LONDON FIRE BRIGADE

Report title

Replacing Brigade Pagers with a Mobile Paging App

Report to	Date
Corporate Services Directorate Board	09 July 2019
Commissioner's Board	31 July 2019
Fire and Resilience Board	24 September 2019
London Fire Commissioner	

Report by	Report number
Chief Information Officer	LFC-0214
	FRB-0069

Protective marking: **OFFICIAL**
Publication status: Published with redactions

Summary
This paper seeks agreement in principle to progress the enhancement of officer paging by integrating a commercially available mobile paging application ('app') to be used on corporate smartphones with 4G and Wi-Fi as communication bearers. The aim is complete the transition of officer paging by November 2020.

Recommendations
That the London Fire Commissioner :

1. Endorses the approach to be taken in respect of replacing the Brigade's pagers with a new smartphone paging app in time to secure smooth transition from the existing PageOne contract which expires in November 2020;

2. Delegate authority to the Director of Corporate Services to approve the total project expenditure of up to £370k [1] to implement a new paging app , after completion of a OJEU compliant procurement exercise (in accordance with the requirements of paragraph 26 herein), which includes both transition costs and contract award;

3. Notes the likely savings of some £64,000 a year when transition from pagers to the new paging app is completed, achieving the medium term financial statement savings for 2021/22; and

4. Notes the need for additional resources (growth) of nearly £70,000 in year one to transition to the new arrangements.

---

[1] Includes £35K contingency

Introduction

1. The Brigade's current contract with PageOne for national and Greater London paging is up for renewal from November 2020. Following a successful pilot of a paging app on smartphones involving DAC's, Station Managers and ICT staff at a variety of locations, this paper seeks agreement to replace pagers with a 'paging' app on Brigade smartphones.

Background

2. Historically the Brigade utilised two paging systems for operationally urgent and non-urgent messages to individuals and groups of eligible LFB officers and appliances. The Vodapage system provided paging coverage nationally and the in house' Multitone paging provided coverage for the Greater London area (mainly within the M25)

Paging cover nationally

3. LFB received notice in the later part of 2017 that the national Vodapage service was to be withdrawn in March 2018 and a corporate project was initiated to ensure that national paging coverage continued .

4. PageOne were the only company that provided a national paging service and, as agreed by the project board, officer Vodapage devices were replaced with a PageOne device to ensure operational requirements were maintained.

Paging cover in Greater London

5. The in-house Multitone paging system used 13 hilltop sites around the Greater London area to provide paging coverage for appliances and officers who did not require national coverage. The hilltop sites connected to both the primary and secondary control rooms via BT "kilo stream circuits". The circuits used aging technology and support for these circuits is being withdrawn by BT.

6. LFB were served notice by landlords to vacate two of the hilltop sites (July 2018 and December 2018). One of these sites was a major site that maintained coverage for the greater part of central, south and south east London and would have taken several additional sites to maintain the same level of coverage. Because of this, and the aging BT kilo stream circuits, the project board agreed that the Multitone pagers be replaced with PageOne devices and the remaining hilltop sites be decommissioned. A total of 790 pagers have been deployed.

Alternatives to pagers

7. In common with many other fire and rescue services, the Brigade has been using pagers for many years. However, technology has moved on considerably and pagers are now viewed as legacy technology and not the most efficient means of communication. The reliability of the 4G mobile phone network, with 5G coming soon, means that smartphones can be used in many situations to replace pagers. It is a significant indicator that paging is a technology that is being phased out, given that Vodapage and other mobile phone operators have withdrawn from the paging market, and that PageOne is now the only UK supplier.

8. Also, recently the National Health Service (NHS) announced early in 2019 their use of pagers is to be phased out, with functionality replaced by use of smartphone apps and specialist software. This is indicative of the wider demise of paging in the public sector as a means of communication.

9. There are a number of paging apps which work with smartphones on the market. These apps are designed to be installed on smartphones and are available in a variety of configurations designed

to suit varying user needs. Perhaps the most obvious benefit is that fact that staff would no longer have to carry a smartphone and a pager. Instead, the paging app is installed on the officer's Brigade smartphone. The other benefits include:

- more efficient pager message management, e.g. user acknowledgement of message delivery, reading and acceptance is logged centrally.

- more configurable and intuitive user interface.

- override of local user settings on the smartphone so that, for example, if the phone is on mute or the volume turned down, this is overridden when a paging message is received and an alert provided.

- a single solution could replace several components of the current paging system, and save cost.

Brigade proof of concept (POC) for a paging app

10. Issues relating to the in-building coverage and resilience of message delivery with the PageOne system have been experienced. As a result of these issues, the scope of the replacement pager project was extended to explore other options which would not rely on dedicated pagers. Following engagement with Vodafone, a POC was completed that used the Vodafone 4G network and Wi-Fi to deliver paging messages onto LFB corporate smartphones that hosted a paging app. The POC involved tests at a sample of Fire Stations, all of Merton (LOC), Stratford and Union Street. The POC was focused upon areas that had previously reported poor in-building pager coverage with the current PageOne system.

11. The results of the POC resulted in much improved message delivery service via the 4G / Wi-Fi bearer, compared to PageOne. The results were presented to the Director of Operations (project sponsor), who requested that a formal integration of the mobile paging application be progressed.

12. Once deployed, the pager app would be managed via the existing mobile device management (MDM) service with Vodafone. In terms of future upgrades, it is simply the app installed on the smartphone that would need to be upgraded, rather than the device itself.

Appliance pagers

13. There is currently a requirement for brigade appliances to have the facility to receive pager messages. All LFB appliances have basic mobile phones for business continuity arrangements. It is proposed that as part of the mobile paging app solution, a short messaging service (SMS) gateway is used to provide an interface to enable SMS messages be received on the appliance mobile phones, thus negating the requirement for an additional paging device. A similar approach will be used to replace Urban Search & Rescue (USAR) pagers.

14. Appliance pagers are currently on a separate three year contract with PageOne and these will be replaced with SMS on mobile phones in 2021/22.

Anticipated costs

15. A breakdown of anticipated costs is set out in Appendix A, spread over three years. These costs include some aspects that we can price with a degree of certainty such as phones and gateways. However, we cannot predict the app license costs with so much certainty and these are, therefore, indicative costs based on software market testing. Firm costs will be possible once tendering has been completed.

16. The costs have been estimated based upon the number of users that we anticipate will require the paging app, based upon their current use of a pager. A breakdown by user / group is included in Appendix B. This will be reviewed by heads of service to be sure that all staff who currently have a pager will need the paging app. It is not anticipated that there should be a growth in requirements.

17. The three year costs of implementing a paging app for smartphones will require some growth in year 1 to facilitate the transition, but will deliver ongoing savings in year 2 onwards. At the end of the three year period, it is anticipated that a saving, compared to current arrangements, of some £64,000 might be achieved. The costs/savings over the three years are phased as set out in the table below. Once the results of tendering are known and an implementation timetable is available, it will be possible to re-calculate the costs and savings based on financial years.

Year	Funding required	Proposed funding mechanism
Year 1	£68,831	Growth
Year 2	-£44,389	Saving
Year 3	-£63,854	Saving

18. The replacement of the previous Vodapage system with the current PageOne system, resulted in savings of £ 105,000 a year from:

- Termination of BT Kilostream circuits (approximately £80K per year).
- Cessation of the Vodapage paging service (approx. £25K per year)

19. These savings were subsequently used to fund the current three year device leasing arrangement with PageOne and have been reflected in the estimated costs breakdown in Appendix A.

20. Notice has been given to other landlords that host the now redundant hilltop sites, previously used to host masts for the Multitone paging system, to terminate the current leases. This will generate further savings of around £20,000 a year for the Brigade. In addition, the Brigade owns the Shooter's Hill site, which may now be surplus to requirements and could therefore be sold to generate a capital receipt (subject to TSS plans)

21. In the Medium Term Financial Statement (MTFS) as set out in report LFC-0063 in August 2018, a potential saving of £52,000 from implementing a paging app (appendix A – Item 15) was included from 2021/22. Based on the figures in this report, a full year saving of nearly £64,000 is estimated by Year 3 of the project. As outlined earlier, some future costs are estimated, and actual savings will depend on the costs confirmed through the tendering exercise.

Collaboration
22. Prior to going to market for the paging app, ICT will seek to identify any collaboration opportunities that may exist. We are aware of one other FRS that has recently procured a paging app, and indications are that others may be considering this approach.

23. The subject was discussed at the NFCC ICT Managers forum in May and there may well be opportunities to partner with another FRS in any procurement.

24. In addition to FRS collaboration opportunities, there may be other opportunities within the health sector. Recently the Health Secretary announced a ban on pagers for the NHS. Whilst there are sector specific solutions available for health, it would make sense to investigate whether there are any collaborative opportunities in this area.

25. We also hold regular meetings with the LAS who have asked for this report to be shared with them and to keep them appraised of progress.

Procurement

26. The requirement will be tendered using the Crown Commercial Service (CCS) framework – Network Services 2 - RM3808. This framework is due to be awarded on 16 July 2019 and will be live for use from August 2019. The framework has 13 lots, one of which is paging and alerting services. The framework will also include secondary services designed to enhance, supplement or support the delivery of the main primary services. It is not possible at this stage to give details of the number of suppliers or their names as this information will not be available until the framework goes live. This framework has been identified as the CCS are one of our preferred framework providers. The fire service are always listed on the OJEU notice and their contract terms and conditions are robust. Other benefits of using the CCS framework are flexible contract lengths, a migration path for legacy technology, savings from new and emerging technologies, and pre-defined and agreed contract terms and conditions with some ability for minor variations.

Finance comments

27. This report seeks agreement in principle to replace existing pagers with a new smartphone app.

28. The report notes that based on current estimates this proposal is likely to result in a cost pressure of £69k in 2020/21, and then a saving of £44k in 2021/22 increasing to £64k in 2022/23 The 2019/20 budget report included a planned saving for this proposal of £52k in 2021/22, this increased saving and the additional cost pressure in 2020/21 should be included as part of the ICT department's budget proposals for 2020/21. The report notes that these forecasts are liable to change depending on the result of the procurement.

29. The report also notes that the Shooter's Hill site may now be surplus to requirements and could therefore be sold. Once confirmation is agreed that this site is no longer required, an update should be provided to the Finance Department as part of the Capital Budget setting process.

Workforce comments

30. It is proposed that staff side consultation will be undertaken in respect to the proposal to replace pagers with a paging app.

Legal comments

31. Under section 9 of the Policing and Crime Act 2017, the London Fire Commissioner (the "Commissioner") is established as a corporation sole with the Mayor appointing the occupant of that office. Under section 327D of the GLA Act 1999, as amended by the Policing and Crime Act 2017, the Mayor may issue to the Commissioner specific or general directions as to the manner in which the holder of that office is to exercise his or her functions.

32. By direction dated 1 April 2018, the Mayor set out those matters, for which the Commissioner would require the prior approval of either the Mayor or the Deputy Mayor for Fire and Resilience (the "Deputy Mayor").

33. Paragraph (b) of Part 2 of the said direction requires the Commissioner to seek the prior approval of the Deputy Mayor before "[a] commitment to expenditure (capital or revenue) of £150,000 or above as identified in accordance with normal accounting practices...".

34. The Deputy Mayor's approval is accordingly required for the Commissioner to award a contract for a paging "app" to the successful bidder, up to a value of £ 370,000 after completion of a procurement exercise.

35. The statutory basis for the actions proposed in this report is provided by section 5A of the Fire and Rescue Services Act 2004, under which the London Fire Commissioner, being a 'relevant authority,' may do 'anything it considers appropriate for the purposes of the carrying out of any of it's functions...'

36. Furthermore, in accordance with section 7 (2)(a) of the above mentioned act, the Commissioner must secure the provision of personnel, services and equipment necessary to efficiently meet all normal requirements for firefighting.

37. The General Counsel also notes that the proposed procurement route for the paging "app" shall be in compliance with the Public Contracts Regulations 2015. The Crown Commercial Service are currently conducting a compliant OJEU procurement in accordance with section 33 of the Public Contracts Regulations 2015 to set up CCS framework RM3808 - Network Services 2, from which the Commissioner will be able to make a compliant call off.

Sustainability implications

38. The procurement activity for a paging app for smartphones, and the associated technologies described in this report, will need to be undertaken in line with the GLA group Responsible Procurement policy. As part of delivery of this policy, the GLA group is currently in the process of affiliating with Electronics Watch, which requires the inclusion of additional terms and conditions for contracts with significant hardware purchases.

39. These terms and conditions aim to improve the transparency of the supply chain and management of any non-compliance with labour standards identified with the support of Electronics Watch. Where hardware replacement of considerable value forms part of the requirement for any of the options proposed, additional terms covering ethical sourcing will need to be included in the tender or re-negotiation. CCS do not currently include Electronics Watch terms and conditions within their frameworks as they are not an affiliate member, however we will seek to include this in the special terms and conditions for consideration by the tenderers.

Equalities implications

40. The Public Sector Equality Duty applies to the London Fire Commissioner when she makes decisions. The duty requires her to have regard to the need to:

a) eliminate unlawful discrimination, harassment and victimisation and other behaviour prohibited by the Act. In summary, the Act makes discrimination etc. on the grounds of a protected characteristic unlawful.

b) advance equality of opportunity between people who share a protected characteristic and those who do not.

c) foster good relations between people who share a protected characteristic and those who do not including tackling prejudice and promoting understanding.

41. The protected characteristics are age, disability, gender reassignment, pregnancy and maternity, marriage and civil partnership, race, religion or belief, gender, and sexual orientation. The Act states that 'marriage and civil partnership' is not a relevant protected characteristic for (b) or (c) although it is relevant for (a).

42. An equalities impact assessment (EIA) has been carried out in respect the proposal to use a paging app on smartphones in place of pagers. The EIA concludes that the change will not have a disproportionately adverse effect on any persons with a particular characteristic due to no change in process nor availability of appropriate equipment. The development of a specification for a paging application will need to consider the needs of users with protected characteristics, and where necessary, to reflect any particular or special requirements.

43. The London Fire Commissioner has considered the proposals and her duty under the Act to eliminate unlawful discrimination, advance equality of opportunity, and foster good relations between people who share a protected characteristic and those who do not.

Appendix A – Estimated costs

	Units	Unit Cost	Year 1	Year 2	Year 3	Total for 3 Years
Current Budgets						
ICT			-£ 105,000	-£ 105,000	-£ 105,000	-£ 315,000
Property			-£20,000	-£20,000	-£20,000	-£60,000
Total Existing Budgets			**-£125,000**	**-£125,000**	**-£125,000**	**-£375,000**
Cost of New Phones						
Contract Costs	14	£144	£ 2,016	£ 2,016	£ 2,016	£ 6,048
Device Costs	14	£230	£ 3,220	£ -	£ 3,220	£ 6,440
MDM Cost	14	£ 65	£ 910	£ 910	£ 910	£ 2,730
PageOne Costs						
Appliance Pagers*	349	£ 65	£22,685	£22,685	£ -	£45,370
Officer Pagers	334	£ 65	£21,710	£ -	£ -	£21,710
Non Core Pagers	96	£ 65	£ 6,240	£ -	£ -	£ 6,240
USAR Pagers **	84	£ 65	£ 5,460	£ -	£ -	£ 5,460
Capita Costs						
Paging App Gateway	1	£40,000	£40,000	£ -	£ -	£40,000
SMS Gateway	1	£36,590	£36,590	£ -	£ -	£36,590
Paging App						
License cost***	430	£128	£55,000	£55,000	£55,000	£165,000
Implementation	1	£12,750	£12,750	£ -	£ -	£12,750
SMS Fail Over	5000	£ 0.04	£ 200	£ 200	£ 1,000	£ 1,400
Total Cost			**£ 193,831**	**£80,611**	**£ 61,146**	**£ 335,588**
Budget Impact			**£ 68,831**	**-£ 44,389**	**-£ 63,854**	**-£ 39,412**

* 349 appliance pagers will migrate to the SMS gateway at the end of the PageOne contract term.

** 84 USAR Staff will migrate to the SMS gateway

*** This licence band would support up to 500 users with no cost increase (a unit cost of £110 per user per year or £9.17 per month)

Appendix B – User / Group breakdown

Total Licences	Consists of (Group)	No. Users	Pager Type
430	Core users	334	App
	Radio Group	3	App
	Welfare	5	App
	Strategy & Risk	3	App
	BDC	6	App
	ICT	3	App
	Fleet	5	App
	London Resilience	40	App
	PEG	12	App
	Press Office	7	App
	PEG Mgt	4	App
	Scientific Advisors	8	App

Total Licences	Consists of (Group)	No. Users	Pager Type
N/A	Appliances	349	SMS
	USAR	84	SMS