



## **From Archived Paper Records to Meaningful Digitised Records**



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## 1. Abstract

This paper is intended to provide an outline of how a UK police force moved from discussion and hypothesis around digitising some of its paper records, to delivering a viable proof of concept and subsequent operational deployment, in a short space of time and with minimal resources.

The force is a fairly typical one, with an overall establishment of about 4000 (officers and staff). It has three custody stations and several support departments and units. It also shares some functions with a neighbouring force under collaborative arrangements.

With a project team of two and other project work packages to deliver on, there were the following challenges to meet:

- Challenge 1 – to reduce quantity of paper held and produced
- Challenge 2 - to make content more widely available to those who need and have authority to access it
- Challenge 3 – to ensure that records (paper) are maintained in a secure environment
- Challenge 4 – to provide this as proof of concept with limited project support and minimal budget
- Challenge 5 – To change current culture from storing paper to scanning and making better use of the paper content and gain support for such an approach by senior management.

## 2. How those challenges were met

### 2.1 How big was the paper issue?

The way in which records were being stored and accessed meant that they were not always available at point of need. Valuable document content could be over looked and decisions made without full knowledge of the facts. Often staff had to wait for days to receive paper files from archive stores and when they did they had to plough through pages that included duplicate and administrative records that would provide no benefit.

### 2.2 How much and where was it?

Every police building had shelves, rooms, cupboards and in one case even a building set aside for storing paper records. A scoping exercise found that an area equivalent to eleven metres of shelf space was being used to store paper records. This scoping did not include all stores; some were not discovered until sometime after the scoping had concluded.

### 2.3 Who created the most and why?

Most of the paper was created in relation to criminal justice files; either crime reports or court files. A “print to file” philosophy was embedded into the organisation. Reports on enterprise systems that had been authorised for filing were routinely and unnecessarily printed for wet signature and then filed along with other hard copy documents.

When court files were being archived they held many copy documents and papers that had been created to support administrative functions and had no policing purpose. The “keep everything” culture had historically been adopted as a response to the Bichard enquiry and promise of concise records management guidance for police forces.

To consider how the quantity of paper records held could be reduced, a focus group session with subject matter experts and key users was organised. Each delegate was asked to bring a file or two from archive. Files were of different variety and levels of complexity.

Prior to the focus group a template listing common forms and documents was prepared; it was used to inform debate about what would be scanned, kept and destroyed.

At the time there was no clarity about the scanning process or where digital records would be stored, there was awareness that one department in the organisation was using an electronic document record management solution (EDRMS) called HP TRIM. The EDRMS was only being used in a limited capacity to store documents collectively referred to as “corporate memory”. Despite the lack of understanding about process there was a massive appetite for something to be done. Delegates spoke keenly about scanning paper records –the future was being discussed.

By the end of the focus group meeting there was a clearer idea about how to reduce the quantity of paper being put to archive and how space being occupied by older records already in archive could be freed up.

## 3. The plan:

### 3.1 Weed

The initial plan was to focus on weeding to reduce the amount of paper being held. Having set and agreed the criteria, staff responsible for filing records were given the go ahead to begin weeding files being sent to archive and those currently held in archive. Three basic rules for weeding were agreed – the following would not be kept:

- Records that had been reproduced and could again be reproduced from the electronic systems

- Duplicate records
- Records that added no policing value to the court or crime file

### 3.2 Scan

There was a desire to use technology more efficiently and to be able to scan records. The organisation was wary of scanning as it had previous experience of outsourcing scanning and those on the receiving end of the finished product were not satisfied with what had been delivered:

- Records were sent off site and there was no way of checking what had or had not been scanned.
- Some scanned documents were misfiled with other documents when they were returned to the originating unit.
- Scanning was of poor quality and original records had to be referred to.

It was not an experience that the organisation wanted to repeat. Prior to this proof of concept scanning had only been undertaken on site on a very limited basis and because of the previous bad experience some members of the organisation were dismissive of new attempts to digitise bulk paper records.

### 3.3 Share

The view was that files would be scanned and then be available to staff electronically via email. This view changed during the proof of concept when the power of the solution being deployed became known. However, in the early stages the vision was to develop a solution that was more effective than sending staff half way across the county to withdraw files from physical archive in order for the information held in them to be shared.

## 4. TRIM User Forum 2009

The project team attended the HP TRIM User Forum in June 2009. As well as networking opportunities with other HP TRIM users, the forum enabled learning about the product and knowledge transfer from others who had tried to better manage paper archives.

Importantly, EzeScan were also in attendance at the forum and did a demonstration session of their product which provides an advanced front end batch scanning solution and plugs directly into HP TRIM using application programming interfaces (API's) allowing many potentially problematic scanning issues to be resolved easily.

The project team were able to ask questions to ascertain its suitability for their needs; they later booked a demonstration session back at the workplace. This

provided the chance to ask more detailed questions and gain an understanding of what a scanning solution, integrated with HP TRIM could look like.

## **5. Multi Functional Device (MFD)**

The project team now had an understanding of HP TRIM, the software they wanted to use to store digitised paper records. They had an idea of the scale of the problem they were trying to resolve, at least the equivalent of eleven kilometres of shelf space being taken up with paper records. There was no funding for equipment or software licensing and yet delivery on the proof of concept was still expected.

The team made a rare discovery during the scoping process, an unused MFD was “found” and swiftly earmarked for redeployment to the archive store, ready to be able to scan paper records.

## **6. Under spend opportunity**

In October of 2009 an extraordinary project board meeting was called to discuss how some staffing under spend money could be most effectively used. As a result of that meeting the proof of concept project was awarded funding for 5 temporary staff members for a three month period.

Faced with a viable opportunity to be able to deliver the proof of concept, the team began to re examine how the challenges set could be met. Dip sampling of paper records and applying the criteria agreed at the focus group showed that 60-70% of the paper held in average files could be discarded.

Recruitment commenced and training packages were written for the temporary team. With only a 3 month window of opportunity to achieve proof of concept the potential process for scanning was also reviewed. From a range of solutions that had been presented, EzeScan were asked to provide further information and clarity around how their product met the requirements of the organisation.

## **7. EzeScan**

As a result of what had been seen, shared and established about organisational needs, a one month pilot using EzeScan to begin to upload volume crime and court files to HP TRIM commenced. This provided the opportunity for other to departments in the organisation to see what was being done and how EzeScan can be configured as a tailor made product, to apply metadata to and “sort” digitised records, ensuring maximum organisational benefit in continuing to store them.

As a direct result of the pilot, two departments also installed EzeScan to digitise paper and store in HP TRIM. One of those departments took on responsibility for scanning documents of 3 other units.

Significantly, 22 units within the organisation declared a business requirement for scanning and electronic document records management as a direct result of the pilot. That business requirement was needed for the organisation to meet efficiency savings and operational demands:

- Storing records in paper format and then retrieving them on demand is costly, unreliable and unsustainable
- Efficiencies and security confidence could be better achieved by transferring documents electronically across the organisation, rather than manually
- Audit, version control, retention dates and tracking of documents are routinely taken care of by digitising records, in many cases these were added benefits, not previously considered by the organisation



*One of many archive stores- before weeding and scanning commenced*





*The same store after just 1 month of work*

## **8. Conclusion at proof of concept and further application**

EzeScan, integrated with HP TRIM provided:

- The ability to apply multiple metadata fields to documents simultaneously during uploading into HP TRIM
- The ability to segregate documents according to form classification
- Optical Character Recognition (OCR) functionality allowed for Text Searchable PDF creation and indexing of documents for keyword search within TRIM. This enabled searches for words and terms that are contained within documents but not specified in metadata. Essentially given the nature of the documents being managed and the business of the organisation, OCR functionality could also allow for business intelligence software to be used if needed at a later date.
- Auto deletion of blank pages scanned in duplex, to allowed the efficient handling of mixed documents within a file
- Electronic redaction of documents and forms within HP TRIM
- The opportunity to do something meaningful with the content of the policing information held within paper records – content that prior to scanning, would only be known by the person creating the record. The organisation can now add operational benefit through its records management and that could save a life.

Surname	OICs	Vehicle_Details	Witness_Name	Offence_Na	Custody_Re	Tape_Ref	Exhibit_Ref	PnC_Date	Crime_Ref	OIS_URN	ID_Viper
White	Jones	ABCUC 2334	Allan Border	Armed Robber	22222	ABC 2	2	08/02/2010	p840	P4567	Mary
Jones	Smith	GRF544GF	Cathy Trim	Burglary	756454	AR-1	G-5		G/8464/2005		Jane
Devis	Brown		Rebecca Derwent	Theft (from Pe		CO/934/5	D-B1	17/03/2005	B/1241/2005		

Information from an access database is applied to multiple documents in a file at the touch of a button



EzeScan applies multiple metadata terms across all scanned documents – data does not have to be re keyed

## 9. Growth in use after proof of concept

Since the proof of concept the solution has been adopted by the major crime team for batch scanning of serious crime files held within the archive store. It has also been installed within the organisations information governance unit. They scan court and crime files requested on demand and to support information sharing requests.

EzeScan has provided efficiencies in the crime reporting business process. When officers use restorative justice as a sanction for young offenders they simply scan the completed paperwork. EzeScan then routes it to the youth offending service via email, requests a read receipt and uploads it to HP TRIM. This removes the need to keep the original paper record, saves the time that it would have taken to manually file the record, saves space in physical archive stores and shares knowledge the restorative justice sanction has been applied.

In addition to the operational benefits being gained, support departments also make good use of the scanning solution. The pensions department have begun to convert paper files to digital files. Once uploaded to HP TRIM they are even able to append pages to digital records, meaning that the digital file becomes “live”. Storing the data on HP TRIM offers all of the practical benefits of having a paper file, but it is more secure, less vulnerable to deterioration and takes up less physical space.

Another area is Audit; a function that is paper generating with records that have to be stored often for a period of 2 years, but are rarely viewed. Batch scanning with minimal metadata provided a simple process and very effective resolution to an ongoing storage issue, once again, when the paper record is uploaded, it can be destroyed.

## 10. Lessons learned

- Think about the reason you are digitising documents. Reasons may vary, it may be simply to store records securely and be able to dispose of the hardcopy. You may need to add power to documents, to make them more readily available than they had been previously. This provides additional research and intelligence capabilities by being able to search document content through OCR or by searching against user defined metadata.
- Manageable sizes of batches added to ease of use of the digitised document. The downside of scanning large files is that they become overwhelming to read on screen. The advantage of the way EzeScan was configured was that documents types could be set and separated with bar codes, so they could be batch scanned according to type. This in effect gave matrix management of scanned files, in addition to searching under metadata, or OCR content users

could also search under meaningful batch types- for example from court files some of the batch types used were:

- Witness statements
  - Records of interview
  - Court exhibits
  - Additional evidence
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- User defined batch scanning also enabled documents to be collated in accordance with future usefulness and with regard to future evidential weighting. This provided greater control over document retention and linking to other records. It also gave a more refined electronic search capability. In terms of efficiency through greater relevance of results returned. Rather than retaining a complete file regardless of future value, specific file parts could be retained according to relevance either as single documents or when related to other evidence, information, intelligence and knowledge.
  - The proof of concept dispelled myths about the options for scanning. EzeScan can be completely tailored to meet the requirements of the user; the operator though, is only required to learn a few basic steps. This is an option that can be deployed into an organisation very quickly provided the groundwork has been done and the options and the required outcomes have been thought through.

## **11. Future uses**

As knowledge of the EzeScan/TRIM application has spread across the organisation more people, and in particular managers, have sought to learn more about the fundamentals of the approach taken, with a view to employing the same solution to meet existing needs in their own teams. There has been widespread recognition of the advantages of digitisation of paper records in both operation and support functions of policing.

The early adoption of the solution by the major crime team has given operational departments the confidence that the solution is future proof and “safe” in terms of having a records management system that provides evidential weighting through BSI 10008:2008

With this endorsement from such high profile users in the organisation many of the concerns about the need to keep filed documents in hard copy quickly diminished, and the application of basic best evidence rules were accepted as good practice.

This helped to overcome the inherent fear of disposing of hard copy records “in case they are needed”, giving other operational departments the confidence to weed, scan and dispose of records knowing that once scanned those records could be secured against unauthorised viewing and that they could be easily retrieved.

The simplicity of its use was sufficient to assure support departments that scanning applications have changed, and, that far from being the onerous task that scanning was perceived to be, EzeScan offers a simplistic approach, that allows the user to quality assure the documents as they are scanned, including the ability to rotate, move up or down, delete, append or insert pages. It puts the user in control of the solution they need, to best manage the documents they create and own.

The approach taken could easily be replicated across similar organisations. In terms of policing nationally, there is the potential for increased availability of operational intelligence to all forces if the content of paper records were to be shared in the same way that more structured content is being shared through an upload to the police national database.

On a more local scale, efficiency savings can be achieved if organisations are able to trust the electronic document management systems that they use. If those systems meet security compliance as HP TRIM does, the fear of destroying paper originals is greatly diminished.

Scanning records reduces the demand on storage space, enables rapid viewing of scanned records and ultimately eradicates the cost of offsite storage. The organisation retains complete control over the records it creates, and more importantly is able to view and make use of the content of those records at any time it desires.

## **12. Conclusion**

The amount of interest in the EzeScan / HP TRIM solution after the proof of concept pilot is testament to the simple yet flexible and effective combination of the combined products.

Digitised documents uploaded to the record management system provided the organisation with confidence that documents had provenance and integrity.

This allowed for many original paper documents to be disposed of, releasing valuable estate space and providing efficiencies on archive retrieval and searching.

This combined solution truly offers an invest to save opportunity for organisations who need greater control over their own records management, offering a process for creating digitised records from paper archives in a few simple steps.