Auto-redaction of text for transfer to the Crown Prosecution Service

Embracing new technologies to solve the problem of text redaction.

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Key details

Does it work?	Promising
Focus	Organisational
Topic	Criminal justice
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Region	Eastern
Partners	Police Criminal justice (includes prisons, probation services)
Stage of practice	The practice is implemented.
Start date	June 2023
Scale of initiative	Local

Key details

Target group	Workforce

Aim

To speed up the process of text redaction (reducing the time taken by officers and staff redacting material and transferring it to the Crown Prosecution Service (CPS)), while addressing the issues associated with data protection. The vision is to continue to deliver a high-quality policing service by being innovative, victim focused and inclusive.

Intended outcome

A reduction in the number of hours spent on text redaction. Once the new product is fully embedded within the force, an estimated 9,525.60 hours of police and staff time will be saved per year.

Description

In line with Bedfordshire Police's ten-year business strategy and partnership with Amazon Web Services (AWS), the force has worked quickly to solve the problem of text redaction by embracing new technologies.

Problem

There was an urgency within Bedfordshire Police to resolve the issue of redaction due to:

- the issue being repeatedly raised as part of the force executive's engagement with the frontline
- the Home Office setting a national programme of work to investigate the issue of redaction
- the National Police Chiefs' Council (NPCC) voting the issue of redaction as the highest priority that required accelerating at the end of 2022
- the implementation of the Director's Guidance on Charging, which impacted the amount of case file material requiring redaction by police officers and staff
- evidence highlighting the challenges faced by redaction found in the Police Federation of England and Wales pay and morale survey 2022

Pilot evaluation

Bedfordshire Police conducted a pilot evaluation of two 'proof of concept' solutions and the existing force text redaction product to understand the benefits of all three. The pilot ran in May 2023. It involved each of the three products redacting more than 200 documents with a strict marking criterion to determine success.

Final product

Following this testing, a data redaction product called Riven DocDefender was noticeably more efficient at reducing the redaction process than the other products.

DocDefender had been built specifically for the needs of policing and justice and demonstrated a user-centric approach. This ensured that investigators could navigate the redaction process efficiently and effectively, saving valuable time and freeing up resources to focus on other critical aspects of police work.

Riven DocDefender's algorithms and text recognition techniques highlighted a high level (92%) of accuracy in identifying sensitive and personal information that required redaction. This precision substantially reduced the risk of inadvertent disclosure, ensuring compliance with confidentiality and privacy regulations.

Riven DocDefender is now used force-wide.

Evaluation

The pilot evaluation for redaction was performed in a controlled environment, involving a representative sample of documents and a selected cross section of users. The objective of the pilot was to evaluate:

- the tool's effectiveness in redacting sensitive information
- the tool's impact on operational efficiency
- user satisfaction

The results of the pilot were highly promising and demonstrated DocDefender's value in key areas. The pilot compared the tool against two other products.

Accuracy and efficiency

During the pilot, the redaction tool highlighted a high level of accuracy (92%) in identifying and redacting sensitive information. The false positive rate was consistently low, ensuring that non-sensitive information was not mistakenly redacted. The false negative rate was also minimal, indicating that the tool effectively captured and redacted sensitive content.

The efficiency of the tool was evident through its processing speed. It processed documents far quicker than the other two solutions. Riven DocDefender offered the highest number of pages and documents per user when compared to other solutions and without affecting performance. This becomes pivotal with the size of files officers and staff must redact.

These results demonstrated that the redaction tool could significantly speed up the redaction process while maintaining a high level of accuracy.

The product is not designed to remove the human element from redaction. It reduces the transactional activity and waste in the process, to aid officers and staff to redact more effectively.

User experience

Feedback from the users involved in the pilot program was overwhelmingly positive. The tool's user interface was intuitive, enabling users to quickly navigate and use its features.

Training and onboarding time for users was minimal, as the tool's functionalities were easy to understand and apply. The users underwent no training on DocDefender, this was required on the other two. During the live rollout, Riven offer flexible and comprehensive training material to match all user abilities. This includes training material and support.

Users reported a smooth experience when using the redaction tool, which contributed to increased productivity and reduced manual effort.

Compliance and security

The redaction tool demonstrated strong compliance capabilities by protecting documents so they are safe for onward transfer. By doing this automatically, it minimises risk to sensitive data due to human error.

The tool maintains an audit log of key user actions, providing a transparent record of all redaction activities. This feature does not appear in the current solution in place across forces and is therefore captured as a benefit.

Integration and interoperability

During the pilot, DocDefender seamlessly integrated within the forces existing workflows – no process reengineering is required based on current practices. It was compatible with various file formats – including PDF, Word, PowerPoint, Excel, and images – allowing users to redact sensitive information from a wide range of document types. The successful integration of the redaction tool contributed to streamlined document management and enhanced productivity.

Based on the positive outcomes of the pilot program, the redaction tool demonstrated significant potential in addressing the force needs. The results highlighted its accuracy, efficiency, user-friendliness, compliance capabilities and compatibility with existing systems.

The pilot's success paved the way for a wider implementation of DocDefender, benefiting the force by:

- reducing the risk of data breaches
- improving operational efficiency
- enhancing overall data privacy and security to maintain public trust

Overall impact

Since DocDefender was deployed in June 2023, there have been several case studies evidencing the product's efficiencies.

- A detective constable (DC) redacted a phone download of 578 pages for her colleague in 20 minutes (which would previously have taken a couple of days). The DC said that the new product was a 'game changer'.
- A DC redacted an 806-page document in approximately an hour. He had spent his entire previous shift redacting half the document, before putting the whole document through DocDefender.
- A field intelligence officer (FIO) redacted 350,000 cells in an Excel spreadsheet with multiple public-interest immunity in 30 minutes, something that would have previously taken four hours.

Learning

1. Configuring the network 'allow' list enables all users to access the product.
2. A strong communication plan ensures users are aware of the tool and how they can make the most of it.
3. Being able to rapidly develop new updates in response to user feedback is important, as redaction has many different requirements.

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Tags

Criminal justice   Information communication technology (ICT)