

Case Study: The Digital Forensics Programme

Using technology to develop innovative solutions

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Overview

» Background and work so far

- Delivering a frontline tech uplift as part of Transforming Forensics' Rape Review Response Project (RRRP)

» Current activity and next steps

- Building on this with the Police Digital Service's (PDS's) Digital Forensics Programme: selective extraction and examination, automation, validation and enduring capability



Strategic drivers we are working to

PDS is working to deliver against key strategic aims that have been set out for policing and forensic science.



Transforming Forensics Programme



NEW – Digital Forensics Programme



Digital Evidence Programme

The end-to-end rape review report on findings and actions

Supporting Rape Review priorities: Operation Soteria response and 24 hour device return target



Violence Against Women and Girls: Supporting a national priority



Digital Forensic Science Strategy: Challenges of volume, complexity, legitimacy

Challenges to solve in the context of RRRP

- ❖ Victims feeling they are subject to a 'digital strip search' and having their devices retained.
- ❖ Working with complexity – digital devices with high quantities of data and the requirement to be 'selective' with what information is gathered.
- ❖ Access to the right kit, at the right place, at the right time.
- ❖ Embedding a quality-first approach to frontline examinations.



RRRP progress so far



What was delivered

- ✓ £5m project **developed and delivered in-year** by TF
- ✓ Working with 24 forces to develop **new, standardised, frontline Digital Forensics (DF) capabilities**
- ✓ Delivering **validated DF tools** to frontline policing:
 - **21 (+1) mobile DFUs** (75% uplift on bid)
 - **116 laptops** (130% uplift)
 - **22 kiosks** (10% uplift)
 - **Validation support**



Emerging benefits*



80% reduction in TRTs for mobile devices



90% reduction in device backlogs



36% of devices **returned at scene** > victims' phones returned w/in 24 hours

***Based on results from mobile DFU deployment in Bedfordshire**

RRRP goals

Policing priorities

- Criminal Justice Taskforce Rape Review Response
- Violence Against Women and Girls Strategy
- Beating Crime Plan

Outputs

- Improved Digital Forensics (DF) capability
- Released Digital Forensics Unit (DFU) capacity
- Better consistency and convergence

Outcomes

- **Same-day return of devices /access to evidence**
- Faster justice and higher conviction rates
- Better service for victims

Impact

- **Less violence against women**
- **Fewer victims**
- **Increased public trust and confidence**

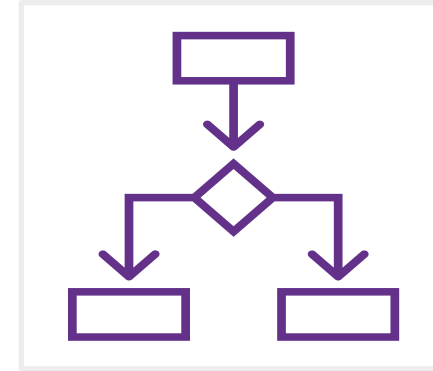
Mobile digivans



Breaking the problem down



Technology design –
what will we deliver?



Method design –
how will it be used?

- **Make solution flexible and modular** – move towards convergence in stages
- **Acknowledge force positions** – one size doesn't fit all

What next for convergence?



Capture overall requirements



Develop artefacts further through consultation



Collaborate on workflow and configuration – build lasting networks



Tackle whole system, otherwise we push problem to a later stage of the process



Capture data to understand what works well

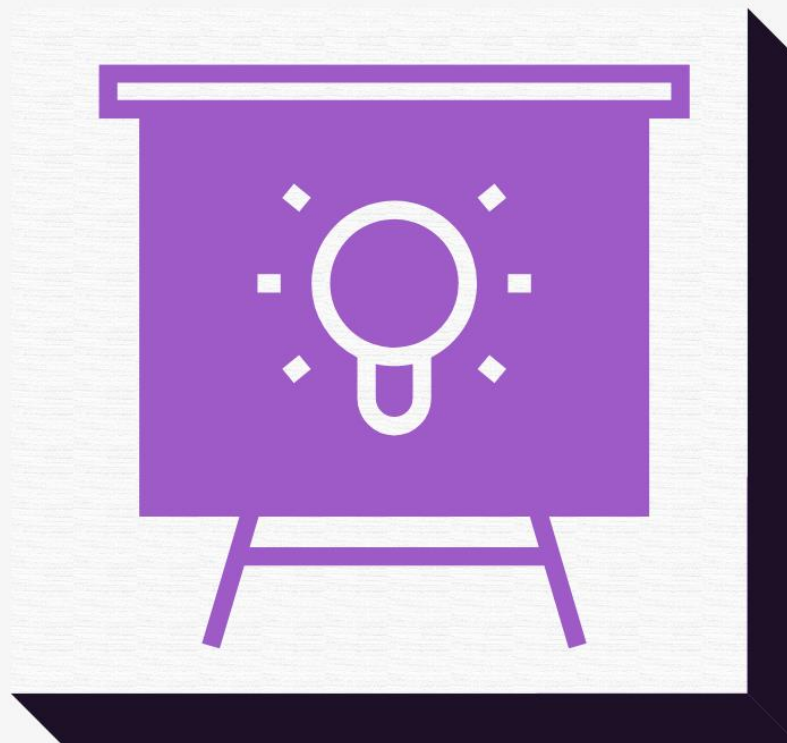


DIGITAL FORENSICS PROGRAMME

Adam Korol (Product Owner)
October 2022

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ABOUT US

- PDS is the delivery vehicle for the National Policing Digital Strategy, co-authored with the National Police Technology Council.
- Our aim is to harness the power of **digital, data and technology**, to enable policing to better protect the public.
- We are **by** policing, **for** policing **with** policing.



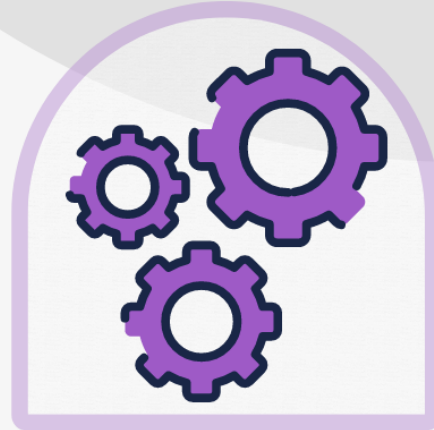


THE PROJECTS



**SELECTIVE
EXTRACTION &
EXAMINATION**

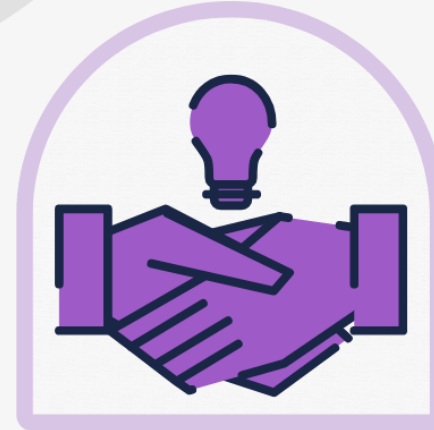
(SEE)



AUTOMATION



**VALIDATION
SERVICE**



**ENDURING
CAPABILITY**

SEE



Develop a strategy

True Selective extraction vs. Selective examination



Create an operating model

Proposed 3 level approach.

1. Self service
2. Guided extraction
3. Submission



'Current state of play' study

Accelerated Capability Environment (ACE) commission



'Art of the possible' study

Accelerated Capability Environment (ACE) commission.

Engage with vendors for future releases



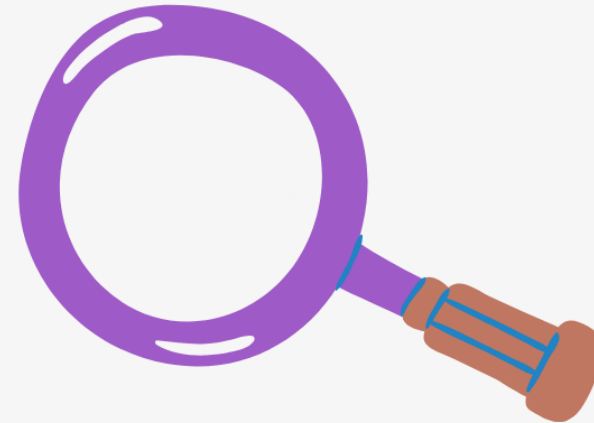
Engage with stakeholders (User Stories)

Understand requirements from Policing, Victim groups, CJ, FSR etc.



Develop National SEE toolkit

Development of solutions (hardware & software) to meet the demands of SEE



OUTCOMES



- Deployment of a toolkit consisting of a **decision making** application which presents users with the best approach to **meet the victim requirements** along with the hardware and software to conduct the work.
- ISO **Verified** tools
- **Privacy** by design SOP's ensuring safeguards are met in regard to peripheral and stored data

AUTOMATION



Develop a Strategy

This will outline the approach to delivering automation solutions in digital forensics both locally and nationally



Building on previous projects

NPCC DFPB request (94%) for lessons and best practice from previous national work to be adopted where appropriate



Hybrid approach

Incorporating both on prem and cloud-based technology. A steppingstone approach for simpler onboarding



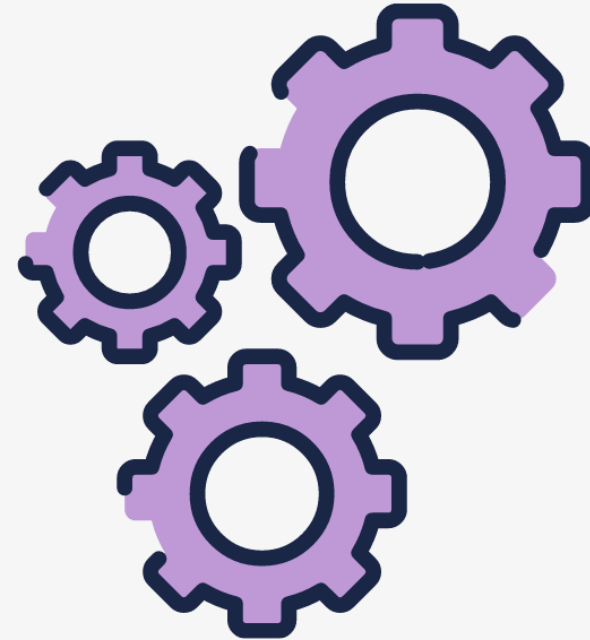
Test platform 22/23

The project will build a test environment with a view to POC/early adopter deployment in the next financial year



Engagement

Via the National Automation working group, community feedback will be sought and best practice shared



OUTCOMES



- Deployment of a test environment with early design focus on **centrally managed hardware** for 'on prem' automation and **cloud** capabilities for storage/**review**.
- ISO **Verified** tools
- A plan for **POC** and **early adopter** collaboration 23/24
- Cases processed **55% faster** on average (prev proj)

VALIDATION SERVICE



Ground Truth Data

Creating new and managing existing GTD hardware for mobile devices



Central datasets

GTD datasets accessible from the cloud



Project verification/validation

Working closely with SEE & Automation to advise on verification/validation plans



Tool verification

Centralised testing of common digital forensic tools



Engagement

Working with FCN who are also active in this area (Computer GTD) and liaising with the FSR office



OUTCOMES



- Ground Truth Data **mobile devices** for forces to use in validation and testing
- Cloud based Ground Truth Datasets for more **efficient access** and **management**
- **Tools** that are commonly used by DFU's **centrally verified**
- **Reduced demand** on DFU Technical & Quality Managers
- **Improved** public and CJ **confidence**

ENDURING CAPABILITY



Create a strategy

Improve operations and commercial practices, drive innovation, develop the workforce and build trust



Cloud

Conduct a DF discovery survey into current state, desired state, challenges and opportunities



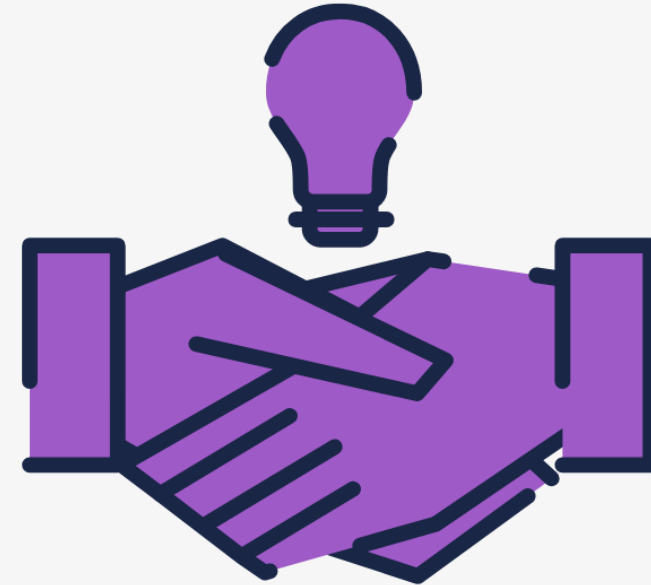
Core principle

Enduring capability is a key component of all project work



Continuous Improvement

Whilst identifying opportunities for rapid deployment of tech, services or solutions into policing, DFP adopt an iterative approach with a focus on improving capability and functionality in future



OUTCOMES



- Development and deployment of **digital forensics solutions** to policing with an **enduring support** capability
- **Improved accessibility** of **existing** products to policing and exploration of **innovative** opportunities
- **Reducing** the **burden** on digital investigative policing by offering centralised **ISO support**
- Ensuring **victims** are dealt with in a **proportionate**, privacy focused manner
- **Positively** impacting start times for DF casework



CONTACT US

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