asked for a lot of coordination and adjustment, this was an additional burden. One may assume that the IT transition could have been smoother if the Federal Administrative Court's opinion had been included in the process. Even though the split of the two courts IT in 2010 is unfortunate not only from a financial perspective, one may assume that it potentially resolves certain issues that hinder its success.

Links

•Swiss Federal Court

•Swiss Federal Administrative Court

•Press: Arbeitsgruppe IT-Bundesgericht hat Arbeit beendet   (in German, April 30, 2008)

•Press: Bundesgerichts-IT: Black Screens und mangelhafte Security   (in German, March 19, 2008)

•Press: IT-Streit der Gerichte: Studie soll Klarheit schaffen   (in German, August 27, 2007)

•Press: Bundesgericht: Open Source Software für Verwaltung   (in German, May 2, 2003)