



## **E-ARKIV STOCKHOLM: FROM VISION TO DIGITAL ARCHIVES**

### **Summary**

In 2008 the city of Stockholm adopted an e-strategy where information and records generated in administrations and companies are seen as a common resource that should be re-usable. As a consequence, the Stockholm City Archives was given the task to purchase and implement a digital repository that caters for the entire city administration. This was done within the three year project Navet (“the Hub”). This paper describes the City Archives journey towards a digital repository and supporting business processes. The paper also outlines some implications the digital repository will have for the City Archives.

### **Stockholm and the Stockholm City Archives**

Sweden’s capital Stockholm is with more than 830,000 inhabitants also the country’s largest city. The city is administered through 14 district councils, 14 specialist committees and 17 publicly owned companies. In this paper they are referred to as “administrations and companies”. With 42,500 employees, the city administration is Sweden’s largest employer. Decisions made therefore have very large impact.

Since 2007 the city of Stockholm has adopted a vision called “Vision 2030” aiming at making Stockholm a cutting-edge city for citizen, business and employees by the year 2030. ICT and e-government are important tools to realise this vision. In 2007, the City Council decided to invest € 65 million over a four year period to develop e-services. The digital repository has been financed from this investment budget.

The Stockholm City Archives is the official archive for the city and the region of Stockholm, containing 700 years of history from medieval times to the present, with records ranging from documents on paper to the digital files of today. With a staff of approx. 70 people, The Stockholm City Archives is one of Sweden’s largest archival institutions. The City Archives have received digital records; mainly text

based databases and digitized images, for the past 20 years. Digital records have been controlled before transfer and stored on a dedicated archival server. For many reasons this has not been a satisfactory long-term solution. The records have been difficult to access and use and preservation planning has not been a priority for the City Archives.

## **Information as a common resource**

As archivists, we're used to formulate the problem of digital records as a long-term preservation problem. A lot of effort is put into aspects concerning how to capture a digital record, what file formats to use, where to store the information, preservation planning and migration strategies. However, according to the City Council and the City Executive Board, this is not the main problem with digital records. The city's e-strategy document stresses that the information and records generated in administrations and companies are a common resource that should be re-usable. Without a standard storage solution, the digital records are locked into the systems where they were created. This complicates the exchange of information within the city administrations as well as difficulties for citizens and business to access public records. A shared digital repository is therefore a vital part of achieving the goal of making records a common, re-usable resource.

The different issues identified by archivists and politicians made up the base for a joint vision regarding digital records.

Firstly, the City of Stockholm needs a trustworthy long-term storage of digital records in one, and only one, shared digital repository.

Secondly, the city's archives are preserved to be used. The Stockholm City Archives aim to promote usage and usability. In the digital world this is preferably done by providing administrations, citizens and business *one* point of access for records. At this one point of access, it should be possible to retrieve a record without knowing the creating administrative body, the creating system etc. Describing the provenance shall be mandatory at the moment of transfer but not during the moment of retrieval.

Thirdly, in order to exchange records between municipal administrations/ companies, and between an administration/company and the digital repository, terminology and structures has to be standardized. Only a few file formats will be accepted and there will be metadata which is mandatory to add to all information packages.

## From project Navet...

Based on this vision, a project called Navet (“the Hub”) started in 2008. The project was divided into two sub-projects, Navet GIF (an acronym for the Swedish translation of Mutual Access to Information) and Navet e-arkiv.

Starting in 2008, *Navet GIF* is still aiming at developing ways to improve the city’s information supply and exchange. This sub-project initially worked on standardizing terminology, metadata and structures, creating a least common denominator for describing cases. The project moved on to putting together a list of demands for a system supporting meetings in the city’s district councils, specialists committees and company boards. At the moment, the project group focuses on purchasing an electronic records management system. Once a vendor is chosen, according to plan the deadline is set September 2011, Navet GIF will close. GIF has a budget of € 0.4 million.

The City Council approved of the project plan for *Navet e-arkiv* in August 2008 and granted the sub-project a budget of approximately € 2.8 million. The implementation phase started in September 2008. The project had a strong backing from politicians and the City Executive Office. The project steering group was lead by the vice CEO, responsible for finance. The rest of the steering group consisted of the director of the City Archives, along with directors’ from the whole spectra of city administrations and a representative of the city’s central IT-department.

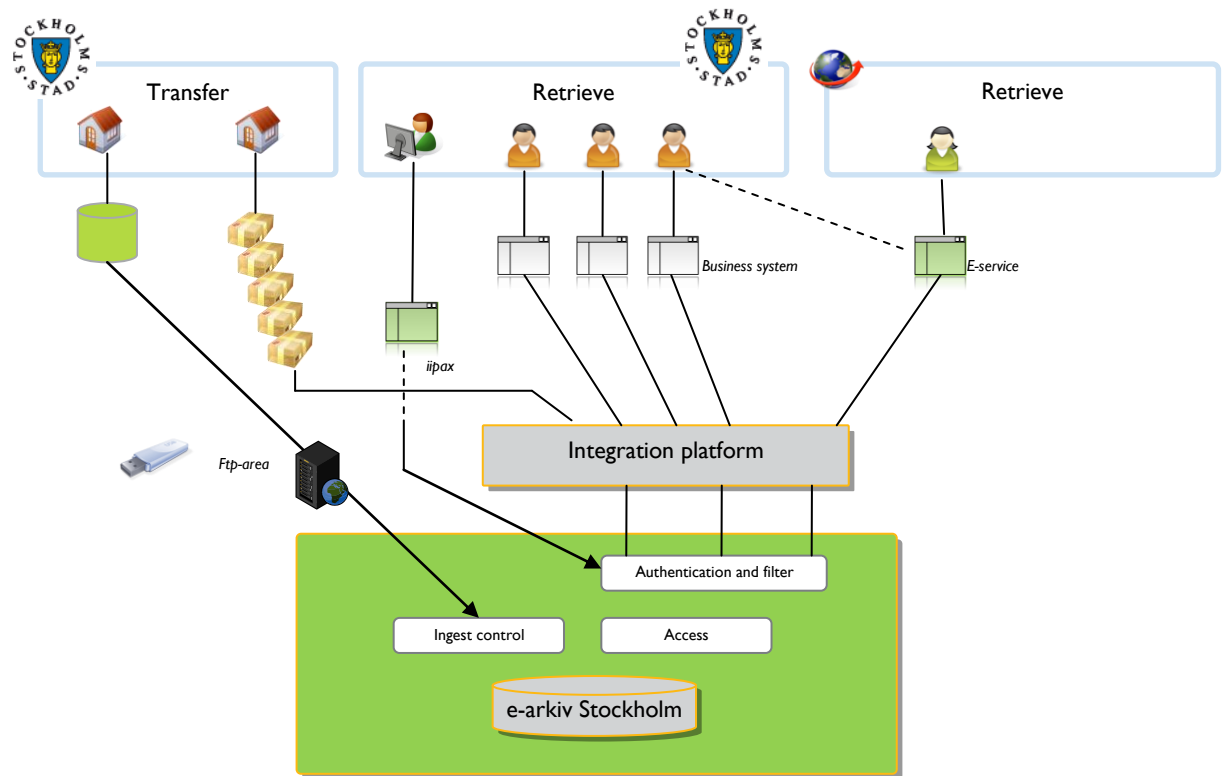
For project management and expertise, Navet e-arkiv contracted consultants from the IT-consultancy company Acando. The project group contained City Archives staff, consultants from Acando and staff from the chosen system vendor Ida Infront. Two specialist committees were chosen as pilot projects. Their role in the project was to test the system and the business processes developed by connecting one system each for transferral of records to the digital repository. Unfortunately, due to factors outside the project’s control, only one of two pilot systems managed to transfer records within the project time frame.

The project resulted in implementation of a digital repository system, iipax Archives. But, as we all know – it’s no use to implement a system without establishing business processes to support it. The project worked equally hard to develop work processes in accordance with the conceptual model OAIS (Open Archival Information System). We translated the concepts of ingest, access, administration etc into hands-on work processes supported by check-lists, templates etc.

In June 2010 the digital repository was launched with full functionality. The official launch took place in August and the project closed in September.

### ... to e-arkiv Stockholm

After three years of analyses, business process development and system implementation, Stockholm City finally has its digital repository. E-arkiv Stockholm is owned by the City Archives and considered one of few systems that cater for the entire city administration.



Transferral of records can be done by a so called synchronous connection, i.e. building a technical integration for transfer of records. Those integrations use the city's system integration platform, a service oriented architecture platform called Microsoft Moss. Transferral can also be done by an asynchronous connection. In those cases, records are transferred to a mutual file area before they are ingest controlled and stored in the digital repository. In exceptional cases it's possible to make an off-line transferral by sending records on for example a USB. In those cases, the City Archives turns it into an asynchronous connection.

Employees within the city can access records from e-arkiv Stockholm by being a user of iipax archives client, by having a technical integration for retrieval from the repository to their own business system or by using the repository's e-service. Iipax archives will mainly be used by staff at the City Archives and archivists/records managers at administrations and companies who have transferred records to e-arkiv Stockholm. The e-service will be a cost efficient

choice for administrations and companies who have limited need to access information from the repository, or who only needs to access information that doesn't contain secret information or personal data. A synchronous technical integration for retrieval of records is the best option for an administration/company with greater need to access information from the repository, or with a need to fast access records that contain secret information or personal data.

Public users can access the records via the e-service. Records containing secret information or personal data will not be displayed in the e-service. However, it is possible to see that there is a record and make a request to receive a copy. Those requests are checked manually by City Archives staff.

### **It's time to "fill the shelf"**

At the official launch of e-arkiv Stockholm, the City Archives director Mr Lennart Ploom concluded: "We've spent three years and € 2.8 million to build the equivalent of a digital shelf. Now it's time to actually fill this shelf with records."

e-arkiv Stockholm received its first non-project related transfer of records in late September 2010, and other transferrals have been made since. The City Archives has a growing list of administrations and companies who has shown interest in connecting one or more systems or e-services. However, we also take proactive steps to promote e-arkiv Stockholm. The aim is to make sure that enough people on management level know what the digital repository is and get them to favourably consider a connection project. We have a presentation kit on The City Archives' web page and arrange meetings and workshops with interested administrations and companies. Connections to the digital repository – for transfer of records, retrieval of records or both - are currently made on a voluntary basis. However, for 2011 the City Archives have been assigned to plan for how and when all city's administrations and companies shall connect to the repository.

The City Archives has decided to treat each connection to the repository as a project. Once a letter of intent has been written, we form a project group with representatives from the City Archives and the connecting administration/company. Quite often, the other party will need to engage their system developers, records management consultants etc. The team from the City Archives represents four different competencies: ingest, access, system administration and project management. Each connection project has a steering group with at least one representative from each organization. There is a handbook and templates to support connecting administrations/companies with the steps they are supposed to take.

The City Archives has a number of requirements for accepting records into the digital repository.

- We only accept records from closed cases. However, as soon as a case is closed, the records can be transferred to the digital repository.
- We do accept records containing secret information and personal data, but a classification in accordance to the Official Secrets Act and the Personal Data Act needs to be done before transfer. This classification provides important metadata that are tied to the information package and will decide how the system will display the record. Information that is classified has to be checked manually by someone at the City Archives and cannot be accessed through the e-service.
- We do accept records that should be disposed of, though it's required that a formal appraisal decision has been made. Retention rules are added to the information packages as metadata and the system will automatically dispose of the records.
- The records are required to be of a specified certain quality and in accordance with ISO 15489 characteristics. This standard states that a record should correctly reflect what was communicated or decided or what action was taken. The records are also required to contain content and necessary metadata, be authentic, reliable, unaltered and usable.
- At the moment, we've chosen to limit ourselves to a few stable, trustworthy file formats. We currently accept delimited text files with one record per row, XML-structured text files, PDF/A, JPEG and TIFF. In the future we'll have to look into ways of archiving more complex formats, for example web pages.

## Future plans

Although the digital repository is up and running with full functionality, the City Archives is planning to further improve the service. During the project we deliberately limited our requests to a very basic e-service for retrieving records. We are currently running a small project that aims at making map based searches possible. In the future we hope to get an authentication service (log on by electronic ID) in the integration platform. This would enable citizens and business to search all cases they have been involved in, even if they contain secret information or personal data.

As we have started to fill the repository with records, we're realising that the work processes needs to be tested and refined. We also need to continue in-service training of staff. During the project, the City Archives depended on consultants. Now we're on our own and a large number of employees need to acquire new skills. Although education and training was an important part of the project, the real training is learning-by-doing, and for that we need proper cases.

The City Archives need to move all records that are currently stored on our dedicated file servers to the digital repository. This task includes both records that



we have digitized in order to make them more accessible and records previously transferred from city administrations and companies. This time consuming work has started on a small scale, and have often proven to be more difficult than the average connection project. City Archives staff need to do all the work, including adding metadata, re-structure information, do the legislative classifications etc – and if we're unlucky there is no one from the creating administration/company to ask.

## **Implications for Stockholm City Archives**

e-arkiv Stockholm has been in place less than a year, but we can already see some indications on how it will affect the City Archives.

The City Archives as an institution needs to have a different and enhanced user focus when our users are retrieving records from their homes instead of visiting us. Right now we're making educated guesses of which the users are and how they search for records in the digital repository. However, in the future we will need to monitor search patterns and react to those patterns in order to further improve services. However, the City Archives staff isn't alone in this. Any administration or company transferring documents to the digital archives need to have an enhanced user focus as well. They need to think about information needs and search patterns in order to structure data well and to give it relevant metadata.

With e-arkiv Stockholm, the City Archives are becoming more relevant to the everyday life of Stockholm City employees. Some administrations and companies will deposit their records with us within minutes of creation. The City Archives have to handle their records with care, and make sure they can retrieve and re-use it as soon as they want to. We'll be in a position to make demands on them – and vice versa. e-arkiv Stockholm is an opportunity for us to "put the archives on the map" – but our mistakes will be just as visible as our successes.

The City Archives has got a brand new field to cover, as well as a new mind-set to implement. However, we have the same number of employees – and the same people. In order to make the digital repository an ordinary part of business, we need to make all staff familiar with digital records. Even if we manage to achieve this, we will have to prioritize. Unless we're given resources to increase staff, we will have to let other tasks have lower priority – or perhaps stop doing something all together.

With e-arkiv Stockholm, the City Archives is leaving its comfort zone. This is not the first digital repository, but one of relatively few that caters for a number of administrations or agencies. We're early adapters, and as such we're bound to make some mistakes. In some areas, the legislative foundation is still untested and we have been forced to make educated guesses into the interpretations. However, we believe that those who lead the way and dare to test will be part of forming



established practice. After all – if archivists aren't part of building and maintaining digital repositories – who will? And to what quality?