



Benefits of implementation of mobile devices with frontline officers in Police Scotland 2019-2020

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In Memorial:



After the completion of this research project, Professor Lesley Diack sadly passed away very suddenly in December 2020.

Lesley made a significant contribution to many aspects of public life in Scotland through her academic work, and in particular in recent years to policing.

She will be sorely missed by all who knew her. We hope this final article she contributed to, and the successful project she led, is one part of a very worthy legacy.

SUMMARY: This project is an evaluation of part of the 'Digitally Enabled Policing Programme' (DEPP), the 'Police Scotland Mobile Working Project (MWP)' which is an on-going project as part of the Police Scotland 'Serving a Changing Scotland Strategy'. The MWP project equipped operational officers with a digital mobile policing solution to replace the traditional paper notebook system, to provide remote, live access to key policing information systems. Objectives were to identify long-term potential benefits and efficiencies to the officers, senior staff, and the public.

A research team from Robert Gordon University (RGU) and Abertay University were appointed to evaluate the implementation and impact of the national roll-out, and to inform the final stages of roll-out to 10000 police officers across Scotland. The research utilised a combined prospective and retrospective qualitative approach, triangulated with online feedback from officers and quantitative data. However, the main data collection phase of the project had to be transformed because of the pandemic.

From the initial observation stage of the project it was noted that preparation for the rollout had been comprehensive and that choice of device, software and network was important. The implementation phase of the rollout was led by the divisions themselves and this further added to the success. From the implementation stage the research team identified long-term potential benefits in five main areas with sub-themes as highlighted below.

RESULTS: From the initial observation stage of the project it was noted that preparation for the rollout had been comprehensive and that choice of device, software and network was important. The implementation phase of the rollout was led by the divisions themselves and this further added to the success. From the implementation stage the research team identified long-term potential benefits in five main areas with sub-themes as highlighted below.

- **Productivity**
Efficiency gains/Increased capacity for more work/Proactive policing benefits/Better Time management/Time savings
- **Information**
Access to information/Information accuracy/Immediacy of information/Additional information sources/Information sharing/Security of information
- **Connectivity and Communication**
Connectivity/Real time communication/Team communications/External communication/Increased visibility
- **Officer wellbeing and safety-Officer**
Wellbeing/Officer morale/Officer safety/Autonomy/Covid-19 benefits
- **Technology and Culture Change**
Police officers' attitudes to technology/Members of public attitude to technology/Culture change/Logistics/New working practices/Collaboration /Improved relationships.

RECOMMENDATIONS

Overall, the introduction of the mobile devices has been a very successful project with the majority of police officers realising multiple benefits in process, job satisfaction, safety and access to information. The rollout of the mobile devices in stage 2 of the project was one that was waited for with anticipation by many. The main recommendations made included:

- Areas in Training;
- Better engagement with officers in device development;
- Timeline for requested additional functions communicated;
- Need for a strategy for maintenance and replacement of devices with financial and organisational backing;
- Interoperability of systems;
- All processes and governance with the new ways of working be reviewed regularly to create timely new systems.

INTRODUCTION

This project is an evaluation of part of the ‘Digitally Enabled Policing Programme’ (DEPP), the ‘Police Scotland Mobile Working Project (MWP)’, which is an on-going project as part of the Police Scotland ‘Serving a Changing Scotland Strategy’. The MWP equipped operational officers with a digital mobile policing solution to replace the traditional paper notebook system, to provide remote, live access to key policing information systems.

In 2018 Police Scotland produced a digital strategy entitled ‘How will we use technology to improve policing in Scotland?’ In this document it was realised that the organisation had ‘historically underinvested in technology’, and that there was a subsequent need to change this to enable Police Scotland to deliver their strategic objectives for Policing 2026, which included a key design to create a portfolio-based approach to delivering investments in digital, data and ICT, which the MWP is one part of this strategy.

Police Scotland worked with industry partners to develop this MWP. Samsung provided the mobile devices used, Motorola provided the notebook functionality and EE, the network provider. All were chosen for their tried and tested business model. The Samsung devices were modern and at the time of purchase their latest model, with the model having been tested for the usual bugs and glitches and had been found to be robust, giving a good user experience. It was similar to many of the devices that frontline officers might use personally, thus creating an ease of use and understanding immediately for the device. The notebook functionality created the system that decreased duplication of statements etc. and allowed efficient and real time sharing of information. EE was chosen as they had the most comprehensive network and geographical coverage throughout Scotland. Therefore, the project was starting from a strong foundation of tested devices, time saving software and comprehensive coverage.

In August 2019 the research team from Robert Gordon and Abertay Universities were successful with their qualitative research proposal to Police Scotland and the Scottish Police Authority. The proposal, which was to research the benefits of the mobile working project, was led by Professor Lesley Diack (LD), an expert researcher in online systems, mobile applications and change management in collaboration with senior lecturer, Dr William Graham (WG) from Abertay who had 30 years' of police experience as well as police research expertise. The named researcher on the bid was Dr Midj Falconer (MF), an expert in police well-being and resilience research. The research questions that the team were tasked with answering were:

1. How has the implementation of new mobile technology affected the business practices and behaviours of the officers and staff of Police Scotland?
2. What has the impact of mobile technology been for the policing of Scotland?
3. What has the impact of mobile technology been for the Scottish public?
4. What has the impact of mobile technology been for Police Scotland's partners

Literature Review

Following police vetting for the research team members, the project commenced in October 2019 with the team first accessing confidential high-level reports on the implementation of the mobile devices provided by the police. This initial phase also included carrying out a literature review of existing academic literature (see Allen et al, 2013 and Karanasios & Allen, 2014) and also grey literature, including government reports, policy statements and issues papers (Seale, 2013; Grey 2014). This first stage also gave the team members an opportunity to take part in and observe officers training in the use of the devices. It also allowed the team the opportunity to listen to discussions between the officers and the trainers, and question the trainers about their experience with the device.

Data Gathering

Participants were recruited from frontline officers and key stakeholders, with interviews and focus groups scheduled for mutually convenient times. However, this all changed with the restrictions introduced by the COVID-19 pandemic – all the face-to-face dates were rearranged to telephone interviews and focus groups were based on convenience and opportunism. As a result, an extra territorial division was also included in the interviews. While this was a change to the research protocol, it did allow the research team to interview more staff and add extra roles to the research plan, due to no travel costs and travelling time to factor into the research plan.

The data collection took place over a six-month period and 68 people were interviewed or took part in focus groups or case studies with over 40 hours of information. The interviews varied from 15-60 minutes in length and were transcribed verbatim. All interviewees were allocated a unique code and no name or identifying information was included, thus anonymising the data and was used to populate the Nvivo© database.

Results

This rich and diverse project gathered a huge amount of data and the subsequent coding in Nvivo© revealed 5 key themes:

- Productivity
- Information
- Connectivity and Communication
- Officer Wellbeing and Safety
- Technology and Culture Change

In terms of **Productivity** there were various areas that emerged from the data. The device gives officers direct access to systems such as the Police National Computer (PNC) for vehicle and wanted/missing checks and the Criminal History System (CHS). Officers commented positively on efficiency savings in that there was less delay in carrying out checks on these systems as they did not have to contact the Control Rooms for the checks. This led to increased capacity in their workloads as they could carry out more checks than was the case previously. The benefits had an impact on proactive policing allowing officers to be out on patrol more.

Officers also commented on improved time management in that they could better utilise their time completing tasks remotely using the device, while carrying out other functions, e.g. accompanying custodies to hospital or prisoner watches, etc. One supervisory officer commented: “We’ve seen some massive changes. I think there's a few points here. The first one probably being that the cops are spending less time in the office and we're actually making better use of our time when we're out and about”.

Access to **Information** was a key benefit for officers when using the devices. Information accuracy and immediacy was important when accessing records on the PNC and CHS. Direct access to the systems gave officers more detailed information on warning signals and warrant information including photographs of suspects. The ability to access photographs across a range of incidents and the camera facility proved beneficial, especially in missing person cases when a photograph of the subject could be shared widely and immediately with colleagues assisting in the search efforts in the early stages of the incident:

“I use CHS for pictures, erm, it's worked out really well when we've been dealing with suspects and being able to identify them pretty fast by getting their picture up on our phone. Erm, also helps when it comes to things like missing people”.

Security of information was also important as the device is more secure than the notebook in that if the device, was lost access could not be gained by anyone other than the officer. The device could also be remotely locked and wiped of data.

Officers also positively commented on having a sense of **connectivity** when away from police offices; particularly those officers who are not based at police premises. There were benefits for

real time **communication** as frequently mentioned by supervisors who had access to statements and up-to-date information as it was being collated at the scene. Internal team and external communications also benefited with officers having remote access to email and phone function for contact with public and other agencies while out on patrol as one officer commented:

“which then leaves you open, on my days off, to getting phone calls, oh, this is happening, can you come now, and it's like, well, no, I can't cause it's my day off today... whereas now, I've obviously got my work phone number that goes out to my schools that if they do need me they can contact me or they can leave a message”

The increased communications and connectivity benefits all led to increased visibility and an increased presence on the street, leading to more proactive policing.

The research project did not have the scope to carry out research with the public in general to ascertain their thoughts on the use of the devices, but anecdotal evidence gathered from users revealed a generally positive attitude from the public. This is an area that the team are keen to expand on in the future.

Officer wellbeing was an area of interest for the project team and the use of the device was found to have benefits with officers commenting that it made the job easier. One issue that drew a lot of positive comment was the ability to complete paperwork while out on patrol or at incidents that meant there was less delay at the end of shift. Officer morale was found to have improved and there was a feeling of being invested in by Police Scotland, providing up-to-date technology. One officer commented that “it was the best piece of kit the police had given him”. Officer safety also attracted positive comments with the facility to access background information, to have better awareness of what they may be walking into when attending incidents, being able to carry out identification checks and access warnings on the system.

“As others have said, PNC/CHS checks are useful, erm, if you're stopping someone, erm, at the roadside, obviously you bring up a photograph if they are known to the police, just to confirm if they, they are who they say there are, so even beneficial from that aspect. So, you're doing it without flagging to people you're that checking them out, which can be to your benefit.”

The **Covid-19 pandemic**, emerged during the research and it was found that the device had benefits to officers and assisted in social distancing efforts by providing officers with remote access to briefings and up-to-date relevant information on the pandemic etc. with one officer commenting, “with the COVID questions being asked, we know how to prepare when we're going to a specific call, whether they need the full PPE”.

The research team also uncovered officer's **attitudes to technology** and how it had a defining role in current policing and standard practice. This was highlighted by one of the delivery team officers who explained what he observed at a shift briefing:

“I was at a briefing... a couple of weeks ago, and there 12 to 14 officers in the briefing and every single one of them had a mobile device in their hand and were taking notes during the briefing and then at the end of it, I was there just to catch up with people and get feedback about general things so, generally, some conversation about lots of things and then at the end of that discussion I asked, well, how are your devices? And I didn't, at that point, mention that I was involved in the delivery of them and, without exception, the feedback was outstanding, and even then, you could tell the kind of leaders in the groups, or whatever, or the more experienced cops, without exception, they couldn't praise it higher”.

This comment shows that officers had a positive attitude towards adoption of technology and could lead to more flexible working arrangements and new working practices. Historically, the remote working concept was discouraged among police officers, however, the pandemic and the timely introduction of the mobile device allowed officers to become more flexible in their working arrangements:

“We in the police don't have a big culture of home working or, terrible flexible working arrangements... I'm working from home today because now and again I can but, culturally, it's not really accepted. For example, my boss, the chief superintendent, worked from home yesterday, for the first time in 30 years. What the mobile devices are doing, for us, at the minute, is, allowing officers to keep in touch if they're self-isolating or, allowing officers to do a limited amount of work, if they're self-isolating or, or are absent at the minute.... and the feedback I'm certainly getting is it allows to, even just to keep in touch with their emails, even just to keep up, up to date with the force guidance about the COVID situation so, they can do a limited amount of work at home, they can't by any means do everything but, it certainly does allow that limited, er, you know, flexible home working situation, which culturally for us, I've been trying to encourage it for the last two years but, it, it seems to be coming in now as more acceptable within some of the police minds that have previously resisted it”.

This comment also reflects a culture change in police officers' attitudes to technology and the flexible working practices that are required to cope with the ongoing pandemic. It allows officers to become less office based and have more autonomy. **Collaboration** and **improved relationships**, between different departments within Police Scotland, was also noted to have improved which was commented on by one senior officer involved in the delivery of the devices:

“I think the trust in ICT to deliver something is there now. It wasn't there before. I think the trust now comes from the officers that they're now getting technical equipment and technology that helps them do their job and isn't just a few people have sat round a table and went, do you know what we'll buy, let's buy this”.

RECOMMENDATIONS

The research team made several recommendations as a result of their research findings. Generally, positive comments were made regarding the **training** that the officers received to undertake the mobile device training. A significant facilitator in this positive feedback was a willingness by officers to undertake the training having seen the benefits and quality of the device. Feedback from officers, line managers and senior officers to the practical training highlighted many positive aspects of the face-to-face training. A **further** recommendation made was to ensure that there was continued **engagement with officers in device development** to ensure that the needs of the users was continued to be addressed. Furthermore, the police must undertake to provide a **timeline for requested additional functions** was made available to officers.

The **sustainability of devices** was discussed and there was a fear that the devices would not be replaced at the end of their life cycle. So it was recommended that there was a planned strategy for maintenance and replacement of devices needs to be established with financial and organisational backing.

In relation to the **Interoperability of systems**, officers interviewed highlighted the collaboration and better information sharing that the devices allowed, some commented that this needs to be increased especially with external organisations. It was recommended that a full-scale needs analysis of collaborative systems is needed throughout Scottish public organisations to create a synergy of work process. Furthermore, it was imperative that **processes and governance keep pace** as there was a realisation that the existing procedures based on the traditional notebook system might need some review and that might need to be ongoing as the changes to processes and governance.

CONCLUSION

This has been the first study of its kind where the rollout of mobile devices has been evaluated ‘in situ’ during the first year of implementation. All previous studies have been at earlier stages of the process either during pilot or strategy development stages. It is also the first study to cover all stages of the rollout from planning to implementation and operational. It is was completed in conjunction with staff at all levels and types within a national police force.

The strengths of this qualitative study are that data saturation was reached with the interviews; frontline officers, administrative staff and senior management participated; there was diversity geographically, operationally and experientially in the participants.

The weaknesses were that the general public were not asked directly for their views on the new devices; the interviews were a snapshot at a particular time and a longer case study approach might have added to the evidence; this was solely a qualitative study that would have been stronger with quantitative approaches added.

In the literature it was suggested that officers might find it difficult to stay away from using their devices and feel that they would need to be continually 'at work' whether they were on duty or not. However while the ability to stay up to date was mentioned as an advantage, the feeling of never being off duty was not perceived as an issue by staff.

This research was carried out mainly during a global pandemic and the research team had to adapt the project to the conditions of 2020. What became apparent throughout the research was that the introduction of the mobile devices had been very timely and had made their use very worthwhile during the social distancing and lockdown conditions. This need to use flexible and remote practices came into its own with Police Scotland's response during COVID-19. The ability to disseminate information quickly, to produce tickets and to give briefings remotely were all mentioned as advantageous to processes and efficiencies.

This is a robust and rigorous research project, which has not only identified five main benefit themes, but 28 sub themes, and made recommendations to aid any further development and with the rollout in Phase 2 of the project.

These results suggest that the MWP has transformed policing in Scotland in the last eighteen months and has allowed Police Scotland to develop new and more efficient working practices, more job satisfaction for staff and become more visible to the public. This is a success story that will develop further as the devices become further embedded in Police Scotland's daily practice.

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