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Information and Communication Technologies in the Fire and Rescue Services in England and Wales.

Final report from the Fire and Rescue Service Information and Technology Project

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The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

List of Tables and Diagrams

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

1. Executive Summary

Finding 1: Analysis of the interviews indicated that the governance of FRS had a significant influence on the capability of the services to engage with, or implement, complex and large scale ICT projects while maintain existing systems. The results suggest that smaller FRS which are an integral part of a council as a county or unitary FRS may lack the necessary resource, capacity and capability to fully engage with large scale national projects while maintaining routine service delivery.

Finding 2: The quantitative data shows a heterogeneous FRS ICT Infrastructure with many FRS facing a number of significant ICT challenges (3.3.16 Key Areas of Challenge) most notable amongst these being the management of legacy systems. Only two technologies were identified as up-to-date in at least 90% of services (Automatic vehicle location (for management of resources) and Automatic Call Distribution. The areas identified by at least 75% of FRS as facing significant or transformational change were Data Capture (e.g Video, pictures and updating critical systems), Image management software (e.g. video, CCTV, pictures, person mounted cameras) and Person mounted cameras (ie Body Worn Video). FRS also place emphasis on technologies that support operational work and which maximise workforce performance, only four areas were identified as a priority or high priority by at least 80% of the FRS (Remote Recording of Data, Data Governance, In-Vehicle Mobile Data Terminals, and Encryption).

Finding 3. While FRS and Police Services are collaborating in the development of ICT infrastructure the key areas of collaboration seem to be between FRS (see
Table 32) and with police services (see
Table 33). In Section 3.3.4 we noted that the majority of cases where Shared Control Centres are present these were with other Fire and Rescue Services (46%) and in 5% of cases these were shared with the Police. We noted both the fluidity and diversity of collaborative relationships between services and the negative impact of this on the provision of IT services.

Finding 4: The interviews indicated that FRS levels of preparedness and capacity to engage were not based on geographical co-location. Equally, key infrastructures may be shared by services outside their geographical area for ESN indicating key dependency between FRS that are not co-located. Diagrams three and four in Section **3.3.5** show the extent to which each FRS expects ESN to influence in vehicle and smartphone use and allows the identification of those services that do not expect any change or expect only minor change. Regional rollout of ESN may not be the most effective approach to implementation if, as the results suggest, FRS within regions are in the process of or have just concluded the renegotiation of collaborative agreements, abandoned existing agreements or created new relationships for the delivery of core IT infrastructure.

Finding 5: Respondents indicated that a lack of clarity about ESN was restricting innovation by suppliers, increasing costs and leading to inertia and inability to plan. A number of services indicated that they would continue to develop and deploy services using commercial bearers on the assumption that they could simply transition to ESN when it became available.

Finding 6: Interviewees indicated that NATS testing is a significant barrier to innovation and transitioning of existing apps onto ESN. *Table 30* demonstrated that while just under a quarter of FRS had a high or very high reliance on cloud computing, more than 60% of FRS placed a high or very high priority on Software as a Service.

Finding 7: Many services noted that they are using commercial bearers to provide data services to FRS tenders. Some services noted that their staff were using untested and insecure commercial applications to communicate with colleagues for work related purposes (e.g WhatsApp). Table 26 indicated that 76% of FRS used Instant Messaging Service often or very often for internal communication and 31% used file sharing services (such as Dropbox) often or very often. There is an assumption that this will continue either because they will continue to use a parallel infrastructure of 4G networks and devices or because they will use ESN for data only via the Fire Tender.

Finding 8: Respondents were very sceptical about the benefits of ESN products to the FRS. Indeed, the benefits of and motivation to engage with, ESN products, was seen as being, at best, ambiguous. A number of areas were identified where services expect to see significant or transformational change because of the implementation of ESN, however, only five areas were identified by at least 60% of services: Communication with partners through data (e.g. Police, Public Health), Data Capture (e.g Video, pictures and updating critical systems), Service Access Node (SANH) or similar, Broadband wireless access in vehicles (e.g. LAN, MDT, mobile), In-Vehicle Mobile Data Terminal. The area of most consensus (identified by 67% of FRS) was Communication with partners through data. The report provides the responses to the question in the nine areas where more than 50% of FRS expected significant or transformation change because of ESN. These demonstrate a heterogeneous understanding of the impact of ESN on these technology areas.

The case for data over ESN, beyond that provided to fire tenders was, however, unclear to many respondents. Diagram 6 in section 3.3.7 shows that a number of services do not know how communication with partners though data will change due to the implementation of ESN. Many felt that the capability offered by ESN Connect was already provided via commercial networks. The significance of the fire tender as either the point to which information was delivered or a nodal point for data connectivity (e.g. to create a Wi-Fi 'bubble' around the tender) was mentioned by a number of respondents in the interviews and its importance was stressed in responses to the questionnaires (see for example section 3.2.1 or 3.3.5). It must, however, be noted that only 60% of services indicated that Broadband wireless access in vehicles (e.g. LAN, MDT, mobile) would change due to ESN (see section 3.3.9). Services noted a low condition in section 3.3.8 for IP Communications and, given ESN is an IP based system, a surprising low expectation that this will change due to implementation of ESN (60%). Section 3.2.2 suggested that the advanced potential capabilities of ESN in relation in Call Handling were not recognised.

Finding 9: Respondents were concerned about voice and network coverage in rural areas and in-buildings. While ESN Assure will help understand coverage it does not resolve issues related to the cost and speed with which these can be resolved. Equally, it was unclear to respondents how this will be paid for and who would pay for it.

Finding 10: The ambiguity of the potential costs of ESN to FRS were raised by most respondents.

Finding 11: Some services noted that because ESN had been delayed they felt they would be tied into devices and a network which have already been superseded and would rapidly become obsolescent. Many of the forces were already using 4G networks and providing devices with greater capability (they indicated) than the ESN Connect device.

Finding 12: The qualitative data gathered indicated that the provision of resources to support ESN and manage Airwave contracts in parallel with ESN has proved very problematic to justify and resource by smaller FRS.

2. Introduction

This report provides findings from the Fire and Rescue Service Information and Technology Project 2019. The report is structured as follows; the methodology for the research is described and then the results from the quantitative survey are presented in three ways: the first is to list the highest scoring aggregate responses to the survey; the second is an analysis of aggregated results categorised by area of work activity and highlighting areas of interest; the third is by the provision of diagrams for the nine areas where more than 50% of services felt that the implementation of the Emergency Services Network (ESN) would lead to significant or transformational change. The report then turns to the qualitative data providing an analysis of the interviews. In this section we reflect on the reported capability and capacity of services to implement ESN, collaborative activity, their understanding of ESN, perceived motivations for engaging with ESN and concerns which restrict engagement.

We conclude by proving a series of recommendations which are underpinned by both the qualitative and quantitative data as they relate to the delivery and implementation of ICT in Fire and Rescue Services across England and Wales.

3. Methodology

The research design used within this study was mixed methods where data was gathered using a structured survey and a series of semi-structured qualitative interviews.

The survey questions were developed to ascertain a comprehensive national picture of the current state of technology across Fire and Rescue Services. To provide points of comparison, questions about key technologies were drawn from previous studies conducted in the context of the Fire and Rescue Services (FRS) and Police Services (c.f., Allen, Norman, Williams, Gritt, Forsgren, Shaw 2016, 2018 and Home Office 2016). The answers to these questions provided data on the influence of key ICT development areas, trends and challenges against a backdrop of ESN deployment, and comparative analysis. The question set was co-developed with colleagues from the Home Office and FRS and was piloted in two FRSs to ensure that the wording of the questions and the choice of technologies was appropriate.

The final survey instrument included 8 thematic areas, organised around working activities engaged in by FRS personnel and which represented particular areas of interest for the Fire and Rescue Services. The aspects explored in relation to each of these technologies were the *condition of technologie*s (with the possible responses: *obsolete, old-but-serviceable, up-to-date, don't use it, don't know)*; the extent to which a particular technology area will see significant change over the next 3-5 year period (with the possible responses of *no change, minor change, significant change, transform and don't know)*; the priority level ascribed to a particular technology (with the responses of *very low, low, neither high nor low, high, very*

high) and the extent to which the use of a particular area will change in response to the introduction of ESN (with the responses: *very low, low, neither high or low, high and very high).* The responses for *key areas of challenge* have not been included in the open report but have been aggregated to allow anonymity for the individual services. This was done primarily to allow individual services to be transparent in their responses.

The questionnaire was subsequently distributed, via mail, to every FRS in England. As well as the electronic copy a hard copy of the questionnaire (which could be returned via freepost) and a covering letter (detailing support from the Home Office and the National Fire Chiefs Council was posted to every FRS. Each service was also provided with a link to an online version of the survey. They were also provided with a participant information sheet (detailing the motivation and procedures of the study and contact details of the researchers) and a consent form (to participate in the study). Due to the diverse ways in which FRS's organise their ICT services we advised that questionnaires could be completed by representatives from a range of work activities related to ICT delivery (including ICT/IM function, Business Change and/or Operational Management). This garnered responses from 40 of the 44 services contacted. The Fire and Rescue Services that responded were:

Avon Fire and Rescue Service
Bedfordshire Fire and Rescue Service
Royal Berkshire Fire and Rescue Service
Buckinghamshire Fire and Rescue Service
Cambridge Fire and Rescue Service
Cleveland Fire Brigade
Cornwall Fire and Rescue Service
County Durham and Darlington Fire and Rescue Service
Cumbria Fire and Rescue Service
Derbyshire Fire and Rescue Service
Devon and Somerset Fire and Rescue Service
Dorset and Wiltshire Fire and Rescue Service
East Sussex Fire and Rescue Service
Essex County Fire and Rescue Service
Gloucestershire Fire and Rescue Service
Greater Manchester Fire and Rescue Service
Hampshire Fire and Rescue Service
Hereford and Worcestershire Fire and Rescue Service
Hertfordshire Fire and Rescue Service
Humberside Fire and Rescue Service
Isle of Wight Fire and Rescue Service
Kent Fire and Rescue Service
Leicestershire Fire and Rescue Service
Lincolnshire Fire and Rescue Service
London Fire Brigade
Merseyside Fire and Rescue Service

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Northamptonshire Fire and Rescue Service
Northumberland Fire and Rescue Service
North Yorkshire Fire and Rescue Service
Nottinghamshire Fire and Rescue Service
Oxfordshire Fire and Rescue Service
Shropshire Fire and Rescue Service
South Yorkshire Fire and Rescue Service
Staffordshire Fire and Rescue Service
Surrey Fire and Rescue Service
Suffolk Fire and Rescue Service
Tyne and Wear Fire and Rescue Service
Warwickshire Fire and Rescue Service
West Sussex Fire and Rescue Service
West Yorkshire Fire and Rescue Service

While the first element of the project focused on the overall ICT landscape the second focused on the Emergency Services Network and utilised qualitative semi-structured interviews. The semi-structured interviews were constructed in such a manner that they would allow elaboration of the results from the quantitative survey. The survey offered a breadth of information presenting a picture across the Fire and Rescue Services landscape, however, the qualitative interviews provided in depth information about ICT infrastructures with a particular focus on ESN. This included examining how participants understood the capabilities that ESN offers and how they define its role within their localised context. The potential benefits and challenges that may emerge as a result of the introduction of ESN were also examined. The researchers paid attention to context specific issues that may have an impact on the ways in which participants experience technology adoption. To that end, the aims of the qualitative data collection and analysis were:

- To reach a more in-depth understanding of technological infrastructure examined in the structured survey;
- To enrich the quantitative data with additional information on individual Fire and Rescue Services and their readiness for and perceptions of the ESN;
- To investigate the connections between different Fire and Rescue Services and, where appropriate, other public sector agencies; and,
- To complement the quantitative results.

Twenty two interviews were undertaken. These were conducted over the telephone and lasted between 17 minutes and 1 hour 20 minutes. Where permission was granted, interviews were recorded and where this was not forthcoming detailed notes were taken. Almost all interviews were audio-recorded. Each interviewee volunteered to take part in the qualitative interview. Participants were drawn from a number of roles, related to the IT function within the service, including: IT managers, Operational Officers with responsibility for ICT, and those leading

ICT and business change programmes. The interviews were transcribed and then analysed using Activity Theory as an underpinning framework for analysis.

The qualitative interviews were conducted on the basis that the interview data would be anonymised. However, the survey results would not be anonymised in the final report.

4. Findings: Survey Data

4.1 Ranked Areas of interest

The following section identifies the technologies which respondents indicated had the highest condition; expected degree of change; priority given to them by the services and the extent to which FRS would change in response to ESN. A heterogeneous pattern was detected in the condition of technologies with only two technologies being identified as up-to-date by 90% or more of services and only four seen as up-to-date 80% or more of services.

The technologies presented in Table 1 below were considered those that had the highest condition rates across the Fire and Rescue Services. The most up-to-date technology is AVL technologies (for management of resources). This may be unsurprising given that FRS's described the appliance as a central point of operation at the incident ground. Call handling as an area of work activity is also heavily represented here, clearly reflecting the fundamental role of technologies in supporting public facing services such as; Automatic Call Distribution, Call Line Identification and the Quality Monitoring of Call Handling. This was followed by Securing Fire Service Systems and Remote Working, particularly with reference to Encryption and Data Governance and Laptops and Mobile office, respectively.

Are of Work Activity	Technology	Condition (Up-to-date)
Location Services	Automatic vehicle location (for management of resources)	93%
Call Handling	Automatic Call Distribution	92%
Securing Fire Service Systems	Encryption	83%
Remote Working	Mobile Office (e.g Laptop, mobile device)	83%
Call Handling	Call Line Identification (e.g. EISEC)	79%
Remote Working	Laptop with access to personal information management systems & data processing	78%
Workforce Management	Computer Aided Dispatch	78%
Securing Fire Service Systems	Data Governance	73%

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Call Handling	Quality monitoring of call handling	71%
Records Management	Integrated GIS	71%
Partnering Systems	Communication with partners through voice (e.g. Police, Public Health)	71%

Table 1: Most up-to-date areas of technology (condition)

The capture of new forms of data was considered to be the area facing the highest degree of change for Fire and Rescue Services in the next 3-5-year period as shown in *Table 2* below. It is interesting to note that data capture was also considered one of the three highest ranked areas for change as a result of ESN, suggesting a change in the modes and methods of capturing data for FRS. This is illuminated further when considering data capture in relation to technologies which pertain to the management, analysis, organisation, integration and governance of data, suggestive of organisations that will be increasingly data driven.

Other areas of note here include technologies that have seen significant change in other 'bluelight' services, including, person mounted cameras (body worn cameras) and smartphone/PDA access to fire service systems.

Area of Work Activity	Technology	Expected Change (Significant/Transformational)
Incident Management	Data Capture (e.g Video, pictures and updating critical systems)	79%
Records Management	Image management software (e.g. video, CCTV, pictures, person mounted cameras)	79%
Surveillance	Person mounted cameras	76%
Workforce Management	Computer aided dispatch	74%
Remote Working	In-Vehicle Mobile Data Terminal	74%
Analytics	Analytic software	71%
Records Management	Broadband wireless access in vehicles (e.g. LAN, MDT, mobile)	71%

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IP Communications	Routing of IP Communications (text, audio, video) from first responders to control or peer to peer	71%
Partnering Systems	Communication with partners through data (e.g. Police, Public Health)	71%
Understanding Data	Location information visualisation	71%

Table 2: Areas of technology most likely to change

Table 3 suggests that services are placing emphasis on technologies that support operational work and which maximise workforce performance. Areas within the broad remit of information governance are given particular emphasis: securing fire service systems particularly data Governance, encryption and identification management (e.g. Single-Sign on) are all represented, which may be anticipated in a climate of increasing volume and complexity of data.

Area of Work Activity	Technology	Priority Level (High/Very High)
Analysis and Mapping	Remote Recording of Data	83%
Securing Fire Service Systems	Data Governance	83%
Remote Working	In-Vehicle Mobile Data Terminal	83%
Securing Fire Service Systems	Encryption	81%
Remote Working	Command Support Unit	71%
Workforce Management	Workforce management systems (Control)	69%
Workforce Management	Computer aided dispatch	69%
Securing Fire Service Systems	Identification and Access Management	67%
Analytics	Predictive Modelling	67%
Remote Working	Smartphone/PDA	64%
Location Services	Automatic Vehicle Location (for Management of Resources)	64%

Table 3: Key ICT priority areas

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Table 4 provides an overview of the key areas where services expect to see change as a result of the implementation of ESN.

Area of Work Activity	Technology	Expected Change (Significant/Transformational)
Partnering Systems	Communication with partners through data (e.g. Police, Public Health)	67%
Incident Management	Data Capture (e.g Video, pictures and updating critical systems)	64%
Control Infrastructure	Service Access Node (SANH) or similar	64%
Records Management	Broadband wireless access in vehicles (e.g. LAN, MDT, mobile)	60%
Remote Working	In-Vehicle Mobile Data Terminal	60%
Remote Working	Smartphone/PDA - Access to fire service systems	57%
IP Communications	Routing of IP Communications (text, audio, video) from first responders to control or peer to peer	55%
Remote Working	Command Support Unit	55%
Workforce Management	Computer Aided Dispatch	50%
IP Communications	Communication with partners through voice (e.g. Police, Public Health)	50%
IP Communications	Routing of IP Communications (text, audio, video) to first responders	50%

Table 4: Key areas of change enabled by ESN

It is clear from the list of highest priority areas of change, linked by respondents to ESN, that there is an anticipation of increased communication with partner agencies through the utilisation of data. This is also represented in the response to the provision of shared control infrastructure, particularly in relation to the Exchange of Information across Emergency Services.

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3.2 The Current and Future State of Technology in the Fire and Rescue Services

The following section provides aggregated results from the services surveyed, categorised by Area of Work Activity, highlighting areas of interest. Where possible, comparative data from earlier research into police ICT is provided (Allen, et.al 2016). Given the elapsed time between the completion of the data collection in that report (concluded December 2016) and the data gathered in this Report (concluded May 2019) direct comparison is problematic, however, in places it was felt to be informative.

3.2.1 Control Infrastructure

	Condition (Up-to-date)	Expected Change (Significant/ Transformation)	Priority Level (High/Very High)	Expected Change ESN (Significant/ Transformation)
GPS for locating firefighters on the fire ground (Location Services)	5% (n=2)	67% (n=28)	17% (n=7)	19% (n=8)
GPS for locating firefighters on call (Location Services)	7% (n=3)	50% (n=18)	21% (n=9)	21% (n=9)
Automatic vehicle location (for management of resources)	93% (n=39)	17% (n=7)	64% (n=27)	24% (n=10)
Automatic vehicle location (Predictive analytics)	40% (n=17)	43% (n=18)	40% (n=17)	29% (n=12)

Table 5: FRS Location Services

Table 5 above demonstrates that Fire and Rescue Services indicated that GPS for locating firefighters both on the 'fire ground' and 'on-call' were not widely adopted, with 95% and 90% of services responding 'don't use' for the condition of both technology areas. When examining alternative approaches to location services for the management of resources, 93% of services rated Automatic Vehicle Location technologies as 'up to date' and when extending the question to other responses, the survey suggests that all but one service utilises AVL technologies. This suggests a focus on the vehicle and the team rather than the individual when responding to an incident.

The survey demonstrates that some FRS's (40%) are currently leveraging predictive analytics within the context of AVL technologies whilst others (43% answering 'don't use'), are yet to see benefit from the deployment of predictive technologies for AVL. The use of predictive

analytics alongside AVL is of interest as it represents the highest response to questions around ESN amongst this set of technologies, with 29% of services recognising 'significant or transformational change' expected as a result of the introduction of the Emergency Services Network.

This presents a polarising picture of the condition of technology, especially when contrasted against that of the Police Services.
Table 6 provides data from our earlier study of Police ICT infrastructure.

	Condition (Up-to-date)	Expected Change (Significant/ Transformational)	Priority Level (High/Very High)
GPS for locating Police Officers	67%	70%	61%
Automatic vehicle location (for management of resources)	49%	58%	56%

Table 6: Police Location Services

When examining police responses, a much more diverse landscape came to the fore, with 67% of police services recognising GPS for locating officers as 'up-to-date' and 49% viewing automatic vehicle location as 'up to date'. The quantitative responses reported here, and the qualitative data, point to a differentiation in working practices for the Fire and Rescue Services in comparison to the police. The deployment of resources for the Fire and Rescue Service revolve around the appliance (vehicle) rather than the individual fire-fighter. For the FRS's, AVL is a key underpinning technology used in managing resources. In contrast the police place more emphasis upon GPS for locating individuals.

Although it is evident that AVL technologies are a key priority for FRS's, the survey also demonstrates the possibility and potential of exploiting technologies that track individual firefighters. This is reflected in the high expected change in the next 3-5-year period with 72% and 58% of services suggesting 'significant and transformational change' in GPS for locating firefighters on the fire ground and on-call. Again, in discussion with interviewees a number of respondents raised this as an area of interest. However, also noting that due to the high reliability nature of the role, a careful and considered approach needed to be taken when implementing technologies that could directly affect the command and control structure of the work of firefighters.

3.2.2 Call Handling

In three of the five areas identified more than 70% of services indicated that the information technologies they used were 'up to date'. When expanding responses to include 'old but serviceable' this rises to 85% in the context of 'Quality monitoring of call handling', 88% for

'Call Line Identification' and 97% for 'Automatic Call Distribution Services'. The low number of services that expected change in Advanced Mobile Location in response to ESN was particularly notable given that a key challenge for Emergency Services is determining the location of mobile callers (European Emergency Number Association) 2015. It has been widely noted that Next Generation Networks provide new ways of providing Caller Location Information Services (Bornheim and Bergonzi 2018).

	Condition (Up-to-date)	Expected Change (Significant/ Transformation)	Priority (High/Very High)	Expected Change ESN (Significant/ Transformation
Quality monitoring of call handling	71% (n=29)	22% (n=9)	55% (n=23)	12% (n=5)
Call Line Identification (e.g. EISEC)	79% (n=33)	19% (n=8)	45% (n=19)	9% (4)
Automatic Call Distribution Services	92%	27%	53%	14%
Virtual call centres (e.g. call centres with a cloud-based infrastructure)	7% (n=3)	46% (n=19)	24% (n=10)	29% (n=12)
Advanced Mobile Location (AML-Caller location information service for smartphones)	41%	47%	50%	18%

Table 7: FRS Call Handling

When comparing these results to those of the police survey there is a marked variation, with higher condition rates identified within Fire and Rescue Services with 'Quality monitoring of call handling' 34% higher and 57% higher in the context of 'Call Line Identification'.

	Condition (Up-to-date)	Expected Change (Significant/ Transformation)	Priority (High/Very High)
Quality monitoring of call handling	37%	56%	48%
Call Line Identification (e.g. EISEC)	22%	68%	49%

Table 8: Police Call Handling

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The clear outlier amongst this group of technologies is in the condition of 'Virtual call centres', with only a minority of services 7% recognising the technology as 'up to date' and another 87% suggesting that they 'do not use' the technology. However, when interrogating the differences in the expected changes from the services over the next 3-5-year period and as a result of ESN, 'Virtual call centres', relatively speaking, had the highest expectation of change in both instances with services identifying 'significant or transformational change' in 46% and 29% of cases, respectively.

Other technology areas in this category including: 'Quality monitoring of call handling', 'Call Line Identification' and 'Automatic Call Distribution' are distinctly low in terms of anticipated changes over the next 3-5-year period and in response to ESN. This is also reflected in the comparative difference to police responses which anticipate a 'significant and transformative' degree of change in 56% and 68% of cases, in the two comparative technologies 'Quality Monitoring of Call Handling' and 'Call Line Identification'. The disparity, both in terms of ESN and against the comparative policing data, may be unsurprising given the well-established and 'up to date' nature of the technologies identified by the Fire and Rescue Services.

3.2.3 Workforce Management

Effective dispatching of resources and management of the workforce are important areas for any public sector agency that deploys first responders. Modern CAD systems are a complex and important part of the FRS infrastructure which provide a variety of functions. CAD technology was described, in the majority of services (74%), as 'up to date' with a further 14% noting that this technology was 'old but serviceable'.

	Condition (Up-to-date)	Expected Change (Significant/ Transformation)	Priority (High/Very High)	Expected Change ESN (Significant/ Transformation)
Workforce management systems (Control)	59% (n=24)	46% (n=19)	69% (n=29)	14% (n=6)
Workforce management systems (Corporate)	66% (n=27)	54% (n=22)	62% (n=26)	19% (n=8)
Computer aided dispatch	74% (n=31)	40% (n=17)	69% (n=29)	50% (n=21)

Table 9: FRS Workforce Management Systems

The comparative data with the police indicated that for Workforce management systems (Control) the condition and expected levels of change were approximately the same. More FRS, however, viewed it as a higher priority.

Control Infrastructure	Condition (Up-to-date)	Expected Change (Significant/ Transformation)	Priority (High/Very High)
Workforce management systems (Control)	53%	50%	57%

Table 10: Police Workforce Management Systems

CAD was also seen as having a relatively high anticipated change as a result of the introduction of ESN, especially in comparison to the other technologies presented. Diagram 1 below illustrates the distribution of response to this question. This illustrates the disparity between responses from the services in this critical area of technology.

Computer Aided Dispatch

West Yorkshire
West Sussex
Warwickshire
West Midlands
Tyne & Wear
Surrey
Suffolk
Staffordshire
South Yorkshire
Shropshire
Royal Berkshire
Oxfordshire
Nottingham
Northumberland
Northamptonshire
North Yorkshire
Norfolk
Merseyside
London
Lincolnshire
Leicestershire
Lancashire
Kent
Humberside
Hertfordshire
Hereford & Worcester
Hampshire
Gloucestershire
Essex County
Greater Manchester
East Sussex
Dorset and Wiltshire
Devon and Somerset
Derbyshire
Cumbria
County Durham and Darlington
Cornwall
Cleveland
Cambridge
Buckinghamshire
Bedfordshire
Avon

No Change | Minor Change | Significant Change | Transformation | Don't Know

Diagram 1: To what extent do you believe that CAD will need to change due to the implementation of ESN?

It is also worth noting, in the context of Computer Aided Dispatch, the disparity between the expected change in the next 3-5-year period, at 40% and the anticipated change from ESN at 50%. As the two questions on expected changes are bound by different criteria, one being time

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(3-5-year period) and one being the implementation of ESN, it may be the case that ESN is expected to make changes beyond the 3-5-year period. Although the other technologies presented had low expected change in relation to ESN, the anticipated change and condition of the technology were relatively high. Workforce management systems (Control), for example, was seen by 46% of services to experience significant or transformative change and 59% described its condition as being up-to-date. Workforce Management Systems (Corporate) were seem by 54% of services as areas where they expected 'significant or transformational' change and by 66% as being 'up to date'.

3.2.4 Shared Control Infrastructure

Just over half of FRS (51%) indicated that they had Shared Control Centres (with more than one FRS or with other emergency services) all of whom indicated that they were 'up to date'. In the majority of cases where services, Shared Control Centres these were with other Fire and Rescue Services 46% and in 5% of cases these were shared with the Police.

	Condition (Up-to-date)	Expected Change (Significant/ Transformation)	Priority (High/Very High)	Expected Change ESN (Significant/ Transformation)
Shared Control Centre (with more than one FRS or with other emergency services)	51% (n=21)	57% (n=24)	50% (n=21)	48% (n=16)
Shared Control Systems (e.g. shared data centres driving multiple Emergency Service Control Centres)	36% (n=14)	55% (n=23)	40% (n=17)	33% (n=14)
Exchange of Information across Emergency Services (e.g. MAIT)	15% (n=6)	69% (n=29)	60% (n=25)	40% (n=21)

Table 11: Shared Control Centres same service or inter-service collaborations.

Despite the low condition ascribed to the 'Exchange of Information across Emergency Services', there is a clear expectation of change and attributed priority. This is indicated by the 69% of services that expect 'significant and transformational' change in this area over the next 3-5-year period, 60% of services that view it as a high or very high priority and the 40% that expect change as a result of ESN.

This set of technologies overall is seen both as relatively high priority area and an area of expected change. This was supported by respondents in interviews, however, many pointed to the difficulties related to change in this area. One participant, for example, stressed the importance of the process of developing increased capacity for interoperability with policing partners through MAIT. However, also stating that his service's project in this area became problematic because of the pre-requisite security standards required for connection to police systems, which led to partners withdrawing from the project.

3.2.5 Fire-Ground / Incident Management

	Condition (Up-to-date)	Expected Change (Significant/ Transformation)	Priority (High/Very High)	Expected Change ESN (Significant/ Transformation)
Data Storage	62% (n=26)	64% (n=22)	55% (n=23)	38% (n=16)
Data Capture (e.g Video, pictures and updating critical systems)	33% (n=14)	79% (n=33)	55% (n=23)	64% (n=27)
Data Integration	54% (n=22)	68% (n=28)	60% (n=27)	44% (n=18)
Internal Customer Service and Help Desk	59% (n=24)	33% (n=14)	31% (n=13)	19% (n=8)

Table 12: FRS Incident Management

	Condition (Up-to-date)	Expected Change (Significant/ Transformation)	Priority (High/Very High)
Data Storage	87%	90%	44%
Data Capture (e.g Video, pictures and updating critical systems)	66%	93%	60%
Data Integration	55%	95%	71%

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Internal Customer Service and help desk	54%	91%	26%

Table 13: Police Incident Management

Data Storage is considered the most 'up to date' of this group of technology areas, 62% of services responded that their technology in this area was 'up-to-date. This increased to 93% when the response data includes 'old but serviceable' was included. Interestingly, Data Capture is considered the least 'up to date' of the technology areas presented above, with only 33% of respondents indicating that it was up-to-date. It was also viewed as having the potential for the highest levels of change in the next 3-5 year period (79% of services expect 'significant and transformational' change), and in terms of the introduction of the Emergency Service Network (64% of services expect 'significant and transformational change)'. Diagram 2 below shows the responses of the individual services to this question and demonstrates the variation in responses.
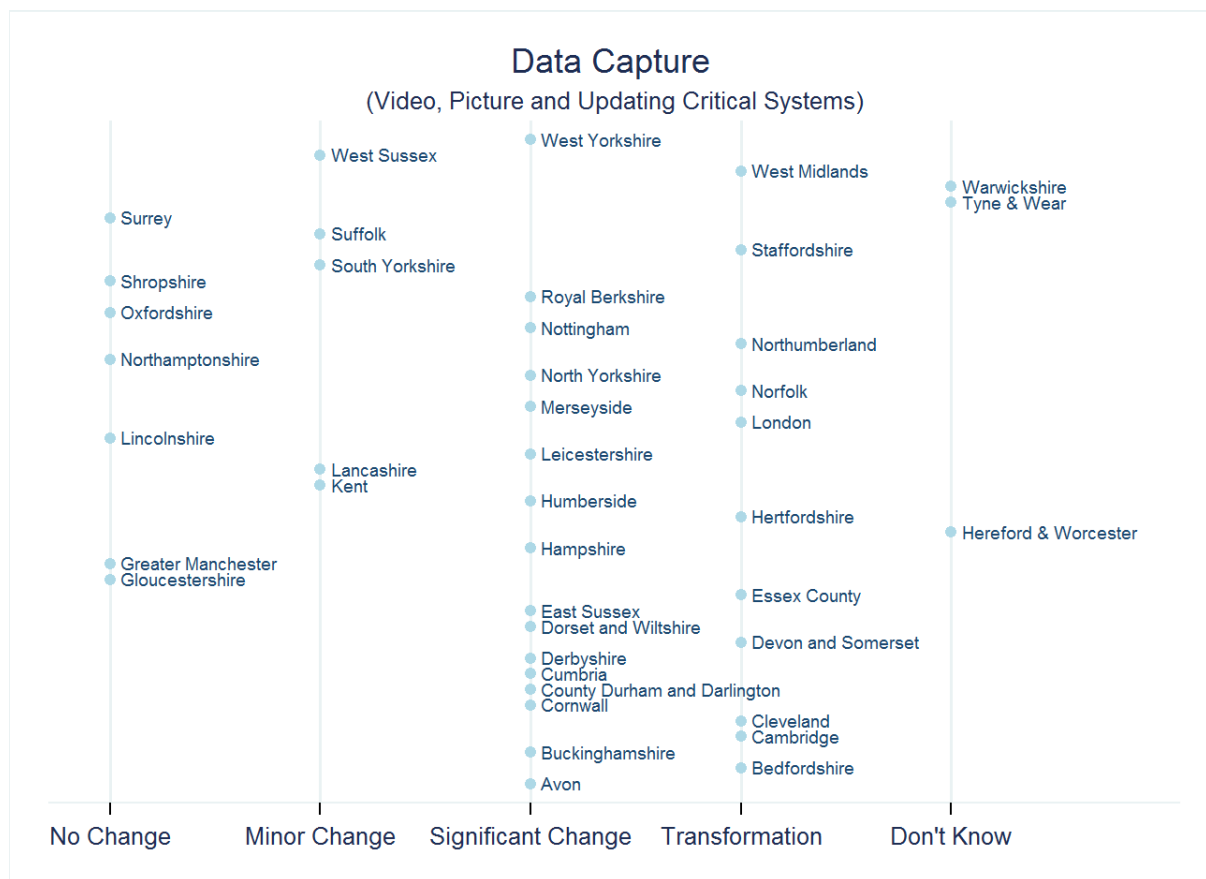
Diagram 2: To what extent do you Data Capture will need to change due to the implementation of ESN?

Data Integration had the second highest rates of change in both the 3-5-year period (78%) and change as a result of the introduction of ESN (44%). Data storage falls not far behind with 62% of services expecting change over the 3-5-year period and 38% indicating that they perceive change to result directly from the introduction of the Emergency Service Network.

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There is a marked difference in some areas when drawing on comparative data from the Policing survey, specifically in the area of expected change over the next 3-5-year period. 90% or more of the police forces responding expected 'significant and transformational' change in all of the areas. This was in contrast to the FRS survey which demonstrates a much broader spread of results with a low of 33% of services expecting significant or transformational change in the 'Internal Customer Service and help desk' and peaking at 79% of services expecting significant or transformational change in 'Data Capture'. A comparison of the responses from FRS and Police demonstrates that two of the four technology areas saw significantly higher levels of condition in the policing survey with 'Data Storage' and 'Data Capture' having 24% and 32% higher rates, respectively. Priority levels across both surveys follow similar trends with both services placing an emphasis on 'Data Integration' and in turn 'Data Capture', 'Data Storage' and 'Internal Customer Service and Help Desk'

3.2.6 Remote Working

	Condition (Up-to-date)	Expected Change (Significant/ Transformation)	Priority (High/Very High)	Expected Change ESN (Significant/ Transformation)
Mobile Office (e.g Laptop, mobile device)	83% (n=35)	55% (n=23)	45% (n=19)	40% (n=17)
Remote access to service systems (e.g. intelligence reports, briefings)	62% (n=26)	55% (n=23)	52% n=22)	33% (n=14)
Laptop with access to personal information management systems & data processing	78% (n=31)	40% (n=16)	45% (n=18)	23% (n=9)
In-Vehicle Mobile Data Terminal	55% (n=23)	74% (n=31)	83% (n=35)	60% (n=25)
Smartphone/PDA - Access to fire service systems	64% (n=27)	67% (n=28)	64% (n=27)	57% (n=24)
Command Support Unit	45% (n=19)	67% (n=28)	71% (n=30)	55% (n=23)

Table 14: FRS Remote Working

In the context of remote working 'Mobile Office' is considered the most 'up to date' (83% of services) is reflected in its (almost) universal usage, with only 2 services noting that they 'don't

use the technology. 'Laptop with access to personal Information Management systems and data processing' follows not far behind, 78% of services indicated that it was up-to-date in there service. This increases to 92% of services when considering a broader set of responses (up-to-date and old but serviceable). Following this in descending order of condition are; Smartphone/PDA at 64%, Remote access to service systems at 62%, In-Vehicle Mobile Data Terminal at 55% and Command Support Unit at 45%.

The survey clearly reflects the significance of In-Vehicle Mobile Data Terminals for FRS's as a key tool in their technological arsenal. Although ranked second from the bottom amongst this set of technologies in terms of condition 55%, MDT's were seen as a 'high or very high' priority in 83% of services with 'significant or transformative' changes anticipated in 74% of cases over the next 3-5-years. This change can also be seen to be driven to a significant degree by ESN, epitomised by the highest percentage of services that expected 'significant or transformational' change amongst these technologies. This is illustrated in Diagram 3 below.
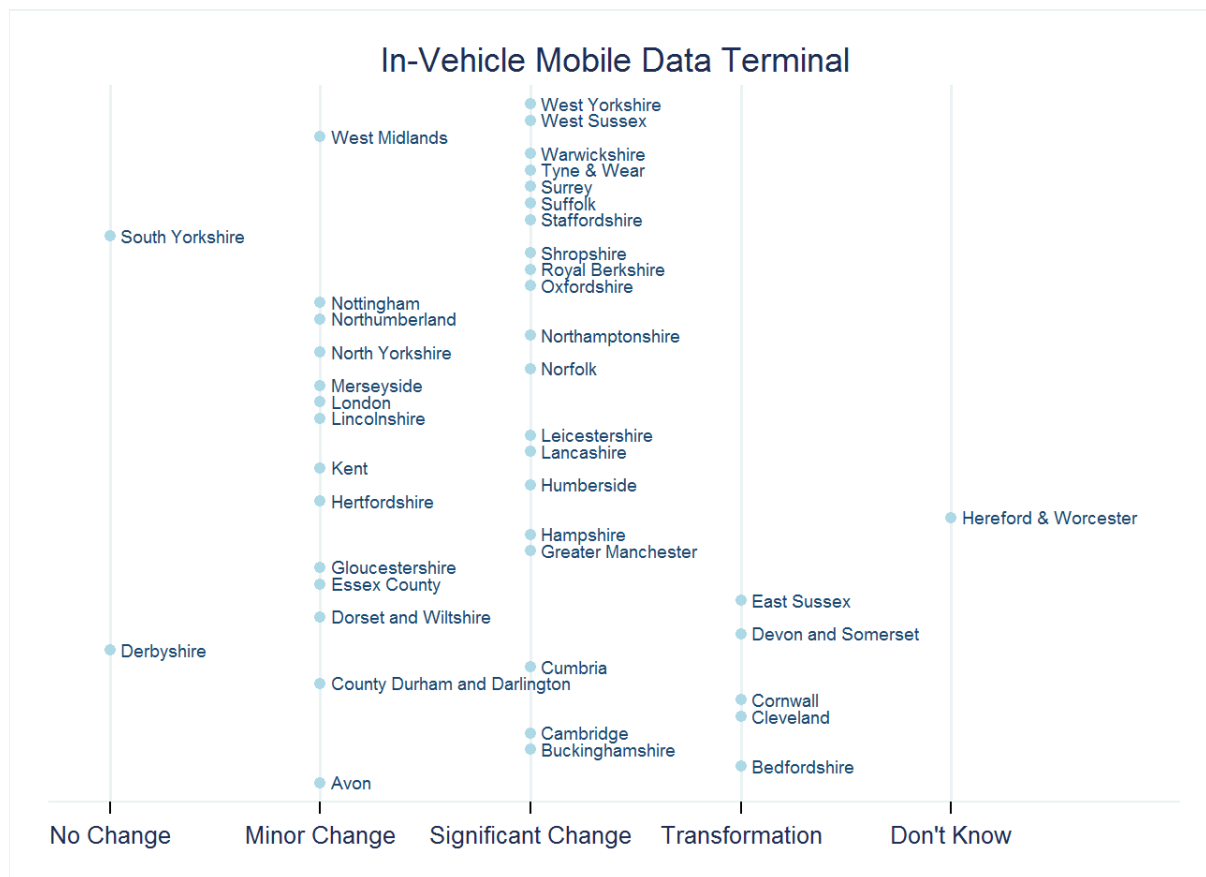
Diagram 3: To what extent do you believe that the use in-vehicle mobile data terms will need to change due to the implementation of ESN?

Smartphone/PDA access followed not far behind MDT's in terms of change in relation to ESN deployment and change over the next 3-5-year period with 57% and 67% of services recognising 'significant and transformational' change, respectively. The response of individual services is represented in
Diagram 4 below.
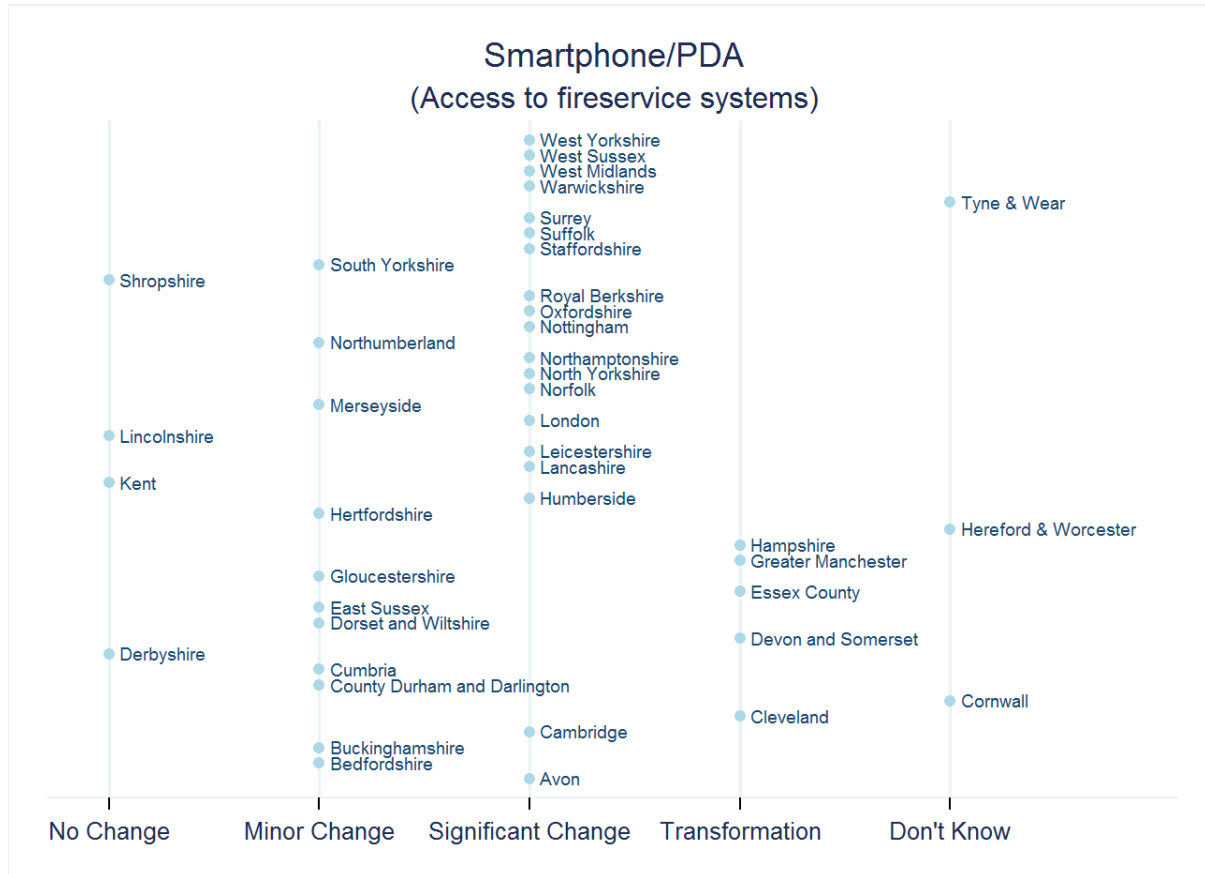
Diagram 4: To what extent do you believe that the use the use of smartphones to access fire service systems will need to change due to the implementation of ESN?

The Command Support Unit also held a 67% expected 'significant or transformational change' due to ESN alongside a 71% 'high and very high' priority level.

Diagram 5 below identifies individual responses to this degree of transformational change needed as a result of ESN.

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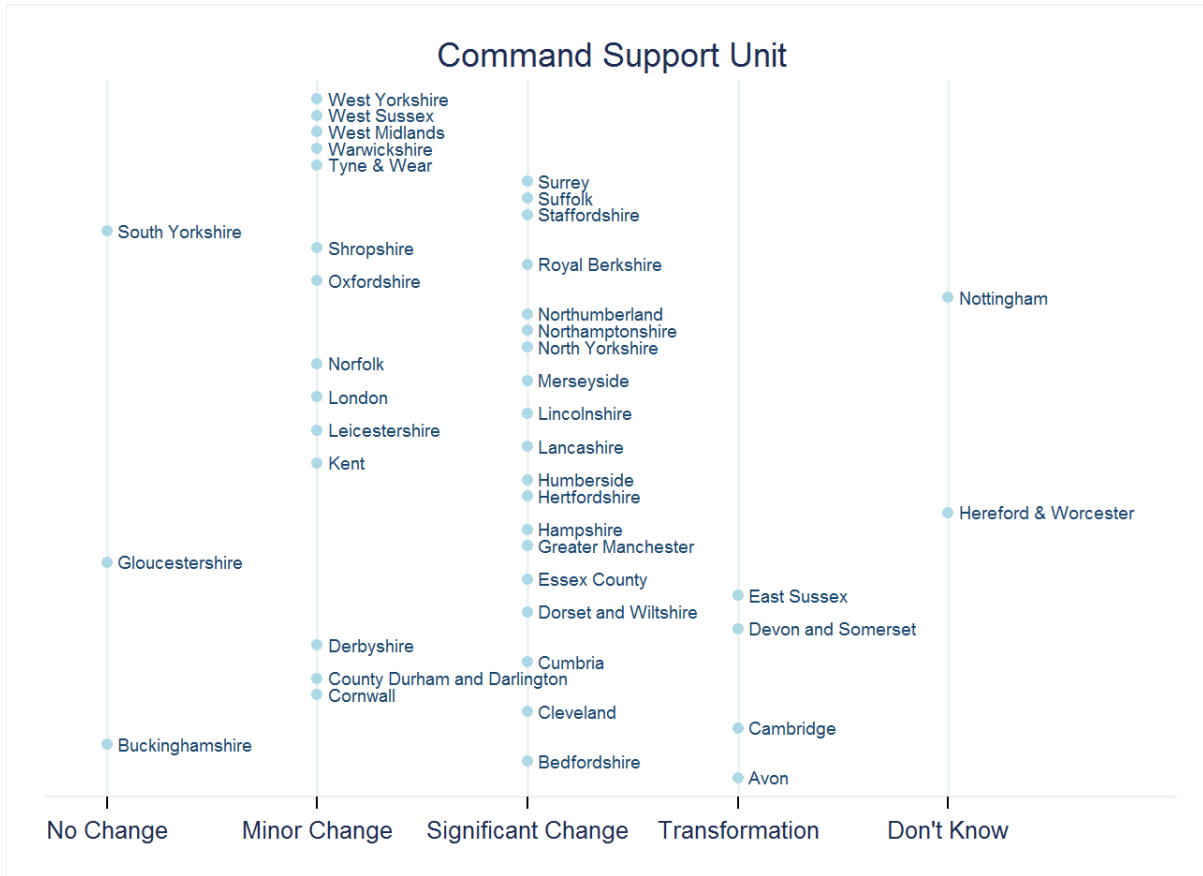
Diagram 5: To what extent do you believe that the use of command support units will need to change due to the implementation of ESN?

	Condition (Up-to-date)	Expected Change (Significant/ Transformation)	Priority (High/Very High)
Mobile Office (e.g Laptop, mobile device)	71%	67%	67%
Remote access to service systems (e.g. intelligence reports, briefings)	71%	100%	81%
Laptop with access to personal information management systems & data processing	79%	30%	51%
In-Vehicle Mobile Data Terminal	23%	77%	59%
Smartphone/PDA - Access to fire service systems	59%	100%	93%

Table 15: Police Remote Working

When comparing the FRS data to the Police data it is interesting to note a universal expectation of 'significant or transformational' change in the next 3-5-year period with a 100% response

rate for 'Remote access to service systems' and 'Smartphone/PDA' from police services. Both FRS's and Police, valued similar technologies with Smartphones/PDA and MDT's taking precedence with generally high levels of priority and anticipated change.

3.2.7. Understanding Data on the Fire ground

	Condition (Up-to-date)	Expected Change (Significant/ Transformation)	Priority (High/Very High)	Expected Change ESN (Significant/ Transformation)
Augmented Reality (heads up displays)	12%	69%	10%	31%
Incident Messaging	64%	54%	59%	44%
Status Messaging	69%	53%	59%	33%
Location information visualisation	23%	79%	52%	43%
Sensor data transmission (e.g. Breathing Apparatus telemetry)	38%	69%	50%	37%

Table 16; Data on the Fire ground

'Incident Messaging' and 'Status Messaging' contained the highest responses for condition of technology with 64% and 69% of services responding, 'up to date'. These two technologies also contained the highest priority, with 59% services responding 'high or very high' for both. However, in terms of expected change over the next 3-5-year period, the other technology areas were identified by more forces (in descending order) Location Information Visualisation at 79%, Augmented Reality at 69% and Sensor Data Transmission at 69% responding with 'significant or transformational' change, in comparison to the 54% for 'Incident Messaging' and 53% for 'Status Messaging'.

Interestingly, with respect to ESN, 'Incident Messaging' is seen to have the highest value of 'significant and transformational' change (44%) with 'Location Information Visualisation' coming in marginally behind with a 43% of services responding. Clearly, both the capabilities for directing incident information and the translation of location information into a visual format are seen to be affected by the implementation of the Emergency Services Network.

3.2.8 Partnering Systems

Within this area of work activity there is a clear inclination towards the more established technologies in terms of condition, with 'up to date' responses more heavily represented in the 'Communication with partners through voice (e.g. Police, Public Health)' at 71%, followed by 'Partnering with automatic systems failover' at 51% and 'Communication with partners through data (e.g. Police, Public Health)' at 31%.

	Condition (Up-to-date)	Expected Change (Significant/ Transformation)	Priority (High/Very High)	Expected Change ESN (Significant/ Transformation)
Communication with partners through voice (e.g. Police, Public Health)	71% (n=30)	57% (n=24)	52% (n=22)	50% (n=21)
Communication with partners through data (e.g. Police, Public Health)	31% (n=13)	71% (n=30)	62% (n=26)	67% (n=28)
Partnering with automatic systems failover	51% (n=21)	44% (n=18)	44% (n=18)	22% (n=9)

Table 17: FRS Partnering Systems

'Communication with partners through data (e.g. Police, Public Health)' gained the lowest condition rate, it also boasted the highest expected change at 71%, highest priority at 62% and highest expected change as a result of the Emergency Services Network at 67%. Diagram 6 below provides the individual FRS responses to this question and shows that a number of services have indicated that they don't know what the influence of ESN will be on this area. Given the strategic importance of data in ESN products, this may be an issue of concern.
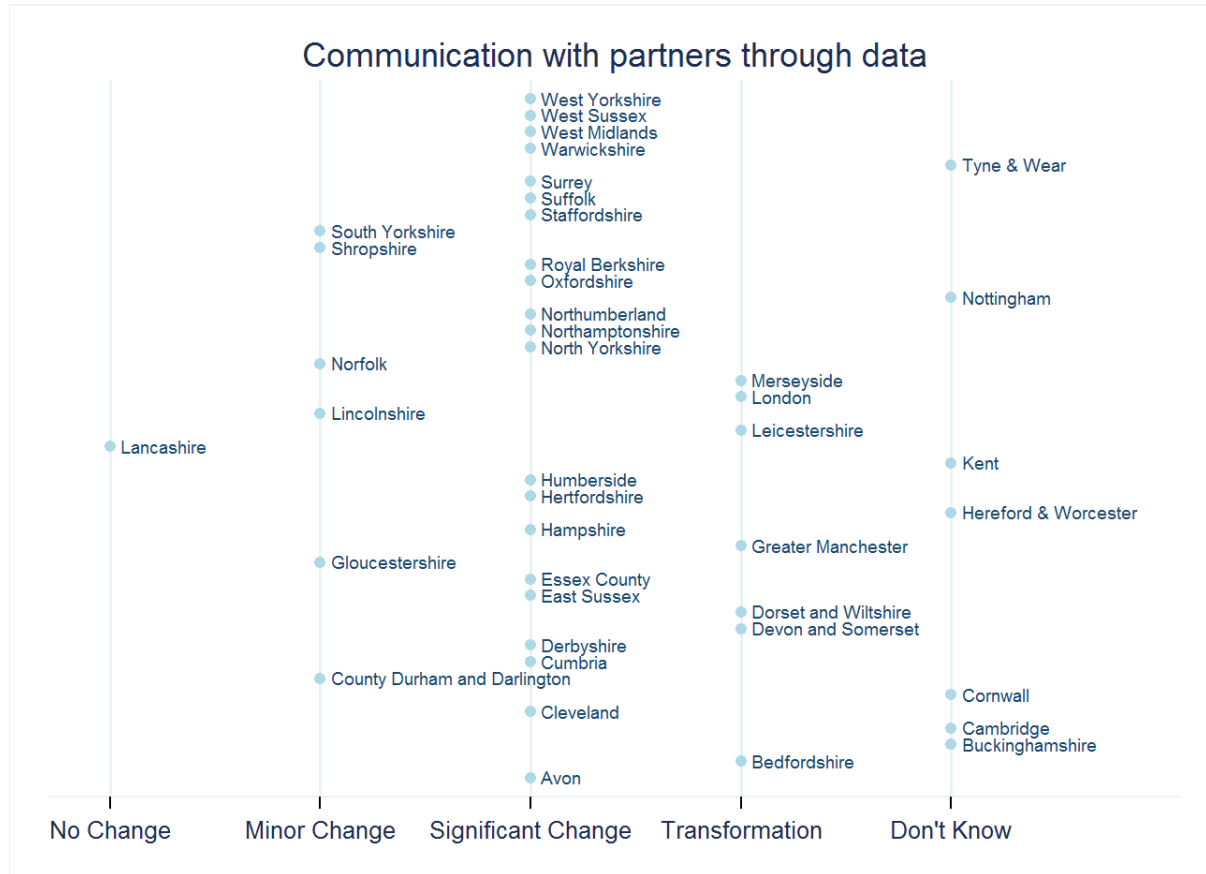
Diagram 6: To what extent do you believe that the use of communication with partners though data will change due to the implementation of ESN?

3.2.9 IP Communications

The survey demonstrates that the condition of IP communications in services is generally low, especially in comparison to other technology areas, with the highest in descending order being 'IP Communications (text, audio, video) for emergency calls from citizens' 26% (n=11), Routing of IP Communications (text, audio, video) to first responders 19% (n=8) and Routing of IP Communications (text, audio, video) from first responders to control or peer to peer 19% (n=8) . The inverse is true when examining both expected change in the 3-5-year period and expected change as a result of ESN with 67%, 62% and 71% for expected change and 38%, 50% and 55%, respectively

	Condition (Up-to-date)	Expected Change (Significant/ Transformation)	Priority (High/Very High)	Expected Change ESN (Significant/ Transformation)
IP Communications (text, audio, video) for emergency calls from citizens	26% (n=11)	67% (n=28)	43% (n=18)	38% (n=16)

Routing of IP Communications (text, audio, video) to first responders	19% (n=8)	62% (n=26)	48% (n=20)	50% (n=21)
Routing of IP Communications (text, audio, video) from first responders to control or peer to peer	19% (n=8)	71% (n=30)	45% (n=19)	55% (n=23)

Table 18: FRS IP Communications

A number of services indicated that they anticipate that there will be change in these areas with ESN representing a key driver of these technologies, however, given the very low base level reported, that the Public Switched Telephone Network (PSTN) is in the process of being phased out and the opportunities offered by next generation 112 services are clear we would have expected a higher priority area and expected rate of change. This is particularly the case in relation to the last two questions as ESN is an IP based service. The responses to the routing of IP communications to and from first responders is provided below in Diagram 7 and Diagram 8.

Routing of IP Communications to first responders

West Yorkshire
West Sussex
West Midlands
Warwickshire
Tyne & Wear
Surrey
Suffolk
Staffordshire
South Yorkshire
Shropshire
Royal Berkshire
Oxfordshire
Nottingham
Northamptonshire
Northumberland
North Yorkshire
Norfolk
London
Merseyside
Lincolnshire
Kent
Lancashire
Leicestershire
Humberside
Hertfordshire
Hereford & Worcester
Greater Manchester
Hampshire
Gloucestershire
Essex County
Dorset and Wiltshire
East Sussex
Devon and Somerset
Derbyshire
Cumbria
County Durham and Darlington
Cornwall
Cleveland
Cambridge
Buckinghamshire
Bedfordshire
Avon

| No Change | Minor Change | Significant Change | Transformation | Don't Know |

Diagram 7: To what extent do you believe that routing of IP communication to first responders will change due to the implementation of ESN?
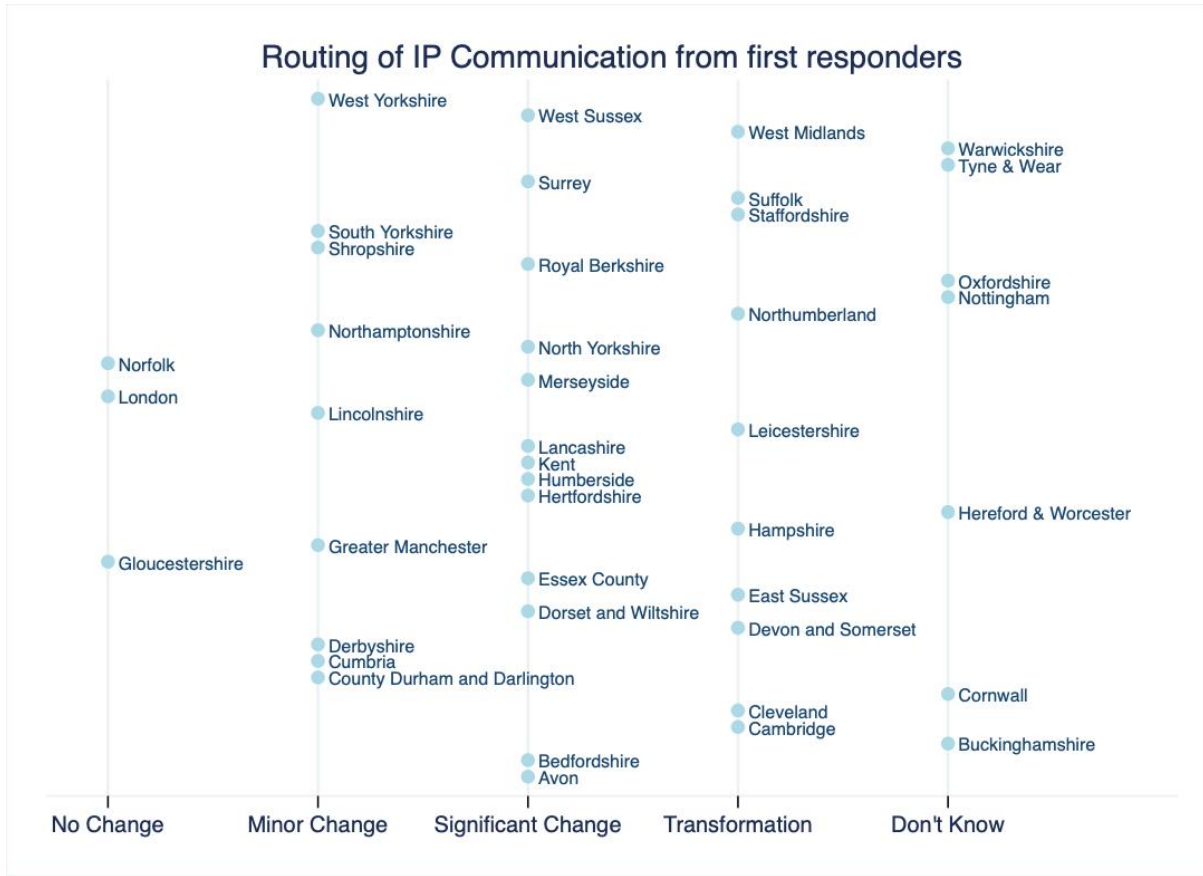
Diagram 8: To what extent do you believe that routing of IP communication from first responders will change due to the implementation of ESN?

The diagrams demonstrate both the wide range of responses and the significant number of services that could not answer these questions.

3.2.10 Records Management

	Condition (Up-to-date)	Expected Change (Significant/ Transformation)	Priority (High/Very High)	Expected Change ESN (Significant/ Transformation)
Integrated databases with partners	29% (n=12)	55% (n=23)	50% (n=21)	24% (n=10)
Broadband wireless access in vehicles (e.g. LAN, MDT, mobile)	52% (n=22)	71% (n=30)	59% (n=25)	60% (n=25)
Image management software (e.g. video, CCTV, pictures, person mounted cameras)	39% (n=16)	79% (n=33)	45% (n=19)	40% (n=17)
Integrated GIS	71% (n=30)	43% (n=18)	45% (n=19)	14% (n=6)

Shared Gazetteer	63% (n=26)	44% (n=18)	44% (n=18)	14% (n=6)

Table 19: FRS Records Management

Integrated GIS and Shared Gazetteer, were considered the most up to date for this set of technologies with 71% and 63% of services indicating that they were up-to-date. Although both technologies attained an almost identical response rate for expected change and priority, anticipated expected change due to ESN, reflected some of the lowest in the study. This was despite a moderate level of expected change over the next 3-5-year period. The suggestion in this instance is that there are other change programmes contributing to and driving transformations in these areas. Another area with relatively low levels of 'significant and transformational' change due to ESN at 34% of services, is in the 'Integrated databases with partners'. This is also accompanied by perceived low rates of condition (29%). This may be surprising, given that the technology in question related to the integration of systems across emergency services pertains specifically to interoperability with partners, where ESN is seen to offer a platform that harmonises data capabilities across emergency service partners.

'Image management software' is seen as having the most 'significant and transformational' change potential (79%), suggesting an expected change in the scale and/or type of visual data collected by Fire and Rescue Services. This was broadly supported by qualitative interviews with the participants alluding to a bigger role of visual data, especially in the areas of briefing and training, but also in the potential to more effectively manage the fire ground through real time streaming.

Another area of anticipated change is 'Broadband wireless access in vehicles' projected to undergo 'significant and transformational change' with a response rate of 71% for expected changes in the next 3-5- year period, but also clearly driven by the introduction of ESN with response rate of 60% for 'significant and transformational' change. Individual service responses to this question are shown in
Diagram 9 below.

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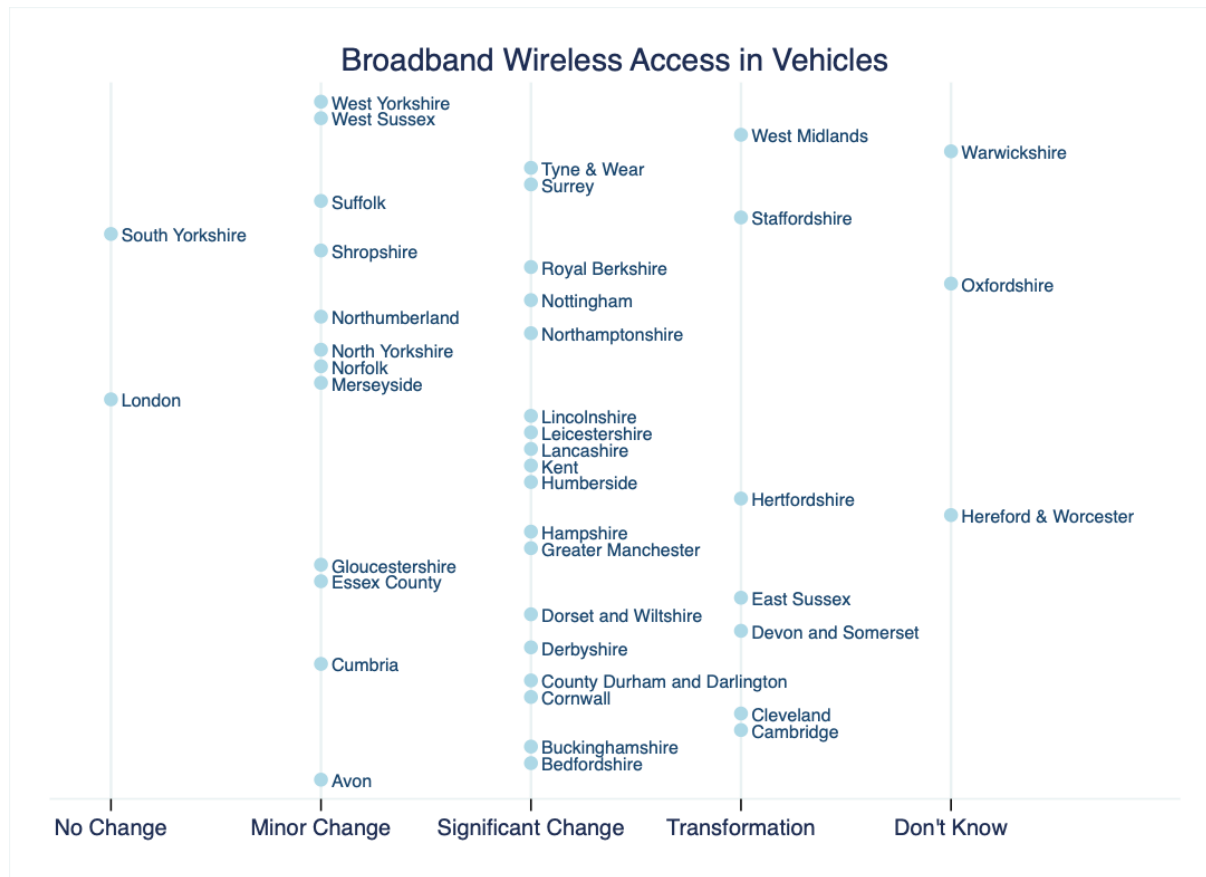
Diagram 9: To what extent do you believe that broadband access in vehicles will change due to the implementation of ESN?

This change was reflected in the qualitative interviews with a number of participants referring to the increased capability of providing expanded broadband wireless access in vehicles, allowing a Wifi 'bubble' for firefighters and other emergency services when in attendance at an incident.

3.2.12 Surveillance

	Condition (Up-to-date)	Expected Change (Significant/ Transformation)	Priority (High/Very High)	Expected Change ESN (Significant/ Transformation)
Video Surveillance	21% (n=9)	34% (n=14)	20% (n=8)	29% (n=12)
In-vehicle cameras (cameras facing outwards)	66% (n=27)	41% (n=17)	29% (n=12)	33% (n=14)
Person mounted cameras	19% (n=8)	76% (n=31)	41% (n=17)	43% (n=18)
Aerial surveillance (e.g. drones)	55% (n=23)	62% (n=26)	45% (n=19)	48% (n=20)

Table 20: FRS Surveillance

Given the expanded use of Person Mounted Cameras in other emergency services, such as Body Worn Video (BWV) in policing, it may be surprising to see the low level of condition attributed to this technology within FRS's. This is an area of development as 76% of FRS's responded that they saw 'significant and transformative' change in this area, the highest amongst this set of technologies. Interviewees, however, noted that Person Mounted Cameras could not currently be used by personnel working within buildings when responding to incident because the current generation of cameras were not sufficiently heat resistant. This was seen as a factor which limited the value to them of video capability offered by ESN Prime.

When examining the highest response rates in relation to the deployment of ESN, Aerial surveillance is seen as having both a relatively high rate of change (48%) and high condition rates (55%). The outlier amongst this set of technologies with relatively lower rates across the board (condition 21%, expected change 34% and priority 20%) is video surveillance. This is perhaps surprising given the declining need for response and the increased emphasis on prevention and protection which are both areas where video surveillance could play a significant role.

3.2.13 Securing Fire Service Systems

The area of securing Fire Service Systems was an area which was seen, overall, as an area of high priority but one which would not change significantly in between three quarters and a third of FRS.

	Condition (Up-to-date)	Expected Change (Significant/ Transformation)	Priority (High/Very High)	Expected Change ESN (Significant/ Transformation)
Encryption	83% (n=35)	40% (n=17)	81% (n=34)	24% (n=10)
Data Governance	73% (n=30)	49% (n=20	83% (n=34)	29% (n=12)
Identification and Access Management (e.g. Single-Sign on)	64% (n=27)	52% (n=22)	67% (n=28)	26% (n=11)
PSN Compliance	43% (n=18)	39% (n=16)	59% (n=24)	33% (n=14)

Table 21: FRS Securing Fire Service Systems

The comparative data suggests that in some areas both the Fire and Rescue Services and the Police broadly follow similar trends across technologies. In terms of condition, both FRS's and

the Police placed a similar emphasis on Encryption, Data Governance and Identification and Access Management, albeit that the police response was higher in some areas.

There was, however, a difference in the perception of change over the next 3-5-years, with more FRS expecting significant or transformative change in 'Identification and Access Management' (a 47% difference) than the police. A similar pattern was seen in other areas; Encryption (35% difference) and Data Governance 30% (difference). These technologies were also higher priority for more FRS with some areas as much as 31% higher (Encryption), 23% higher (Data Governance) and 22% higher (Identification and Access Management. One potential reason for the differentiation put forward in interviews was that due to the sensitivity of information stored on Police service systems their systems were already more sensitised to these issues. Thus, Police and Fire and Rescue Services are starting from different points.

Securing Police Systems	Condition (Up-to-date)	Expected Change (Significant/ Transformation)	Priority (High/Very High)
Encryption	93%	5%	50%
Data Governance	73%	19%	60%
Identification and Access Management (e.g. Single-Sign on)	70%	5%	45%

Table 22: Police Securing Police Systems

3.2.14 Analysis and Mapping

The following section relates to the process of datafication within the Fire and Rescue Services. These are core organisational capabilities which allow organisations to make informed decisions by utilising advanced techniques for the analysis of data.

Securing Fire Service Systems	Condition (Up-to-date)	Expected Change (Significant/ Transformation	Priority (High/Very High)	Expected Changes due to ESN (Significant/ Transformation
Integrated Management of Business	32% (n=13)	56% (n=23)	56% (n=23)	15% (n=6)
Remote recording of data	40% (n=17)	67% (n=28)	83% (n=35)	40% (n=17)
Tools to extract and clean data	57% (n=24)	52% (n=22)	52% (n=22)	17% (n=7)

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Tools to visualise data	55% (n=23)	69% (n=29)	62% (n=26)	12% (n=5)
Analytic software	29% (n=12)	71% (n=30)	57% (n=24)	31% (n=13)
Predictive Modelling	38% (n=16)	67% (n=28)	67% (n=28)	17% (n=7)
Use of 3rd Party Analytic Services	22%	31%	7%	6%
Investigative Software	19% (n=8)	43% (n=18)	36% (n=15)	7% (n=3)
Collection and Analysis of Data from private sources	27% (n=11)	39% (n=16)	22% (n=9)	12% (n=5)
Collection and Analysis of Data from public data sources	57% (n=24)	61% (n=25)	49% (n=20)	22% (n=9)

Table 23: Analysis and Mapping

The results gathered for the different areas identified within the broad category of Analysis and Mapping indicated that for many FRS, their technology, or use of technology wasn't up-to-date. While analytic software was seen as an area of significant change or transformation by 30 respondents (71% of those that responded to this question) only 12 saw it as being currently up-to-date within their service and 24 (57%) as a high or very high priority area. Only 40% of respondents saw Remote recording of data as being up-to-date, while 67% saw it as an area for significant or transformative change and 83% recognised it as an area of high or very high priority. Only 40% indicated that they expected significant or transformative changes linked to ESN. A potential benefit of ESN is the capability to collect and analyse higher volumes of data, more rapidly and from a wider variety of sources. This data has clear value in response, however, more importantly in prevention and protection. The results from this set of questions indicate that services may not have the correct technological infrastructure to collect, process, analyse and display this information.

3.3.15 Internal and External Use of Social Media

Table 24 below demonstrates that all Fire and Rescue Services are engaging with some form of social media to communicate with the public, albeit to different degrees and across different

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platforms. FRS's indicated usage of the more established social media channels including Twitter, Facebook and Youtube, (Facebook and Youtube having the highest user bases in the UK[1]) with responses of 'often or very often' in 90%, 85%, and 46%, of cases. This trend is reflected in both the expected change over the next the 3-5-year period, (44%, 41%, 41%) and the priority levels ascribed to each of these areas (69%, 59% and 28%).

	Use (Often/Very Often)	Expected Change (Significant/ Transformation)	Priority (High/Very High)
Twitter	88% (n=37)	45% (n=19)	69% (n=29)
Facebook	81% (n=34)	40% (n=17)	57% (n=24)
Youtube	44% (n=18)	39% (n=16)	26% (n=11)
Flickr	10% (n=4)	27% (n=11)	10% (n=4)
Instagram	34% (n=14)	37% (n=15)	24% (n=10)
Snapchat	5% (n=2)	27% (n=11)	10% (n=4)

Table 24: FRS Use of Social Media: Communication with the public

	Use (Often/Very Often)	Expected Change (Significant/ Transformation)	Priority (High/Very High)
Twitter	95%	63%	64%
Facebook	95%	63%	61%
Youtube	58%	51%	42%
Flickr	21%	48%	17%
Instagram	36%	55%	37%
Snapchat	8%	58%	22%

Table 25: Police Use of Social Media: Communication with the Public

The results suggest that there is scope and potential for FRS's to gain benefit in the exploitation of social media channels that are dominant in the areas of image sharing and the mixed economy platforms that utilise both image and video sharing, such as Instagram and Snapchat. These technology areas had a much lower relative representation in both the Police survey and FRS survey and represent the less well-established technologies.

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[1] 40.2 million 37.1 million

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The data gathered on the use of social media for communication within the organisation was revealing in that all of the technologies were used and the use of instant messaging was particularly high (73%).

FRS Use of Social Media: Communication within the organisation	Use (Often/Very Often)	Expected Change (Significant/ Transformation)	Priority (High/Very High)
Enterprise networking sites (e.g. Yammer)	33% (n=14)	41% (n=17)	20% (n=8)
Instant messaging (e.g. Chat, Whatsapp)	76% (n=32)	64% (n=27)	36% (n=15)
File Sharing (e.g. Dropbox)	31% (n=13)	54% (n=22)	37% (n=15)
Wiki	12% (n=5)	24% (n=10)	7% (n=3)
Collaborative Document Sharing (e.g. Google Docs)	38% (n=16)	74% (n=31)	43% (n=18)
Micro-blogging (e.g. Twitter)	36% (n=15)	40% (n=17)	19% (n=8)
Video conferencing (e.g. Skype, Facetime)	50% (n=21)	69% (n=29)	57% (n=24)
Email	93% (n=40)	38% (n=16)	62% (n=26)

Table 26: FRS Use of Social Media: Communication within the organisation

It was noticeable that the use of e-mail was marginally lower than the police, however the use of file sharing systems (such as Dropbox) was much higher. Collaborative document sharing (such as Google docs) was used by over a third of FRS. This points to very different information management practices, governance and values than the police.

Police Use of Social Media: Communication within the organisation	Use (Often/Very Often)	Expected Change (Significant/ Transformation)	Priority (High/Very High)
Enterprise networking sites (e.g. Yammer)	22%	61%	33%
Instant messaging (e.g. Chat, Whatsapp)	64%	66%	41%
File Sharing (e.g. Dropbox)	12%	47%	24%
Wiki	18%	34%	10%
Collaborative Document Sharing (e.g. Google Docs)	33%	59%	29%
Micro-blogging (e.g. Twitter)	24%	35%	26%

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Video conferencing (e.g. Skype, Facetime)	73%	73%	70%
Email	98%	28%	46%

Table 27: Police Use of Social Media: Communication within the organisation

This suggests that some of this capability may need to be provided using ESN. A number of services indicated that they would continue to use parallel devices. It is noticeable in other services we see the development of 'shadow systems' to provide capability not offered by formally sanctioned systems.

3.2.15 Delivery of Systems

The following sections relate to the delivery of systems. We focused on IT sourcing, cloud computing and collaborative development.

The results in
Table 28 and
Table 29 are suggestive of a very similar situation within both of these public services. The services are using a range of approaches, however, the majority of FRS relied heavily or very heavily on insourcing (52%).

	Reliance (High/Very High)	Priority (High/Very High)
Business Process Outsourcing (Technology and Process)	17% (n=7)	21% (n=9)
Outsourcing (services and support)	24% (n=10)	29% (n=12)
Outsourcing (Infrastructure)	21% (n=9)	24% (n=10)
Outsourcing (Temporary on project by project basis)	17% (n=7)	21% (n=9)
Outsourcing (Total IT)	12% (n=5)	15% (n=6)
Insourcing	52% (n=22)	38% (n=16)

Table 28: FRS IT Sourcing

Delivery of systems: IT Outsourcing	Reliance (High/Very High)	Priority (High/Very High)
Outsourcing (services and support)	20%	18%
Outsourcing (Infrastructure)	24%	18%

Outsourcing (Temporary on project by project basis)	16%	27%
Outsourcing (Total IT)	16%	13%

Table 29: Police IT Sourcing

We also explored the area of cloud computing focusing on three approaches to cloud: software as a service, software as a platform and software as infrastructure. The responses to this set of questions by FRS indicated that they had low, if marginally more reliance on cloud services that the police, and marginally more services saw it as a high or very high priority.

	Reliance (High/Very High)	Priority (High/Very High)
Cloud (Software)	22% (n=9)	60% (n=25)
Cloud (Platform)	22% (n=9)	52% (n=22)
Cloud (Infrastructure)	22% (n=9)	52% (n=22)

Table 30: FRS Cloud Computing

Delivery of systems: Cloud	Reliance (High/Very High)	Priority (High/Very High)
Cloud (Software)	13%	40%
Cloud (Platform)	13%	40%
Cloud (Infrastructure)	18%	40%

Table 31: Police Cloud Computing

The low reliance on cloud based services by FRS may be linked to the lack of data capability using Airwave. The pervious section, however, described the use of cloud based social media and interviewees indicated that services are using commercial bearers to provide data to mobile telephones. If more than 50% of FRS see this form of delivery as important or very important then a significant barrier to use of ESN may be NATS accreditation of apps.

The wider question of development of systems was explored in three questions. The answers to the first indicated that the FRS place much more emphasis upon in-house systems development than the police and more services see is as a priority or high priority area (57% of FRS and 7% Police).

Their response to the question on collaboration with other public sector bodies was similarly low for reliance and just under 50% of respondents in both services indicated that it was a high or relatively high priority.

	Reliance (High/Very High)	Priority (High/Very High)
In-house systems development	48% (n=20)	57% (n=24)
Collaboration in systems development with other fire services	38% (n=16)	50% (n=21)
Collaboration with other public sector bodies	29% (n=12)	45% (n=19)

Table 32: FRS Development of Systems

	Reliance (High/Very High)	Priority (High/Very High)
In-house systems development	18%	7%
Collaboration in systems development with other Police Services	51%	58%
Collaboration with other public sector bodies	22%	47%

Table 33: Police Development of Systems

3.3.16 Key Areas of Challenge

The services were asked to review a number of areas which were identified as being particularly challenging for many large complex organisations. The results were heterogeneous with a number of services recognising these areas as challenging or very challenging while others viewed these as not being challenging. A comparison of the response from FRS in Table 34 and police responses in Table 35 suggests that with the exception of legacy systems overall a smaller percentage of FRS see these areas as challenging than police services.

	Areas of Challenge (Challenging/Very Challenging)	Priority (High/Very High)
Enterprise Content Management	31% (n=13)	45% (n=19)
Management of legacy systems	52% (n=22)	62% (n=26)
Information governance	45% (n=19)	88% (n=37)

Ability to effectively search information held	38% (n=16)	74% (n=31)
Maintaining data and information in a secure manner while using IT more intensely	33% (n=14)	88% (n=37)
Procurement of technology	29% (n=12)	40% (n=17)
Ability to use analytics to gain insight from information held	29% (n=12)	76% (n=32)

Table 34: FRS Key Areas of Challenge

The ranking of the priority of these areas was equivalent, however, a higher number of FRS ranked three as challenging or very challenging: Information governance; Ability to effectively search information held, maintaining data and information in a secure manner while using IT more intensely; and Ability to use analytics to gain insight from information held.

Police Key areas of challenge	Areas of Challenge (Challenging/Very Challenging)	Priority (High/Very High)
Enterprise Content Management	65%	60%
Management of legacy systems	47%	60%
Information governance	64%	52%
Ability to effectively search information held	84%	53%
Maintaining data and information in a secure manner while using IT more intensely	73%	44%
Ability to use analytics to gain insight from information held	80%	58%

Table 35: Police Key Areas of Challenge

5. Findings: Qualitative Data

The interview data gathered indicated that governance models, FRS capability and existing ICT collaborations, influence the ability of FRS in England and Wales to engage with the Emergency Services Mobile Communications Programme (ESMCP). This is influenced by the context of reduced resource for 'back-office' and services working under different governance structures and changing strategic alliances. These contextual factors simultaneously restrict the ability of the services to manage ICT change and necessitate further change to ICT infrastructures and the structures for their provision.

5.1 Governance of FRC

Analysis of the interviews indicated that the governance models used by FRS had a significant influence on the capability of the services to engage with or implement ESN. We concluded that their variety is a significant impediment to any attempt at the provision of national ICT infrastructures.

FRS which were either an integral part of a council pointed to the fact that their IT was provided to them as a service by their local council, and that the financial situation of their council determined their capability to deliver or implement technology. One respondent noted that the financial situation of their council led to under-investment:

> *"It has been quite horrendous for the council ...they just haven't been able to balance the books. Now we have had some really restrictive spending situations the last couple of years imposed upon us. And it has really affected the ability to develop our systems within fire and rescue." (Interview 110205)*

Only one of the FRS governed as an integral part of a council as a county or unitary FRS noted that financial resource wasn't an issue of concern. This service stated that:

> *"I don't see there being an issue….it has been highlighted on the risk register - we have put reserved funding aside so, I think…the authority are quite relaxed really that we are doing everything we can, there isn't any issues with it." (Interview 140056)*

With the exception of this respondent, others noted that their governance structures meant that they lacked control over their investment decisions, delivery or day-to-day management of their ICT infrastructure:

> *"....well in effect we are just a separate department within the council. So we are a county fire and rescue service -so our IT department is really the county council IT department, and our link into that is that we have one person we link into in the county council and everything is escalated through that department via that one person". (Interview 100302)*

Engagement or disengagement with ESN was, therefore determined by the local authority not by FRS and relied heavily on the capability of the individual who acted as an interlocker between the council ICT department and the FRS. Respondents from these services noted that

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the perceived ambiguity about the costs of ESN made it particularly difficult to agree resource to support implementation or use:

> *"… Financially it is quite difficult yeah, we have to have the spend approved for anything we do really, and again lack of detail we don't know what that is - but we have had to put very fuzzy proposals in to the county council to say like -we may need to for example replace all the MDTs when ESN comes along …" (Interview 140226)*

Stand-alone combined fire authorities (CFA) or Metropolitan FRAs responsible for their own governance seemed to be in a much stronger position because of their relative size and because as precepting authorities they had greater financial control:

> *"...being a precepting authority gives us - in comparison to the knowledge I have about those that are not, we have a lot more autonomy to do the things we believe are necessary and do the heavy lifting and get the job done". (Interview 090229)*

Respondents from FRS governed by the Police, Fire and Crime Commissioners (PFCC) indicated to us that they were still transitioning their IT service to joint or police led services. While they indicated that this model potentially provided access to broader range of skills and capability they also indicated that issues related to security meant that they were still developing and maintaining parallel systems.

The data gathered from the respondents indicated that both the variety of governance structures and the nature of each of the structures mitigated against engagement with ESN. This is discussed further below in relation to FRS' ICT capability and capacity and collaborative development of infrastructure.

5.2 FRS ICT Capability

We identified three key aspects of ICT service capability that relate to ESN; the first was that of the scale of IT services, the second relates to the skills within the services and the third relates to existing ICT infrastructure.

A number of services noted that the number of staff in their IT department was small. Their capability to support the implementation of ESN was, therefore, limited. One respondent noted:

> *"....most fire services, and I won't include people like London and Manchester and others- but most fire services are quite small organisations. We only have perhaps 6 people in our IT department. So therefore - the first casualty when you are so swamped with work is the good old documentation.*

> *It is the documentation and the delivery of proof which is really the difficult part which a programme like ESN demands of you. Someone like London can put a department of 5 or 6 people together to deliver the documentation required for the whole of London. You know - someone like ourselves, you know, we ask one or two people to try and find time to complete the documentation required for this." (Interview110205)*

In other services they noted that they needed staff with breadth of skills rather than staff who could focus on a particular area:

> *"I have various titles but at the moment it is just ICT manager. We are a very small team, there are only four of us in the team- and we do pretty much everything. From - CCTV right through to the control room, MCT, PC servers, firewalls, you know the security. So basically any technical requirements, within fire and rescue service, our team delivers" (Interview 20190404)*

In other services they noted that the person responsible for ICT also led a number of other areas:

> *"Within my remit I have a number of departments - I have the fleet and engineering, which includes store - I have the ICT and I also have the service information team that deal with systems, and policies and procedures. And in addition to that the facilities and estates group as well" (Interview 110205)*

This approach to leadership and management of ICT can be seen as particularly positive as it supports the development of strategy which facilitates integration across different related areas and co-ordination on an operational and tactical level. In smaller organisations, which have limited numbers of staff, this can be problematic as in-depth expertise may not be available within the organisation to support decision making by a single lead.

The FRS staff who were interviewed, also indicated that they had different levels of expertise and experience in ICT. A number of respondents who were responsible for ESN for their service noted that they didn't have the expertise to answer any technical or strategic questions related to ESN. One stating when asked to discuss the benefits that ESN could bring to his/her fire service:

> *"Its a difficult one for me to answer because a) I am not techy and b) in fire we are just part of the county council and they tend to just form the IT strategy…" (Interview 140226)*

This was a common response in the interviews and a number of the interviews took significantly less than the expected time as respondents indicated that they did not have the knowledge or expertise to answer the questions.

Others noted the norm within the FRS of appointing individuals from within the FRS with
operational experience to manage at this level:

> *"I am the first non-operational person to be appointed at area manager
> level." (Interview 110205)*

In this case the respondent noted that they brought to the position a number of years' experience
as an IT manager working in other sectors. They also, however, noted that this was not normal
practice in the FRS.

An issue raised by a number of respondents was inertia related to existing ICT infrastructures.
This has already been noted in relation to fire services that were in the process of renegotiating
collaborative relationships, however, it also relates to the size of FRS and the level of security
deemed necessary for different systems. We do not have data on how prevalent this issue is,
however, it was noted by one respondent that in the past they had not needed to develop
separate administrative and control systems. The nature of data being shared within the service
was not deemed sensitive enough to necessitate separate systems. The advent of ESN, however,
requires untangling these systems:

> *"*One of the things which seems to be coming through as a theme now is that
> they are very much concentrating on Fire Control as a separate entity as
> opposed to the administration, which is awkward for us because we have
> spent perhaps 5-10 years saying: 'to be honest there is no difference between
> fire control and the rest of the organisation'. … So whereas before we have
> utilised common platforms, switches, data connections - we now need to
> prove that those separations, different IP structures and all the rest of it are
> correctly segmented." (Interview 110205)

A final point in relation to capability was that the political imperative has been to maintain
'front-line 'staff, while at the same time staff cuts have been made in IT support staff as they
are seen to be part of the 'back-office'. This point was made to us by a number of FRS. The
lack of internal capability further degrades the ability of these FRS to implement large scale
ICT projects such as ESN.

5.3 Existing ITC collaborations

One way in which the FRS mitigate and cope with the challenges noted above is by developing
capability through collaborative approaches to management of elements of the ICT
infrastructure or developing shared services. Most of these collaborations have been across
FRS and were driven by both cost benefits and capability gains:

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> *"We were lucky that 5 or 6 years ago we entered a collaboration with X FRS.
> That is a, that has proven to be a really great collaboration for everyone and
> everything - so each authority saves in the region of £400, 000 £500,000 a
> year, just because of shared staff ... That is brilliant and has produced year
> on year returns for us ...." (Interview 20190403)*

Different models of collaboration were described in the interviews. A key approach was an aligned support services under one strategic lead:

> *"I am responsible for all elements of ICT delivery, that also incorporates
> radio and telephony systems within the service and the systems within the
> control room environment which is a joint-control covering X area, Y area
> and Z area. "(Interview 110210)*

Others noted collaborations with partner FRS based on particular functionality. One noted that they had a dyadic relationship with FRS for their control room and were simultaneously in a tripartite collaboration with a different FRS's for another area of ICT capability. Many noted that these collaborations were not necessarily with services which were geographically adjacent to them and may be based on different reasons.

Another service noted collaborations with the police service while maintain reliance on existing collaborations with other FRS:

> *"...we do share a building with the police, we have joint headquarters. We
> have various collaborative projects that are going... we do share with other
> fire authorities so we share our X system with X and Y [FRS'] (Interview
> 140335)*

Respondents, however, noted that as their FRS moved governance structure to the Police, Fire and Crime Commissioner (PFCC) many of these collaborations were being re-negotiated or abandoned. This was either as a result of a decision by the PFCC, or was a defensive action undertaken by the FRS if they felt that it was likely that they would soon fall under the remit of a PFCC. A number of respondents indicated that this shift in strategic orientation is proving difficult to implement. They noted that regional political alliances and relationships played an important role in deciding how these new collaborations would be structured:

> *"we have moved to the X ...who has expressed a desire that X services are
> located in Y- whereas Y, their senior management and political leadership
> have been looking at the potential of a closer collaboration with Z. ....and
> we are waiting for the political decisions in those two areas to make
> themselves apparent. " (Interview 110205)*

Others noted that this meant that existing FRS partnerships were breaking down and new ones forming based upon Political decisions:

> *"I think where the political winds have changed in X they are now under the PCC, so the Police, Fire and Crime Commissioner - their governance instructions looks very different and I think they are being pushed down a different avenue to join with X and Y Police and Fire, rather than Z FRS. That left Z FRS potentially out on a limb, so this was an ideal collaboration that... scratched everyone's itch really - it's a good outcome." (Interview 20190403)*

FRS noted that their reliance on existing collaborations with other FRS was so important that they placed more priority on these than collaborations with police services:

> *"What we have found now is obviously there is a natural steer towards collaboration with the police. We did sound that out to look at a joint shared control room - that caused issues for Z FRS who wouldn't be able to get that through their political bodies. So ultimately the collaboration with the police fell flat really quite quickly and economically, it didn't stack up for us." (Interview 20190403)*

Development of ICT infrastructure in FRS that had an existing strong collaborative relationship with a police service under a PFCC were described as being difficult. As while notionally under one umbrella organisation (PFCC) the infrastructure was kept separate because it was described as central government decisions on the security of systems:

> *"… we are in the same building as X Police. Our control rooms are on the same floor. The equipment room that serve those control rooms is the same equipment room…all of the incoming connections in this building come to the same room. So we sort of asked the question …can we not just share one [connection into the control room] and split it somehow? That went on for over a year until the Home Office advised us that that wasn't a preferred option… So we tried to share … ESN with X Police, but that was not supported." (Interview 20190404)*

This is particularly problematic for the smaller County/Unitary FRA who moved under the aegis of the PFCC:

> *"…the police who are far bigger than us - they may be a useful resource for us to say, can we have some cooperation here to say - I tell you what, we just add our hundred or so devices in and could you do the management and*

configuration of those devices as well? But that is still a little bit up in the air at the moment ... we have been told very clearly that in the current custodian role you can't have that crossover - you can only be looking after the things you are responsible for which is the Fire Service, you know you can't have a police custodian looking after the fire and vice versa" (Interview 20190319 110205)

Others noted that while collaboration between Fire and Police Services in ESN was encouraged it was often problematic on a practical level. One respondent indicated that this was problematic because it was difficult to take all fire tenders to one location in order that the police service install devices:

"...So, whilst we have a lot of encouragement to collaborate the reality is that has to be balanced with the inconvenience to the service..." (Interview 110210)

Respondents indicated that some regional cross-service ESN specific collaborations had lost impetus:

"we invite the police to our meetings and to be honest, since the restructure of the programme where it has been pretty much acknowledged that because of the delays it is not going to be delivered for a couple of years now -the police representation has been sort of rolled back a bit. And also their work in their police-specific group, again those same 5 counties, and they are working you know on their police side of this as well. So yes, we keep in touch with them - particularly for local coverage issues, but we are not actively working on specific issues at this point in time. (Interview 110205)

The scale of IT services and the skills set described to us by respondents suggest that many FRS may not have the internal capacity or capability to fully engage with ESN while maintaining existing competences.   This ability to maintain existing systems while implementing or developing new approaches has been referred to as organisational ambidexterity. The evidence suggest that the levels of organisational ICT ambidexterity in the FRS is low and will, if cuts to ICT capability occur, only be reduced. Equally, the changing nature of governance within the FRS seems to suggest that many collaborative initiatives are being renegotiated, new partnerships are emerging and older ones being put aside. This further reduces the FRS' ability to engage with ENS at this point, and poses a significant risk for ESN implementation.

5.4 Understanding of ESN

The advent of the Emergency Service Network will provide a new range of underpinning services and technologies. That FRS have a clear understanding of this new technological tool and its potential impact on work is of particular importance to successful implementation.

A small number of respondents to the telephone interviews indicated that they viewed the implementation of ESN as an enabler for change describing it as a new platform for the emergency services. The following quotation from one a respondent encapsulated this view:

> *"I would like to see it as a platform - I am hoping it will be. I know there has been quite a lot of focus on devices, I think it is beyond that, I would hope we would use it as a service, as a platform as a communication platform that enables us to carry out our business. To a degree that is why we are trying to explore what is available across the commercial network, and then once ESN becomes available it can only improve what we have on the commercial offering." (Interview 20190401 140056)*

Others, however, indicated that while they hoped that ESN could be integral to the future of their FRS, they were unsure about whether or not capability will be delivered via ESN or a commercial network. The quotation below is representative of the view of some:

> *"Well I hope it will pretty much be integral to how we operate as a service - out on the accident and emergency or simply other tasks that we are doing so out in the community, doing protection and prevention work. But again… I still think there is a question for me over when we will use the commercial network and when we will use the ESN" (Interview 20190401 140056)*

Most respondents, however, took a much less positive view. The consensus was that they did not see ESN as being a better solution than the existing provision. We were, however, struck by the lack of engagement with or knowledge of ESN by some respondents. As one interview unfolded the impression was given that the respondents did not have an explicit or concrete strategy for ESN nor did they have a shared understanding of ESN. During the interview we noted verification between the two respondents, exploration and questioning of each other and were left with the impression that the interview itself was a sensemaking process for the respondents. In this interview they concluded:

> *"The only way we would connect something to ESN is if we tethered it to a device, so we tethered a laptop to an ESN mobile phone. That would be how we would use it, yeah…" (Interview 20190313 100302)*

Most of the respondents, however, indicated that they didn't yet understand what value or capabilities ESN could deliver to them. Indeed, it was characterised by respondents as being particularly ambiguous. This was, in part, linked to a perceived lack of information:

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> *"...but again it is waiting for more clear information from ESN" (Interview 100302)*

Another noted that the service indicated while it was asking suppliers to be ESN compliant:

> *"...it is just a bit of uncertainty so for example the spec of our new system is basically saying it needs to be ESN compliant - but I am not sure if anybody is thoroughly and detailed aware of what ESN compliant means." (Interview 20190403)*

This caused significant issues for both the services purchasing ICT and the vendors. Concern about supplier lack of knowledge about ESN was reflected in concerns about purchasing decisions:

> *"[suppliers] don't know what work it [ESN] means - and that can produce some financial scepticism or nervousness around what are they quoting for and how much would the supplier cost, are they over quoting or under quoting, does that present some risks or opportunities for us as an authority? So it is a degree of uncertainty that probably is affecting the market rather than the fire and rescue services - it is really easy for us to say, well just build us a system that is ESN compliant, but I think the suppliers - some suppliers might be, well we don't know what that is so we are not going to bid, whereas some suppliers will be we think there will be a big piece of work so we will bid quite high and that obviously passes the work onto the authority." (Interview 20190403)*

It also seems to have been linked directly to purchasing decisions towards EE and Motorola in the hope that their systems would be ESN compliant:

> **"...***we have been - waiting really I suppose for better mobile broadband communications for some time, in terms of what we are doing with the delays we are now looking at replacing our MDTs and while we are doing that we are actually putting the EE connected vehicles solution on the vehicles, on the appliances. So this is to help us transition towards ESN when it is available to us. So that would mean that all of our fire appliances have a 100 meter radius Wi-Fi bubble" (Interview 140056)*

FRS also indicated that this was also linked to delays in delivery of ESN, lack of understanding of the capabilities of the network and how it would link with existing ICT infrastructure. They also indicated a lack of trust that the information that they had been provided with was robust

and would not change. One respondent explained how this led to information that they had received not being shared in service and planning not taking place:

> *"...because ESN has been much delayed we are keeping it restricted to a fairly limited audience here within the fire service, even to the point of we are telling the fleet manager don't bother coming to any meetings yet we don't know how we will fit out our vehicles. And we talk to our operational, technical support and we say - look don't worry about it yet, we haven't worked out if we are going to put modems on the appliances and create a mesh net on each of the appliances, which is going to be ESN compliant (Interview 20190319 110205)*

The operational lead for ESN in one service noted:

> *"As I said, it seems to be a period of limbo - I am not as into it as I was, but there doesn't seem to be much going on at the moment… we are sitting on our hands with the developments really…. we just don't quite understand how it will work just yet because of the lack of detail on ESN" (Interview 140226)*

A number of services indicated that they already provide 4G capability to their staff with one service indicating that all mobile phones issued are on a 4G commercial bearer and fire service personnel can use them as they wish, deploying whichever tool they prefer via a commercial app store. One service noted that many of their fire officers routinely used data services, however, illustrated this by discussing the use of WhatsApp to communicate with colleagues about work tasks. (Interview 20190404). The widespread use of 'social media; tools to share, stored and communicate within the organisation is shown in Table 26. Other services noted that they saw their move to deploy 4G using commercial services as complementing ESN:

> *"...we decided to make steps ourselves but make them in ways that are going to complement the ESN programme and basically improve our readiness to adopt." (Interview 140056)*

Other services indicated that a key challenge was urgent need to replace legacy systems:

> *"So our system is really old and frankly we can't wait any longer because of the risk to the authorities. So we are future proofing that, we are also looking at - we have a continuous mobile phone contract that could be terminated or moved over to ESN once the devices are ready…." (Interview 20190403)*

Table 34 demonstrates that legacy systems were both challenging and an area of priority by most FRS. Indeed, some services indicated that they had already addressed this in the area of

communication by placing 4G modems in their Fire Tenders and had a similar more cost effective service in place:

> *"At the moment we are just using a different 4G modem, which is not ESN accredited, and I don't think it will be. But it's half the price…" (Interview 201;90404)*

Only a small number of the respondents indicated that they were in a positive position, and had undertaken work to prepare for ESN. One noted:

> *"We have done our IT health checks, we have listed our remediation plan which we have completed the majority of, and we are heading towards the ESN transition towards the current proposed date of 2021." (Interview 20190321 140230)*

Another described preparation as a 'journey' and indicated that they were 'part way through':

> *"We are part way through our readiness journey, so there is - excuse me, we have done quite a lot of stuff on increasing our network security, the next part we are doing is network segregation to segregate our command and control traffic from our corporate traffic because at the moment it just traverses the same - our corporate network. So he is doing a lot of that internal readiness as well as doing the outward facing pieces as well with the ESN programme." (Interview 090229)*

Others talked of preparing their technical infrastructure for ESN:

> *"...we are now doing the technical refresh before doing ESN" (Interview 100302)*

The majority of respondents, however, indicated that either they did not know enough to start preparing for implementation or were developing infrastructure in the hope that it would be compliant with the ESN programme:

> *", if we knew in some ways what we had to be compliant with it would help but at the moment we are doing some replacements within our mobile data environment with an eye on ESN rather than trying to adhere to ESN requirements and standards" (Interview 140230)*

One service, while indicating that they were prepared for ESN, also noted that that the applications that they currently use on devices will be prohibitively costly to install on ESN devices and thus this service is not looking to use ESN for data and will maintain its existing 4G system (Interview 20190321 140230)

Another noted that they thought ESN would prevent them from performing some of their critical tasks:

> *"As a user or potential user of ESN we are not actually doing much at the moment - there is a lot of encouragement for us to take up the early products which are a form of data path only, and later there will be some voice functionality - but until the final solution, which is called prime - we won't have priority in the network, we won't have the ability to do the stuff that we do in control rooms, which is where we actively create a talk group that contains all of the resources to an incident…" (Interview 110210)*

A number noted that the implementation of ESN was out of phase with their planned mobile technology refresh cycle therefore they would start to buy new devices and deploy using a commercial bearer:

> *"…if ESN slips a bit more, we may have to replace MDTs which may take us another 5 years before we replace MDTs with ESN capable one- or it may be that we purchase an ESN capable one, but don't necessarily put an ESN sim in it, we keep a Vodafone in it to start with, because we might have a long term Vodafone contract where we wouldn't be willing to double pay to get no benefit from it." (Interview 133116a)*

5.5 Motivation for Engaging with the emergency services mobile communications programme (ESMCP)

A prerequisite for providing resource for and fully engaging with ESMCP is that the FRS can see a clear motivation or benefit from use of ESN. In one of our first interviews the respondent took the view that it would not only provide a replacement for Airwave as a voice communication system but would also allow their FRS to start to use of mobile data. They took a particularly positive view of ESMCP:

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> *"ESMCP - but for me, it is the panacea, it's the replacement of airwave, so it is critical voice comms, it's using data that we have never really used before - and I think that is the bit that fire services are struggling to come to understand where their benefits may lie. So it's the network, the devices, the critical communications, the data - you know, it is the whole piece"* *(Interview 20190325 090229)*

The quotation provided us with a first indication, however, that services may not be motivated to engage as they may not see the value of more advanced data services. This was reinforced by most of the subsequent interviewees. The following quotation is typical of these responses:

> *"A lot of the other functionality is to do with the bandwidth of ESN - and if I am honest we don't currently have a use for it, and I say that because we have spent a lot of time and effort making our data systems efficient…."* *(Interview 110210)*

The majority view seemed to be that they would focus on voice, however, everything else within ESN would be given secondary importance:

> *"…at the minute the main thing is we have the critical voice on fire engines and frontline services, and that is our number 1 priority. Everything else is ancillary - we already do … data from fire engines, mobilising fire engines and things like that. …we would rather get the voice sorted and have our supporting stuff as a fallback safety net in a way -… we may consider moving other things onto ESN in the future."* *(Interview 133116a)*

Most respondents indicated that they were unclear how existing services and applications could migrate from their existing 4G services to ESN:

> *"So we are not 100% sure what we can put on the devices, we are not sure who is willing to go and do NATS testing on Apps and things and what Apps will be available and stuff like that."* *(Interview 133116b)*

Thus, even those services that saw a value from use of data seemed unsure about whether their current practices could continue. This clearly restricted uptake and engagement. This is reflected in the following quotation:

> *"So therefore, if we are then having restrictions imposed on us that say you can't do this, can't do that - that will become quite awkward and we may well find ourselves in a situation where we are saying - ok then we will just have the ESN device, leave it doing what it does but all our officers will be carrying two phones".* *(Interview 110205)*

This sense that services were struggling to understand how it could be used was reinforced by another interviewee, who indicated that while they could see it as an enabler for change this would take time:

> *"Yeah I think it's an enabler for change, I think it'll be the first time we have really had something that has changed the game. But I think we will- as I think most fire services will, we will take time to kind of get on board and understand what it can do for you." (Interview 090229)*

This issue was picked up by another respondent who indicated that they didn't think it would lead to any rapid changes in working practices:

> *"... I don't envisage anything changing once we implement ESN, I don't imagine our working practices will change immediately - I think it is going to be something that is going to evolve as we get confident with the technology." (Interview 100302)*

Another stated:

> *"So we are the equivalent of one metropolitan police force as a national fire service, if you like. And that is purely because of the way we use it - the majority of fire services will work the same as us, we will be a fixed device on a fire engine and then decamp onto the standard fire ground radios. That is a standard working for most fire brigades" (Interview 133116b)*

Respondents indicated that rather than change ways of working it could only fit into existing ways of working. They would not, therefore, issue their staff with ESN enabled mobile phones as they didn't provide them with Airwave Radios:

> *"our firefighters haven't got an airwave radio- there is an airway radio on the truck, and when they take control they are identifying as the truck" (Interview 20190404)*

Equally, the majority of the services viewed ESN as an enabler of incremental rather than transformational change:

> *"I don't see it as transformational - it will be an incremental change to what we do. Nothing drastic will change over- night from our point of view ..." (Interview 140226)*

The consensus view provided was that FRS were sceptical about the benefits of ESN and did not see it as offering additional capability:

> *"...it is very much wait and see I think. But - I don't think ESN is going to drive some sort of revolution in the fire service, because you can do it all now. If you want to send data for any reason, you can do it." (Interview 20190404)*

One element of this was that the services felt unconvinced by the use case for ESN:

> *"So there is a range of things that are potentially useful, but we haven't yet as a sector sort of really kind of got behind a core set of ideas that I think will bring us true benefit, and I think we need to see it to understand what it is we can do." (Interview 090229)*

This respondent went on to state that while the use case for the police was clear the use case for FRS was unclear because they worked in a different way:

> *"As I say for the police, the use case is made - it can potentially enhance what they do because of the way they work. We work in a very different way, and we are still struggling to break out of that command and control, incident response, very... voice heavy way of working." (Interview 090229)*

Interviewees indicated that they couldn't see the value from video, questioned the potential for interoperability and indicated that the high levels of security, while needed for the police, were not needed for FRS and impeded development. Their approach to ESN seems to reflect the norms and value of the FRS:

> *"Not, I would say risk averse, but we are conscious that if we take risks people normally die. So we are not in an industry that would wish to do any leading edge technology in the fire ground - we would prefer to use proven technology and reliable technology that has been proven over time." (Interview 140230)*

The majority of the interviewees did not accept the motivations providing for adopting ESN. It was not seen as providing additional capability or fitting with working practices and respondents were deeply sceptical about potential benefits.

5.6 Concerns Raised

In contract with the limited set of benefits raised by respondents they raised myriad potential concerns.

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Network coverage in rural areas and in-building was raised by a number of respondents, many noting that this was a significant area of potentially unexpected cost:

> *"And that has proved to be a massive issue for us - there are a lot of holes in the coverage. And you know, we get a lot of incidental coverage with airwaves which was over and above the contract - and that is a worry for us, trying to plan where we might need to upgrade the system…"(Interview 140226)*

The cost of ESN was raised by most of the respondents. ESN was described as a more expensive system and requiring very significant additional cost. This included short term capital expenditure in device cost and on-going operational costs in network contracts, which were expected to be much higher. They also noted that the expected life of the devices would be shorter leading to increased refresh cycle costs and shorter refresh cycles. Concern was raised about the decision to use bespoke devices, which was seen as increasing cost and dependency in a rapidly evolving area of technology. One respondent stated:

> *"…the original idea is that we will have a commercial off the shelf device which was able to have an ESN software load, which enabled it via its simcard to have priority on the network. Now we are getting a specialised device, we are getting a specialised expensive device -which will be a barrier to us taking it up large scale across our services…" (Interview 110210)*

A number noted that they felt ESN would necessitate moving towards constantly using data across the network rather than caching data on devices leading to increased network changes:

> *"…because if we are starting to use 4G data rather than caching, because at the moment it would be a case of we would probably cache it or bring it back to the station. You know - and transfer the data over wifi. But, you know, having this always on 4G data has potential to bring benefits but it also has the cost that is associated with that…"(Interview 090229)*

Interviewees noted the very significant increase in costs for the devices, voice and data services which they indicated had more than doubled. One respondent noted:

> *"…we can buy a mobile phone on contract - a government based contract, for around 3 pounds a month, including data and voice. ESN - we still have to be given any figures, they have alluded to figures around £8 a month, but the dedicated devices we are going to have to use on the network are potentially £800 to £1000 devices". (Interview 110210)*

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A number indicated that the Samsung device would be 25% more expensive than their Airwave Radios and would have a much shorter life-cycle. A significant area of cost noted was that of NATS accreditation costs which were seen as overly expensive and restricting innovation and development of future capability by the eco-system of companies developing apps for the FRS:

> *"Yeah. So if you think about it if you stick 10 grand onto somebody's development of an app it is quite a sizeable lump for some of these small companies". (Interview 133116b)*

Respondents also pointed to concerns related to costs of accreditation and the need to review updates, contributing to the view that they would still require two devices

> *"...it's like, for us it is kind of looking your mobile phone will be your mobile phone and your ESN device will be your critical voice." (Interview 20190404)*

A number of respondents indicated that they would not be providing their firefighters with ESN devices on the fire ground. They expressed the view that the existing technology was limited but sufficient for their current needs, affordable and easily maintained

> *"Again the UHF radio, you can buy it for a couple of hundred quid it lasts for ten years there is no software on it….you pick up the radio off the shelf, and just give it to a firefighter. Whereas an ESN device has to be assigned, logged in, all this sort of stuff (Interview 20190404)*

Given the governance structures of FRS the influence of concerns about costs cannot be underestimated as a factor which restricts full engagement with ESN:

> *"so even this year the funding started to run out, fortunately they have released some more money this year or last year, last financial year- a couple of weeks ago, but it wasn't looking great X county for instance wasn't going to be able to support ESA going forward. …The planning phase at the moment seems very tricky from my point of view" (Interview 091628)*

FRS indicated that they were not only concerned about the increase in costs but also about how the funding model would change to compensate for this:

> *"It's one of the questions we have all been asking - how does the funding model work for ESN? And we haven't been told, we don't know…"*

Finally, many respondents indicated that the delay in the roll out of ESN meant that they felt that they were being provided with a network with built in obsolesce as commercial networks, services and devices moved to 5G:

> "My concern on that is if we are delaying the rollout of the programme until 2020, well we have already spoken about the device being a Samsung 8 - well TV adverts areprr already on Samsung 10s, and also its a 4G network and already out there the rollout of 5G has started. So - I would hope the ESN programme will provide some future proofing, and that is a concern at the moment." (Interview 110205)

The majority of the respondents stated that they did not feel that the deployment of ESN would lead to organisational transformation or significant change. One of the respondents, who had considered changes to work process enabled by ESN, argued that achieving the benefits could be difficult and may be offset by potentially negative impacts:

> "This has other implications with regard to the intelligence you can bring to your mobilising process, because potentially you would only need to mobilise the people you would need for the fire engine - so for instance, you might only want to alert two wearers of BA, an officer in charge and a driver. But once you start doing that you will unload the pay and conditions of the retain staff, who don't get an awful lot for their retained service as it is, so if you start to erode that you may have difficulty recruiting people to those roles - so you have to think about it carefully because currently what happens is we send a broadcast signal out to a station, everyone available will come to the station, everyone who arrives at the station gets what we call an attendance fee, and then the people that are required to go on the fire engine which is sorted out locally at the time the go out the door, they get an extra fee for going to the incident. Obviously whilst it is very intelligent when we use a new system, there is a risk it might erode those conditions, so it is something we need to tread carefully on. (Interview 110210)

6. Conclusions and recommendations

The following section of the report synthesises the findings as they relate to the delivery of major ICT infrastructures across FRS. We have also provided some indicative recommendations to address the areas of concern identified.

Finding 1: Analysis of the interviews indicated that the governance of FRS had a significant influence on the capability of the services to engage with, or implement, complex and large scale ICT projects while maintain existing systems. The results suggest that smaller FRS which are an integral part of a council as a county or unitary FRS may lack the necessary resource,

capacity and capability to fully engage with large scale national projects while maintaining routine service delivery.

Recommendation 1: Multiple governance structures and variable levels of capability and capacity seem to be significant impediments to system wide change. Strategic review of governance and collaboration requires strategic review. Consideration should be given to providing further resource for county or smaller unitary FRS to obtain internal technical support for delivery of ICT infrastructure projects such as ESN.

Finding 2: The quantitative data shows a heterogeneous FRS ICT Infrastructure with FRS facing a number of significant ICT challenges (3.3.16 Key Areas of Challenge) most notable amongst these being the management of legacy systems. Only two technologies were identified as up-to-date in at least 90% of services (Automatic vehicle location (for management of resources) and Automatic Call Distribution. The areas identified by at least 75% of FRS as facing significant or transformational change were Data Capture (e.g. Video, pictures and updating critical systems), Image management software (e.g. video, CCTV, pictures, person mounted cameras) and Person mounted cameras (ie Body Worn Video). FRS also place emphasis on technologies that support operational work and which maximise workforce performance, four areas were identified as a priority or high priority by at least 80% of the FRS (Remote Recording of Data, Data Governance, In-Vehicle Mobile Data Terminals, and Encryption).

Recommendation 2: The heterogeneous nature of the FRS ICT landscape in terms of ICT capacity, ICT capability, condition of ICT infrastructure and priorities indicates that any support provided needs to be on service by service basis. The findings, do, however, also identify common areas where co-ordinated activities may be particularly helpful.

Finding 3. While FRS and Police Services are collaborating in the development of ICT infrastructure the key areas of collaboration seem to be between FRS (see
Table 32) and with police services (see
Table 33). In Section 3.3.4 we noted that the majority of cases where Shared Control Centres are present these were with other Fire and Rescue Services (46%) and in 5% of cases these were shared with the Police. We noted both the fluidity and diversity of collaborative relationships between services and the negative impact of this on the provision of IT services.

Recommendation 3: The Policing and Crime Act 2017 places a statutory duty on fire and rescue authorities, police forces, and ambulance trusts to collaborate where it does not endanger public safety and improves efficiency or effectiveness. The fluidity and diversity of collaborative relationships is reported as leading to inefficiencies and will inevitably lead to less effective use of resource. It is clear that it negatively influences the delivery of a national programme for ICT or national infrastructure. There is opportunity for the Fire Services governed by the Police Fire and Crime Commissioners (PFCC) to access resource, however, they will require clarity and guidance to enable the joint implementation of ESN and underlying infrastructures.

Finding 4: The interviews indicated that FRS levels of preparedness and capacity to engage were not based on geographical co-location. Equally, key infrastructures may be shared by services outside their geographical area for ESN indicating key dependency between FRS that are not co-located. Diagrams three and four in Section **3.3.5** show the extent to which each

FRS expects ESN to influence in vehicle and smartphone use and allows the identification of those services that do not expect any change or expect only minor change. Regional rollout of ESN may not be the most effective approach to implementation if, as the results suggest, FRS within regions are in the process of or have just concluded the renegotiation of collaborative agreements, abandoned existing agreements or created new relationships for the delivery of core IT infrastructure.

Recommendation 4: The composition of the regional rollout of ESN should be reconsidered on the basis of an assessment of individual FRS preparedness for ESN.

Finding 5: Respondents indicated that a lack of clarity about ESN was restricting innovation by suppliers, increasing costs and leading to inertia and inability to plan. A number of services indicated that they would continue to develop and deploy services using commercial bearers on the assumption that they could simply transition to ESN when it became available.

Recommendation 5: Detailed guidance or standards should be produced for both FRS and suppliers which will allow an independent judgement to be made on compliance with existing services, systems and technology with ESN.

Finding 6: Interviewees indicated that NATS testing is a significant barrier to innovation and transitioning of existing apps onto ESN. *Table 30* demonstrated that while just under a quarter of FRS had a high or very high reliance on cloud computing, more than 60% of FRS placed a high or very high priority on Software as a Service.

Recommendation 6: The process by which application for use on mobile devices are NATS tested should be simplified and the cost reduced. A number of respondents indicated that they would like to see a central repository or store of NATS tested applications.

Finding 7: Many services noted that they are using commercial bearers to provide data services to FRS tenders. Some services noted that their staff were using untested and insecure commercial applications to communicate with colleagues for work related purposes (e.g WhatsApp). Table 26 indicated that 76% of FRS used Instant Messaging Service often or very often for internal communication and 31% used file sharing services (such as Dropbox) often or very often. There is an assumption that this will continue either because they will continue to use a parallel infrastructure of 4G networks and devices or because they will use ESN for data only via the Fire Tender.

Recommendation 7: The use of non-NATS tested applications and commercial bearers for mobile data should be clarified.

Finding 8: Respondents were very sceptical about the benefits of ESN products to the FRS. Indeed, the benefits of and motivation to engage with, ESN products, was seen as being, at best, ambiguous. A number of areas were identified where services expect to see significant or transformational change because of the implementation of ESN, however, only five areas were identified by at least 60% of services: Communication with partners through data (e.g. Police, Public Health), Data Capture (e.g Video, pictures and updating critical systems), Service Access Node (SANH) or similar, Broadband wireless access in vehicles (e.g. LAN, MDT, mobile), In-Vehicle Mobile Data Terminal. The area of most consensus (identified by 67% of FRS) was Communication with partners through data. The report provides the responses to the question in the nine areas where more than 50% of FRS expected significant or transformation

change because of ESN. These demonstrate a heterogeneous understanding of the impact of ESN on these technology areas.

The case for data over ESN, beyond that provided to fire tenders was, however, unclear to many respondents. Diagram 6 in section 3.3.7 shows that a number of services do not know how communication with partners though data will change due to the implementation of ESN. Many felt that the capability offered by ESN Connect was already provided via commercial networks. The significance of the fire tender as either the point to which information was delivered or a nodal point for data connectivity (e.g. to create a Wi-Fi 'bubble' around the tender) was mentioned by a number of respondents in the interviews and its importance was stressed in responses to the questionnaires (see for example section 3.2.1 or 3.3.5). It must, however, be noted that only 60% of services indicated that Broadband wireless access in vehicles (e.g. LAN, MDT, mobile) would change due to ESN (see section 3.3.9). Services noted a low condition in section 3.3.8 for IP Communications and, given ESN is an IP based system, a surprising low expectation that this will change due to implementation of ESN (60%). Section 3.2.2 suggested that the advanced potential capabilities of ESN in relation in Call Handling were not recognised.

Recommendation 8a: Detailed Use Cases should be developed and circulated to describe the current benefits for FRS of the following ESN products: ESN Connect +; ESN Direct; and ESN Prime.

Recommendation 8b: The use of ESN to enable or provide support for the concepts of 112 Total Conversation and NG112 and related services should be articulated.

Finding 9: Respondents were concerned about voice and network coverage in rural areas an in-buildings. While ESN Assure will help understand coverage it does not resolve issues related to the cost and speed with which these can be resolved. Equally, it was unclear to respondents how this will be paid for and who would pay for it.

Recommendation 9: Clarity should be provided about the costs and delivery of additional network coverage in rural area and in-building coverage.

Finding 10: The ambiguity of potential costs of ESN to FRS were raised by most respondents.

Recommendation 10: Clarity on the following costs should be reviewed: device cost, network contract costs, obsolescence of devices and refresh cycles, ability to cache data on devices rather than transmit over ESN. Costs and funding for the delivery of parallel Airwave and ESN contracts. This issue influences uptake of all ESN products including ESN Direct.

Finding 11: Some services noted that because ESN had been delayed they felt they would be tied into devices and a network which have already been superseded and would rapidly become obsolescent. Many of the forces were already using 4G networks and providing devices with greater capability (they indicated) than the ESN Direct device.

Recommendation 11: Clarity be provided about upgrade path for devices a planning process for transition to 5G networks and next-generation networks

Finding 12: The qualitative data gathered indicated that the provision of resources to support ESN and manage Airwave contracts in parallel with ESN has proved very problematic to justify and resource by smaller FRS.

Recommendation 12: Further transitionary financial resource be provided to smaller services and clarity provided on the funding model, particularly in relation to the parallel use of Airwave and ESN devices.

7. References

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8. Appendix 1: Key Terms and Acronyms

AML   - Advanced Mobile Location Service
AVL   - Automatic Vehicle Location
BWV - Body Worn Video
C&C   - Command and Control
CAD   - Computer Aided Dispatch
EISEC - Enhance Information Service for Emergency Calls
ESN   - Emergency Service Network
FRS   - Fire and Rescue Service
GIS   - Geographic Information Systems
GPS   - Global Positioning System
ICS   - Incident Command System
LAN   - Local Area Network
MAIT - Multi-Agency Incident Transfer Protocol
MDT   - Mobile Data Terminal
NATS - Network Approval Testing Service
PSN   - Public Sector Network
UHF   - Ultra High-Frequency Radio
VDU   - Visual Display Unit

GPS tracking is the surveillance of location through use of the Global Positioning System (GPS) to track the location of an entity or object remotely.
The Automatic Vehicle Location Systems (AVLS) provides the exact location of individual Fire and Rescue Service Vehicles. This enables the mobilising systems to propose the nearest available resource that is appropriate to dispatch to an emergency.

Quality monitoring systems in the context of call handling allow organisations to improve call agents' performance by both monitoring and measuring interactions they have with the public.

Virtual call centres allow the use of agents answering calls who are not based in a geographically centralised location.
Automatic call distribution systems distribute incoming telephone calls to qualified agents responsible for answering inbound calls.

Call Line Identification gives call handlers call information on the number and address of landline telephones or the nearest cell location for mobile phones.

Computer Aided Dispatch systems allow public safety operations and communications to be augmented, assisted, or partially controlled by an automated system. It can include, among other capabilities, computer-controlled emergency vehicle dispatching, vehicle status, incident reporting, and management information systems

Workforce management systems provide a range of services to support the management of staff, from training through to information in order to support the forecasting and scheduling of staff. It can be provided as a stand-alone system or more normally function as an element of a larger solution.

Data storage the ability to manage safe and secure storage of information collected. Such storage is, clearly, subject to issues of data protection and security with cloud technologies offering potential advantages but also raising concerns over security and resilience.

Data capture the ability to capture appropriate information from a diverse range of sources.
Data integration the ability to bring together diverse data sources and manage the use of them in support of incidents.

Internal customer service and help desk systems pertains to the ability to provide such systems within the service in order to facilitate data capture, information sharing and knowledge management as a basis for improved operational efficiency.

9. Appendix 2: Questionnaire responses on a service by service basis

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Survey Results 1: Avon Fire and Rescue Service

Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
GPS for locating firefighters on the fire ground (Location Services)	Don't use it	Transform	Neither High nor Low	No change
GPS for locating firefighters on call (Location Services)	Don't use it	Don't Know	Neither High nor Low	No change
Automatic vehicle location (for management of resources)	Up to date	Minor Change	Very High	No change
Automatic vehicle location (Predictive analytics)	Don't use it	Don't Know	Neither High nor Low	Minor change
Quality monitoring of call handling	Up to date	Minor Change	High	No change
Workforce management systems (Control)	Up to date	No Change	Neither High nor Low	No change
Workforce management systems (Corporate)	Up to date	No Change	Neither High nor Low	No change
Shared Control Centre (with more than one FRS or with other emergency services)	Don't use it	No Change	Very Low	No change
Exchange of Information across Emergency Services (e.g. MAIT)	Don't use it	No Change	Neither High nor Low	No change
Shared Control Systems (e.g. shared data centres driving multiple Emergency Service Control Centres)	Don't use it	No Change	Very Low	No change
Virtual call centres (e.g. call centres with a cloud based infrastructure)	Don't use it	No Change	Very Low	No change

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Automatic call distribution systems				

Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Call Line Identification (e.g. EISEC)	Up to date	No Change	High	No change
Advanced Mobile Location (AML- Caller location information service for smartphones)	Up to date	No Change	High	No change

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Service Access Node H (SANH), or similar	Up to date	Transform	Neither High nor Low	Transform
Computer aided dispatch	Up to date	Minor Change	High	Minor change

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Data Storage	Up to date	Minor Change	Neither High nor Low	Significant change
Data Capture (e.g Video, pictures and updating critical systems)	Don't use it	Significant Change	High	Significant change
Data Integration	Don't know	Minor Change	Neither High nor Low	Significant change
Mobile Office (e.g Laptop, mobile device)	Up to date	Minor Change	Neither High nor Low	Minor change
Internal Customer Service and help desk	Up to date	Minor Change	Neither High nor Low	Minor change
Remote access to service systems (e.g. intelligence reports, briefings)	Up to date	Minor Change	High	Significant change
Laptop with access to personal information management systems & data processing	Up to date	Minor Change	High	Significant change
In-Vehicle Mobile Data Terminal	Up to date	Minor Change	High	Minor change
Smartphone/PDA - Access to fire service systems	Up to date	Minor Change	High	Significant change
Augmented Reality (heads up displays)	Don't use it	No Change	Neither High nor Low	Significant change

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Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Incident Messaging	Up to date	Minor Change	High	Transform
Status Messaging	Up to date	Minor Change	High	Transform
Command Support Unit	Up to date	Minor Change	High	Transform
Communication with partners through voice (e.g. Police, Public Health)	Up to date	No Change	High	Significant change
Communication with partners through data (e.g. Police, Public Health)	Don't use it	No Change	Neither High nor Low	Significant change
Partnering with automatic systems failover	Don't use it	No Change	Low	Significant change
IP Communications (text, audio, video) for emergency calls from citizens	Don't use it	Don't Know	High	Significant change
Routing of IP Communications (text, audio, video) to first responders	Don't use it	Don't Know	High	Significant change
Routing of IP Communications (text, audio, video) from first	Don't use it	Don't Know	High	Significant change

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responders to control or peer to peer				
Location information visualisation	Don't use it	Significant Change	High	Significant change
Sensor data transmission (e.g. Breathing Apparatus telemetry)	Don't use it	Minor Change	High	Transform

Station End Equipment	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Printers	Old but serviceable	Minor Change	Neither High nor Low	No change
Visual Display Unit (VDU)	Don't use it	Minor Change	Neither High nor Low	No change

Records Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated databases with partners	Don't use it	Don't Know	Low	Minor change
Broadband wireless access in vehicles (e.g. LAN, MDT, mobile)	Up to date	Minor Change	Neither High nor Low	Minor change
Image management software (e.g. video, CCTV, pictures, person mounted cameras)	Up to date	Minor Change	Neither High nor Low	Minor change
Integrated GIS	Up to date	Minor Change	Neither High nor Low	Minor change
Shared Gazetteer	Up to date	Minor Change	Neither High nor Low	Minor change

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Video Surveillance	Up to date	Minor Change	Neither High nor Low	Minor change
In-vehicle cameras (cameras facing outwards)	Up to date	Minor Change	Low	Minor change
Person mounted cameras	Don't use it	Don't Know	Neither High nor Low	Minor change
Aerial surveillance (e.g. drones)	Don't use it	Minor Change	Low	Minor change

Securing Fire Service Systems	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Encryption	Up to date	Minor Change	High	Minor change
Data Governance	Up to date	Minor Change	High	Minor change
Identification and Access Management (e.g. Single-Sign on)	Up to date	Minor Change	Neither High nor Low	Minor change
PSN Compliance	Don't use it	Don't Know	Very Low	No change

Analysis and Mapping	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated Management of Business Processes (e.g. Enterprise resources planning tools such as SAP, Oracle, Microsoft Dynamics)	Don't know	Don't Know	High	Minor change

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Remote recording of data (Home Fire Safety Checks, Fire Hydrant Data)	Old but serviceable	Minor Change	Neither High nor Low	Minor change
Tools to extract and clean data	Old but serviceable	Minor Change	Neither High nor Low	Minor change
Tools to visualise data	Old but serviceable	Significant Change	Neither High nor Low	Minor change
Analytic software (displaying information on mobile device)	Old but serviceable	Significant Change	Neither High nor Low	Minor change
Predictive modelling	Old but serviceable	Minor Change	Neither High nor Low	Minor change
Use of 3rd party analytic services	Don't use it	No Change	Low	No change
Investigative software - fire	Don't know	Don't Know	Neither High nor Low	Minor change
Collection and analysis of data from private data sources (e.g. insurance data)	Don't use it	Minor Change	Low	No change
Collection and analysis of data from public data sources (e.g. local council, ambulance service and police service)	Up to date	Minor Change	Neither High nor Low	Minor change

The Use of Social Media: Communication with the public	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Twitter	Very often	Minor Change	High
Facebook	Often	Minor Change	Neither High nor Low
Youtube	Often	Minor Change	Neither High nor Low
Flickr	Don't Know	Don't Know	Low
Instagram	Often	Minor Change	Neither High nor Low
Snapchat	Never	No Change	Very Low

The Use of Social Media: Communication within the organisation	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Enterprise networking sites (e.g. Yammer)	Never	No Change	Very Low
Instant messaging (e.g. Chat, Whatsapp)	Often	Minor Change	Neither High nor Low
File Sharing (e.g. Dropbox)	Occasionally	Minor Change	Low
Wiki	Don't Know	Don't Know	Very Low
Collaborative Document Sharing (e.g. Google Docs)	Occasionally	Minor Change	Neither High nor Low
Micro-blogging (e.g. Twitter)	Don't Know	Don't Know	Very Low
Video conferencing (e.g. Skype, Facetime)	Occasionally	Minor Change	Neither High nor Low
Email	Very often	Minor Change	Neither High nor Low

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Delivery of systems: IT Outsourcing	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Business Process Outsourcing (Technology and Process)	Very low	Very low
Outsourcing (services and support)	Very low	Very low
Outsourcing (Infrastructure)	Very low	Very low
Outsourcing (Temporary on project by project basis)	Very low	Very low
Outsourcing (Total IT)	Very low	Very low
Insourcing	Very low	Very low

Delivery of systems: Cloud	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Cloud (Software)	Low	Neither High nor Low
Cloud (Platform)	Very low	Low
Cloud (Infrastructure)	Very low	Very low

Development of Systems	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
In-house systems development	High	High
Collaboration in systems development with other fire services	High	High
Collaboration with other public sector bodies	Low	Low

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Survey Results 2: Bedfordshire Fire and Rescue Service

Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
GPS for locating firefighters on the fire ground (Location Services)	Don't use it	Don't Know	Neither High nor Low	Don't know
GPS for locating firefighters on call (Location Services)	Don't use it	Don't Know	Neither High nor Low	Don't know
Automatic vehicle location (for management of resources)	Up to date	Minor Change	High	Minor change
Automatic vehicle location (Predictive analytics)	Don't use it	Don't Know	Neither High nor Low	Don't know
Quality monitoring of call handling	Old but serviceable	Significant Change	High	Don't know
Workforce management systems (Control)	Old but serviceable	Significant Change	High	Don't know
Workforce management systems (Corporate)	Up to date	Minor Change	High	Don't know
Shared Control Centre (with more than one FRS or with other emergency services)	Don't use it	Don't Know	Low	Don't know
Exchange of Information across Emergency Services (e.g. MAIT)	Don't use it	Don't Know	Neither High nor Low	Transform
Shared Control Systems (e.g. shared data centres driving multiple Emergency Service Control Centres)	Up to date	Significant Change	High	Don't know
Virtual call centres (e.g. call centres with a cloud based infrastructure)	Don't use it	Don't Know	Neither High nor Low	Transform

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

Automatic call distribution systems				

Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Call Line Identification (e.g. EISEC)	Up to date	No Change	Neither High nor Low	No change
Advanced Mobile Location (AML- Caller location information service for smartphones)	Old but serviceable	Significant Change	Neither High nor Low	No change
Service Access Node H (SANH), or similar	Up to date	Minor Change	High	Transform

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Data Storage	Old but serviceable	Transform	Very High	Significant change
Data Capture (e.g Video, pictures and updating critical systems)	Obsolete	Significant Change	Very High	Transform
Data Integration	Old but serviceable	Transform	Very High	Significant change
Mobile Office (e.g Laptop, mobile device)	Obsolete	Transform	Very High	Transform
Internal Customer Service and help desk	Old but serviceable	Significant Change	Neither High nor Low	Minor change

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Remote access to service systems (e.g. intelligence reports, briefings)	Old but serviceable	Transform	High	Minor change
Laptop with access to personal information management systems & data processing	Up to date	Transform	Low	No change
In-Vehicle Mobile Data Terminal	Obsolete	Transform	Very High	Transform
Smartphone/PDA - Access to fire service systems	Old but serviceable	Transform	Neither High nor Low	Minor change
Augmented Reality (heads up displays)	Don't use it	Don't Know	Very Low	Don't know

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Incident Messaging	Old but serviceable	Transform	High	Minor change
Status Messaging	Old but serviceable	Transform	High	Minor change
Command Support Unit	Old but serviceable	Significant Change	Neither High nor Low	Significant change
Communication with partners through voice (e.g. Police, Public Health)	Don't use it	Transform	High	Transform

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Communication with partners through data (e.g. Police, Public Health)	Don't use it	Transform	High	Transform
Partnering with automatic systems failover	Old but serviceable	Significant Change	Neither High nor Low	Minor change
IP Communications (text, audio, video) for emergency calls from citizens	Don't use it	Don't Know	Neither High nor Low	Minor change
Routing of IP Communications (text, audio, video) to first responders	Don't use it	Don't Know	Neither High nor Low	Significant change
Routing of IP Communications (text, audio, video) from first responders to control or peer to peer	Up to date	Significant Change	Neither High nor Low	Significant change
Location information visualisation	Old but serviceable	Significant Change	High	Minor change
Sensor data transmission (e.g. Breathing Apparatus telemetry)	Don't use it	Significant Change	Neither High nor Low	Don't know

Station End Equipment	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Printers	Obsolete	Transform	High	Minor change
Visual Display Unit (VDU)	Old but serviceable	Significant Change	High	Minor change

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales**.**

Records Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated databases with partners	Don't use it	Don't Know	High	Don't know
Broadband wireless access in vehicles (e.g. LAN, MDT, mobile)	Don't use it	Transform	High	Significant change
Image management software (e.g. video, CCTV, pictures, person mounted cameras)	Old but serviceable	Significant Change	Neither High nor Low	Significant change
Integrated GIS	Old but serviceable	Transform	Neither High nor Low	Minor change
Shared Gazetteer	Old but serviceable	Significant Change	Neither High nor Low	Minor change
Video Surveillance	Don't use it	Don't Know	Very Low	Minor change
In-vehicle cameras (cameras facing outwards)	Old but serviceable	Significant Change	Neither High nor Low	Significant change
Person mounted cameras	Old but serviceable	Significant Change	Low	Significant change
Aerial surveillance (e.g. drones)	Up to date	Significant Change	High	Significant change
Integrated databases with partners	Don't use it	Don't Know	High	Don't know
Broadband wireless access in vehicles (e.g. LAN, MDT, mobile)	Don't use it	Transform	High	Significant change

Securing Fire Service Systems	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Encryption	Old but serviceable	Minor Change	High	Minor change

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Data Governance	Old but serviceable	Minor Change	High	Minor change
Identification and Access Management (e.g. Single-Sign on)	Old but serviceable	Transform	High	Minor change
PSN Compliance	Don't use it	No Change	Very Low	No change

Analysis and Mapping	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated Management of Business Processes (e.g. Enterprise resources planning tools such as SAP, Oracle, Microsoft Dynamics)	Don't use it	Significant Change	High	Transform
Remote recording of data (Home Fire Safety Checks, Fire Hydrant Data)	Old but serviceable	Significant Change	High	Transform
Tools to extract and clean data	Don't use it	Significant Change	Neither High nor Low	Significant change
Tools to visualise data	Old but serviceable	Significant Change	High	Transform
Analytic software (displaying information on mobile device)	Don't use it	Transform	High	Transform
Predictive modelling	Obsolete	Transform	High	Transform

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Use of 3rd party analytic services	Up to date	Significant Change	Neither High nor Low	Don't know
Investigative software – fire	Don't use it	No Change	Very Low	No change
Collection and analysis of data from private data sources (e.g. insurance data)	Don't use it	Don't Know	Very Low	Don't know
Collection and analysis of data from public data sources (e.g. local council, ambulance service and police service)	Old but serviceable	Significant Change	High	Significant change

The Use of Social Media: Communication with the public	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Twitter	Very often	Minor Change	High

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Facebook	Very often	Minor Change	High
Youtube	Very often	Minor Change	High
Flickr	Don't Know	Don't Know	Very Low
Instagram	Very often	Minor Change	High
Snapchat	Don't Know	Minor Change	Very Low

The Use of Social Media: Communication within the organisation	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Enterprise networking sites (e.g. Yammer)	Often	Significant Change	Neither High nor Low
Instant messaging (e.g. Chat, Whatsapp)	Never	Minor Change	Neither High nor Low
File Sharing (e.g. Dropbox)	Never	Transform	Neither High nor Low
Wiki	Never	No Change	Very Low
Collaborative Document Sharing (e.g. Google Docs)	Very often	Significant Change	Very High
Micro-blogging (e.g. Twitter)	Never	Significant Change	Low
Video conferencing (e.g. Skype, Facetime)	Never	Significant Change	High
Email	Very often	Minor Change	Very High

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Delivery of systems: IT Outsourcing	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Business Process Outsourcing (Technology and Process)	Very low	Low
Outsourcing (services and support)	Very High	Very High
Outsourcing (Infrastructure)	Low	Neither High nor Low
Outsourcing (Temporary on project by project basis)	Neither High nor Low	Neither High nor Low
Outsourcing (Total IT)	High	High
Insourcing	High	High

Delivery of systems: Cloud	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Cloud (Software)	Very High	Very High
Cloud (Platform)	Neither High nor Low	Neither High nor Low
Cloud (Infrastructure)	Neither High nor Low	Neither High nor Low

Development of Systems	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
In-house systems development	High	High
Collaboration in systems development with other fire services	Very low	Very low
Collaboration with other public sector bodies	Very low	Very low

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Survey Results 3: Royal Berkshire Fire and Rescue Service

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Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
GPS for locating firefighters on the fire ground (Location Services)	Don't use it	No Change	Neither High nor Low	No change
GPS for locating firefighters on call (Location Services)	Don't use it	No Change	Neither High nor Low	Significant change
Automatic vehicle location (for management of resources)	Up to date	No Change	High	No change
Automatic vehicle location (Predictive analytics)	Up to date	No Change	High	No change
Quality monitoring of call handling	Up to date	No Change	High	No change
Workforce management systems (Control)	Up to date	No Change	Very High	No change
Workforce management systems (Corporate)	Up to date	No Change	Very High	No change
Shared Control Centre (with more than one FRS or with other emergency services)	Don't use it	No Change	Low	No change
Exchange of Information across Emergency Services (e.g. MAIT)	Don't use it	No Change	Neither High nor Low	Significant change
Shared Control Systems (e.g. shared data centres driving multiple Emergency Service Control Centres)	Don't use it	No Change	Low	No change
Virtual call centres (e.g. call centres with a cloud based infrastructure)	Don't use it	Transform	High	Transform

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Automatic call distribution systems				

Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN

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Call Line Identification (e.g. EISEC)	Up to date	Minor Change	High	No change
Advanced Mobile Location (AML- Caller location information service for smartphones)	Don't know	No Change	Neither High nor Low	Minor change
Service Access Node H (SANH), or similar	Up to date	Transform	High	Significant change
Computer aided dispatch	Up to date	Minor Change	High	Minor change

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Data Storage	Obsolete	Significant Change	Very High	Significant change
Data Capture (e.g Video, pictures and updating critical systems)	Obsolete	Significant Change	Very High	Significant change
Data Integration	Obsolete	Significant Change	Very High	Significant change
Mobile Office (e.g Laptop, mobile device)	Up to date	Significant Change	High	Significant change
Internal Customer Service and help desk	Up to date	Significant Change	Neither High nor Low	Significant change
Remote access to service systems (e.g. intelligence reports, briefings)	Up to date	Minor Change	High	Significant change
Laptop with access to personal information management systems & data processing	Up to date	Significant Change	High	Significant change
In-Vehicle Mobile Data Terminal	Up to date	Significant Change	High	Significant change

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Smartphone/PDA - Access to fire service systems	Up to date	Significant Change	Neither High nor Low	Significant change
Augmented Reality (heads up displays)	Don't use it	Significant Change	Neither High nor Low	Significant change

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Incident Messaging	Up to date	Significant Change	Neither High nor Low	Minor change
Status Messaging	Up to date	Significant Change	Neither High nor Low	Minor change
Command Support Unit	Old but serviceable	Significant Change	Neither High nor Low	Significant change
Communication with partners through voice (e.g. Police, Public Health)	Up to date	Minor Change	Neither High nor Low	Minor change
Communication with partners through data (e.g. Police, Public Health)	Don't use it	Significant Change	High	Significant change
Partnering with automatic systems failover	Up to date	Significant Change	Neither High nor Low	Minor change
IP Communications (text, audio, video) for emergency calls from citizens	Don't use it	Significant Change	High	Significant change
Routing of IP Communications (text, audio, video) to first responders	Don't use it	Significant Change	High	Significant change

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Routing of IP Communications (text, audio, video) from first responders to control or peer to peer	Don't use it	Significant Change	High	Significant change
Location information visualisation	Old but serviceable	Significant Change	High	Significant change
Sensor data transmission (e.g. Breathing Apparatus telemetry)	Don't use it	Significant Change	High	Significant change

Station End Equipment	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Printers	Old but serviceable	Significant Change	Neither High nor Low	Minor change
Visual Display Unit (VDU)	Don't use it	Significant Change	Neither High nor Low	Minor change

Records Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated databases with partners	Old but serviceable	Significant Change	High	Minor change
Broadband wireless access in vehicles (e.g. LAN, MDT, mobile)	Old but serviceable	Significant Change	High	Significant change

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Image management software (e.g. video, CCTV, pictures, person mounted cameras)	Old but serviceable	Significant Change	High	Significant change
Integrated GIS	Up to date	Significant Change	High	Minor change
Shared Gazetteer	Old but serviceable	Significant Change	High	Minor change
Video Surveillance	Don't use it	Minor Change	Neither High nor Low	Minor change
In-vehicle cameras (cameras facing outwards)	Up to date	Significant Change	Neither High nor Low	Significant change
Person mounted cameras	Old but serviceable	Significant Change	High	Significant change
Aerial surveillance (e.g. drones)	Up to date	Significant Change	High	Significant change
Integrated databases with partners	Old but serviceable	Significant Change	High	Minor change
Broadband wireless access in vehicles (e.g. LAN, MDT, mobile)	Old but serviceable	Significant Change	High	Significant change

Securing Fire Service Systems	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Encryption	Up to date	Significant Change	High	Minor change
Data Governance	Up to date	Significant Change	High	Minor change
Identification and Access Management (e.g. Single-Sign on)	Up to date	Significant Change	High	Minor change
PSN Compliance	Old but serviceable	Significant Change	Very High	Significant change

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

Analysis and Mapping	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated Management of Business Processes (e.g. Enterprise resources planning tools such as SAP, Oracle, Microsoft Dynamics)	Old but serviceable	Significant Change	High	Minor change
Remote recording of data (Home Fire Safety Checks, Fire Hydrant Data)	Old but serviceable	Minor Change	Neither High nor Low	Minor change
Tools to extract and clean data	Old but serviceable	Significant Change	Neither High nor Low	Minor change
Tools to visualise data	Old but serviceable	Significant Change	Neither High nor Low	Minor change
Analytic software (displaying information on mobile device)	Old but serviceable	Significant Change	High	Significant change
Predictive modelling	Old but serviceable	Significant Change	High	Minor change
Use of 3rd party analytic services	Obsolete	No Change	Very Low	No change
Investigative software - fire	Don't use it	Significant Change	Neither High nor Low	Minor change
Collection and analysis of data from private data sources (e.g. insurance data)	Old but serviceable	Significant Change	High	Significant change
Collection and analysis of data from public data sources (e.g. local	Old but serviceable	Significant Change	High	Significant change

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

council, ambulance service and police service)				

The Use of Social Media: Communication with the public	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Twitter	Often	Significant Change	Neither High nor Low
Facebook	Often	Significant Change	Neither High nor Low
Youtube	Occasionally	Significant Change	Neither High nor Low
Flickr	Occasionally	Significant Change	Neither High nor Low
Instagram	Occasionally	Significant Change	Neither High nor Low
Snapchat	Occasionally	Significant Change	Neither High nor Low

The Use of Social Media: Communication within the organisation	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Enterprise networking sites (e.g. Yammer)	Occasionally	Minor Change	Low
Instant messaging (e.g. Chat, Whatsapp)	Often	Significant Change	Neither High nor Low
File Sharing (e.g. Dropbox)	Occasionally	Significant Change	Neither High nor Low

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Wiki	Occasionally	Minor Change	Low
Collaborative Document Sharing (e.g. Google Docs)	Occasionally	Significant Change	Neither High nor Low
Micro-blogging (e.g. Twitter)	Occasionally	Minor Change	Neither High nor Low
Video conferencing (e.g. Skype, Facetime)	Occasionally	Significant Change	High
Email	Often	Significant Change	Very High

Delivery of systems: IT Outsourcing	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Business Process Outsourcing (Technology and Process)	High	High
Outsourcing (services and support)	Neither High nor Low	Neither High nor Low
Outsourcing (Infrastructure)	Neither High nor Low	Neither High nor Low
Outsourcing (Temporary on project by project basis)	Neither High nor Low	Neither High nor Low
Outsourcing (Total IT)	Low	Low
Insourcing	Very High	High

Delivery of systems: Cloud	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level

Cloud (Software)	Very low	High
Cloud (Platform)	Very low	High
Cloud (Infrastructure)	Very low	Very High

Development of Systems	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
In-house systems development	High	High
Collaboration in systems development with other fire services	High	High
Collaboration with other public sector bodies	Low	Low

Survey Results 4: Buckinghamshire Fire and Rescue Service

Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
GPS for locating firefighters on the fire ground (Location Services)	Don't use it	Minor Change	Low	Don't know
GPS for locating firefighters on call (Location Services)	Don't use it	Minor Change	Low	Don't know
Automatic vehicle location (for management of resources)	Up to date	No Change	Very Low	Don't know
Automatic vehicle location (Predictive analytics)	Don't use it	Minor Change	Low	Don't know
Quality monitoring of call handling	Don't Know	Don't Know	Low	Don't know
Workforce management systems (Control)	Don't Know	Don't Know	Very Low	Don't know
Workforce management systems (Corporate)	Up to date	Minor Change	Low	Don't know
Shared Control Centre (with more than one FRS or with other emergency services)	Up to date	No Change	Very Low	Don't know
Exchange of Information across Emergency Services (e.g. MAIT)	Don't Know	Don't Know	Very Low	No change
Shared Control Systems (e.g. shared data centres driving multiple Emergency Service Control Centres)	Don't Know	Don't Know	Very Low	No change
Virtual call centres (e.g. call centres with a cloud based infrastructure)	Don't use it	No Change	Very Low	No change

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

Automatic call distribution systems				

Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Call Line Identification (e.g. EISEC)	Up to date	No Change	Very Low	No change
Advanced Mobile Location (AML- Caller location information service for smartphones)	Don't know	No Change	Very Low	Minor change
Service Access Node H (SANH), or similar	Up to date	Don't Know	Low	Significant change
Computer aided dispatch	Up to date	Don't Know	Low	Significant change

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Data Storage	Up to date	Minor Change	Neither High nor Low	Significant change
Data Capture (e.g Video, pictures and updating critical systems)	Don't use it	No Change	Low	Significant change
Data Integration	Up to date	Significant Change	High	Minor change
Mobile Office (e.g Laptop, mobile device)	Up to date	Minor Change	Neither High nor Low	Minor change
Internal Customer Service and help desk	Up to date	Minor Change	Neither High nor Low	No change

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Remote access to service systems (e.g. intelligence reports, briefings)	Up to date	Minor Change	Neither High nor Low	No change
Laptop with access to personal information management systems & data processing	Up to date	Minor Change	Neither High nor Low	Minor change
In-Vehicle Mobile Data Terminal	Up to date	Significant Change	High	Significant change
Smartphone/PDA - Access to fire service systems	Old but serviceable	Minor Change	Low	Minor change
Augmented Reality (heads up displays)	Don't use it	Don't Know	Very Low	No change

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Incident Messaging	Up to date	Minor Change	Neither High nor Low	Minor change
Status Messaging	Up to date	Minor Change	Neither High nor Low	Minor change
Command Support Unit	Up to date	No Change	Low	No change
Communication with partners through voice (e.g. Police, Public Health)	Up to date	No Change	Low	No change
Communication with partners through data (e.g. Police, Public Health)	Old but serviceable	No Change	Low	Don't know

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Partnering with automatic systems failover	Old but serviceable	Significant Change	High	Don't know
IP Communications (text, audio, video) for emergency calls from citizens	Don't use it	No Change	Neither High nor Low	Don't know
Routing of IP Communications (text, audio, video) to first responders	Up to date	No Change	Neither High nor Low	Don't know
Routing of IP Communications (text, audio, video) from first responders to control or peer to peer	Up to date	No Change	Neither High nor Low	Don't know
Location information visualisation	Up to date	No Change	Neither High nor Low	Minor change
Sensor data transmission (e.g. Breathing Apparatus telemetry)	Up to date	No Change	Neither High nor Low	Minor change

Station End Equipment	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Printers	Old but serviceable	No Change	Very Low	No change
Visual Display Unit (VDU)	Up to date	No Change	Very Low	No change

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

Records Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated databases with partners	Don't know	Don't Know	Low	Minor change
Broadband wireless access in vehicles (e.g. LAN, MDT, mobile)	Old but serviceable	Significant Change	Neither High nor Low	Significant change
Image management software (e.g. video, CCTV, pictures, person mounted cameras)	Up to date	Minor Change	Very Low	Don't know
Integrated GIS	Up to date	Minor Change	Very Low	No change
Shared Gazetteer	Up to date	Minor Change	High	Significant change
Video Surveillance	Old but serviceable	Minor Change	Very Low	No change
In-vehicle cameras (cameras facing outwards)	Up to date	No Change	Neither High nor Low	No change
Person mounted cameras	Don't use it	Don't Know	Very Low	Don't know
Aerial surveillance (e.g. drones)	Up to date	Minor Change	Very Low	No change
Integrated databases with partners	Don't know	Don't Know	Low	Minor change
Broadband wireless access in vehicles (e.g. LAN, MDT, mobile)	Old but serviceable	Significant Change	Neither High nor Low	Significant change

Securing Fire Service Systems	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Encryption	Up to date	No Change	High	No change
Data Governance	Up to date	Minor Change	High	Minor change
Identification and Access Management (e.g. Single-Sign on)	Up to date	Minor Change	High	Minor change
PSN Compliance	Obsolete	No Change	Very Low	Don't know

Analysis and Mapping	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated Management of Business Processes (e.g. Enterprise resources planning tools such as SAP, Oracle, Microsoft Dynamics)	Up to date	Minor Change	High	No change
Remote recording of data (Home Fire Safety Checks, Fire Hydrant Data)	Up to date	Significant Change	High	Minor change
Tools to extract and clean data	Up to date	Minor Change	Neither High nor Low	No change
Tools to visualise data	Up to date	Minor Change	Neither High nor Low	Minor change
Analytic software (displaying information on mobile device)	Up to date	Minor Change	High	No change
Predictive modelling	Up to date	Minor Change	High	No change
Use of 3rd party analytic services	Up to date	Minor Change	Neither High nor Low	No change
Investigative software - fire	Up to date	No Change	Very Low	No change
Collection and analysis of data from private data sources (e.g. insurance data)	Up to date	Minor Change	Low	No change
Collection and analysis of data from public data sources (e.g. local	Old but serviceable	Significant Change	High	Significant change

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales**.**

council, ambulance service and police service)				

The Use of Social Media: Communication with the public	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Twitter	Often	No Change	Neither High nor Low
Facebook	Often	Significant Change	High
Youtube	Occasionally	Minor Change	Low
Flickr	Never	No Change	Very Low
Instagram	Never	No Change	Very Low
Snapchat	Never	No Change	Very Low

The Use of Social Media: Communication within the organisation	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Enterprise networking sites (e.g. Yammer)	Never	Minor Change	Very Low
Instant messaging (e.g. Chat, Whatsapp)	Often	Minor Change	Neither High nor Low

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File Sharing (e.g. Dropbox)	Occasionally	Minor Change	Neither High nor Low
Wiki	Never	No Change	Very Low
Collaborative Document Sharing (e.g. Google Docs)	Never	No Change	Very Low
Micro-blogging (e.g. Twitter)	Never	No Change	Very Low
Video conferencing (e.g. Skype, Facetime)	Very often	Minor Change	High
Email	Very often	Transform	Very High

Delivery of systems: IT Outsourcing	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Business Process Outsourcing (Technology and Process)	Low	Low
Outsourcing (services and support)	Low	Low
Outsourcing (Infrastructure)	Low	Low
Outsourcing (Temporary on project by project basis)	Low	Low
Outsourcing (Total IT)	Very low	Very low
Insourcing	Neither High nor Low	Neither High nor Low

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales**.**

Delivery of systems: Cloud	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Cloud (Software)	Neither High nor Low	Neither High nor Low
Cloud (Platform)	Neither High nor Low	Neither High nor Low
Cloud (Infrastructure)	High	High

Development of Systems	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
In-house systems development	Very low	Very low
Collaboration in systems development with other fire services	High	High
Collaboration with other public sector bodies	Neither High nor Low	Neither High nor Low

Survey Results 5: Cambridge Fire and Rescue Service

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
GPS for locating firefighters on the fire ground (Location Services)	Don't use it	Significant Change	Neither High nor Low	Significant change
GPS for locating firefighters on call (Location Services)	Don't use it	Significant Change	Neither High nor Low	Significant change
Automatic vehicle location (for management of resources)	Up to date	Minor Change	High	Significant change
Automatic vehicle location (Predictive analytics)	Up to date	Significant Change	High	Significant change
Quality monitoring of call handling	Up to date	Minor Change	Neither High nor Low	Minor change
Workforce management systems (Control)	Up to date	Minor Change	High	Minor change
Workforce management systems (Corporate)	Up to date	Minor Change	High	Minor change
Shared Control Centre (with more than one FRS or with other emergency services)	Up to date	Significant Change	Very High	Transform
Exchange of Information across Emergency Services (e.g. MAIT)	Up to date	Significant Change	High	Transform
Shared Control Systems (e.g. shared data centres driving multiple Emergency Service Control Centres)	Old but serviceable	Transform	Very High	Transform
Virtual call centres (e.g. call centres with a cloud based infrastructure)	Old but serviceable	Transform	Very High	Transform

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

Automatic call distribution systems				

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales**.**

Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Call Line Identification (e.g. EISEC)	Old but serviceable	Significant Change	Very High	Transform
Advanced Mobile Location (AML- Caller location information service for smartphones)	Don't use it	Transform	Very High	Transform
Service Access Node H (SANH), or similar	Up to date	No Change	Neither High nor Low	Don't know
Computer aided dispatch	Old but serviceable	Transform	Very High	Transform

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Data Storage	Up to date	Significant Change	Neither High nor Low	Transform
Data Capture (e.g Video, pictures and updating critical systems)	Don't use it	Transform	Neither High nor Low	Transform
Data Integration	Up to date	Significant Change	Neither High nor Low	Transform
Mobile Office (e.g Laptop, mobile device)	Up to date	Transform	High	Transform
Internal Customer Service and help desk	Old but serviceable	Significant Change	High	No change
Remote access to service systems (e.g. intelligence reports, briefings)	Up to date	Minor Change	Neither High nor Low	Minor change
Laptop with access to personal information management systems & data processing	Up to date	Minor Change	Neither High nor Low	Minor change

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

In-Vehicle Mobile Data Terminal	Up to date	Significant Change	Neither High nor Low	Significant change
Smartphone/PDA - Access to fire service systems	Old but serviceable	Minor Change	Neither High nor Low	Significant change
Augmented Reality (heads up displays)	Don't use it	Don't Know	Neither High nor Low	Don't know

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Incident Messaging	Up to date	Significant Change	Neither High nor Low	Transform
Status Messaging	Up to date	Significant Change	Neither High nor Low	Transform
Command Support Unit	Up to date	Transform	Neither High nor Low	Transform
Communication with partners through voice (e.g. Police, Public Health)	Up to date	Minor Change	Neither High nor Low	Minor change
Communication with partners through data (e.g. Police, Public Health)	Old but serviceable	Significant Change	High	Don't know
Partnering with automatic systems failover	Up to date	Minor Change	High	No change
IP Communications (text, audio, video) for emergency calls from citizens	Don't use it	Transform	Neither High nor Low	Transform

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

Routing of IP Communications (text, audio, video) to first responders	Don't use it	Transform	Neither High nor Low	Transform
Routing of IP Communications (text, audio, video) from first responders to control or peer to peer	Don't use it	Transform	Neither High nor Low	Transform
Location information visualisation	Don't use it	Transform	Low	Significant change
Sensor data transmission (e.g. Breathing Apparatus telemetry)	Don't use it	Transform	Neither High nor Low	Transform

Station End Equipment	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Printers	Old but serviceable	Significant Change	Very High	Minor change
Visual Display Unit (VDU)	Old but serviceable	Significant Change	Very High	Minor change

Records Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated databases with partners	Don't use it	Minor Change	Very Low	No change
Broadband wireless access in vehicles (e.g. LAN, MDT, mobile)	Don't use it	Significant Change	Neither High nor Low	Transform

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales**.**

Image management software (e.g. video, CCTV, pictures, person mounted cameras)	Up to date	Significant Change	Neither High nor Low	Significant change
Integrated GIS	Up to date	Significant Change	Neither High nor Low	No change
Shared Gazetteer	Up to date	Minor Change	High	Minor change
Video Surveillance	Don't use it	No Change	Very Low	Don't know
In-vehicle cameras (cameras facing outwards)	Up to date	Minor Change	Neither High nor Low	Don't know
Person mounted cameras	Don't use it	Significant Change	High	Don't know
Aerial surveillance (e.g. drones)	Don't use it	Don't Know	Very Low	Don't know

Securing Fire Service Systems	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Encryption	Up to date	Minor Change	High	Don't know
Data Governance	Up to date	Minor Change	Very High	Don't know
Identification and Access Management (e.g. Single-Sign on)	Up to date	Minor Change	High	Don't know
PSN Compliance	Don't use it	Don't Know	Very Low	Don't know

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales**.**

Analysis and Mapping	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated Management of Business Processes (e.g. Enterprise resources planning tools such as SAP, Oracle, Microsoft Dynamics)	Up to date	Transform	High	Minor change
Remote recording of data (Home Fire Safety Checks, Fire Hydrant Data)	Up to date	Minor Change	High	Minor change
Tools to extract and clean data	Up to date	Minor Change	Neither High nor Low	No change
Tools to visualise data	Up to date	Minor Change	High	No change
Analytic software (displaying information on mobile device)	Up to date	Transform	Low	No change
Predictive modelling	Old but serviceable	Significant Change	Neither High nor Low	No change
Use of 3rd party analytic services	Obsolete	No Change	Very Low	No change
Investigative software - fire	Don't know	Don't Know	Neither High nor Low	Don't know
Collection and analysis of data from private data sources (e.g. insurance data)	Up to date	Don't Know	Neither High nor Low	Minor change
Collection and analysis of data from public data sources (e.g. local council, ambulance service and police service)	Up to date	Minor Change	High	Minor change

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales**.**

The Use of Social Media: Communication with the public	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Twitter	Very often	Minor Change	High
Facebook	Very often	Minor Change	High
Youtube	Very often	Minor Change	High
Flickr	Very often	Minor Change	High
Instagram	Very often	Minor Change	High
Snapchat	Never	Minor Change	Very Low

The Use of Social Media: Communication within the organisation	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Enterprise networking sites (e.g. Yammer)	Very often	Transform	High
Instant messaging (e.g. Chat, Whatsapp)	Very often	Minor Change	Neither High nor Low
File Sharing (e.g. Dropbox)	Very often	Minor Change	Neither High nor Low
Wiki	Occasionally	Minor Change	Very Low
Collaborative Document Sharing (e.g. Google Docs)	Occasionally	Significant Change	Neither High nor Low
Micro-blogging (e.g. Twitter)	Very often	Minor Change	High

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

Video conferencing (e.g. Skype, Facetime)	Occasionally	Transform	High
Email	Very often	Minor Change	High

Delivery of systems: IT Outsourcing	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Business Process Outsourcing (Technology and Process)	Neither High nor Low	Neither High nor Low
Outsourcing (services and support)	Neither High nor Low	Neither High nor Low
Outsourcing (Infrastructure)	High	Neither High nor Low
Outsourcing (Temporary on project by project basis)	High	Neither High nor Low
Outsourcing (Total IT)	High	Neither High nor Low
Insourcing	High	Neither High nor Low

Delivery of systems: Cloud	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Cloud (Software)	Low	Neither High nor Low
Cloud (Platform)	Very low	Low
Cloud (Infrastructure)	Very low	Very low

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

Development of Systems	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
In-house systems development	Low	Low
Collaboration in systems development with other fire services	Very low	Very low
Collaboration with other public sector bodies	Very low	Very low

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
GPS for locating firefighters on the fire ground (Location Services)	Don't use it	Significant Change	Neither High nor Low	Minor change
GPS for locating firefighters on call (Location Services)	Don't use it	Significant Change	High	Minor change
Automatic vehicle location (for management of resources)	Up to date	Minor Change	Very High	Significant change
Automatic vehicle location (Predictive analytics)	Up to date	Minor Change	Very High	Significant change
Quality monitoring of call handling	Up to date	Minor Change	Very High	Minor change
Workforce management systems (Control)	Old but serviceable	Transform	High	Minor change
Workforce management systems (Corporate)	Old but serviceable	Transform	High	Minor change
Shared Control Centre (with more than one FRS or with other emergency services)	Don't use it	Significant Change	Neither High nor Low	No change
Exchange of Information across Emergency Services (e.g. MAIT)	Don't use it	Significant Change	Neither High nor Low	Minor change
Shared Control Systems (e.g. shared data centres driving multiple Emergency Service Control Centres)	Don't use it	Don't Know	Neither High nor Low	No change
Virtual call centres (e.g. call centres with a cloud based infrastructure)	Don't use it	Minor Change	Low	Minor change

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

Automatic Call Distribution Systems				

Survey Results 6: Cleveland Fire Brigade

Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Call Line Identification (e.g. EISEC)	Up to date	No Change	Very High	No change
Advanced Mobile Location (AML- Caller location information service for smartphones)	Don't use it	Significant Change	High	Minor change
Service Access Node H (SANH), or similar	Don't use it	No Change	Neither High nor Low	Transform
Computer aided dispatch	Up to date	Minor Change	Very High	Significant change

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Data Storage	Up to date	Significant Change	Neither High nor Low	Minor change
Data Capture (e.g Video, pictures and updating critical systems)	Up to date	Significant Change	Neither High nor Low	Transform
Data Integration	Up to date	Significant Change	Neither High nor Low	Significant change
Mobile Office (e.g Laptop, mobile device)	Up to date	Transform	High	Minor change

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Internal Customer Service and help desk	Up to date	Significant Change	Neither High nor Low	Minor change
Remote access to service systems (e.g. intelligence reports, briefings)	Up to date	Significant Change	High	Significant change
Laptop with access to personal information management systems & data processing	Up to date	Significant Change	Neither High nor Low	Minor change
In-Vehicle Mobile Data Terminal	Up to date	Significant Change	Very High	Transform
Smartphone/PDA - Access to fire service systems	Up to date	Significant Change	High	Transform
Augmented Reality (heads up displays)	Up to date	Transform	High	No change
Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Incident Messaging	Up to date	Significant Change	High	Minor change
Status Messaging	Up to date	Significant Change	High	Minor change
Command Support Unit	Up to date	Significant Change	Low	Significant change
Communication with partners through voice (e.g. Police, Public Health)	Up to date	Significant Change	Low	Significant change
Communication with partners through data (e.g. Police, Public Health)	Don't use it	Significant Change	High	Significant change
Partnering with automatic systems failover	Up to date	Significant Change	High	Minor change

IP Communications (text, audio, video) for emergency calls from citizens	Don't use it	Transform	High	Minor change
Routing of IP Communications (text, audio, video) to first responders	Don't use it	Transform	High	Transform
Routing of IP Communications (text, audio, video) from first responders to control or peer to peer	Don't use it	Transform	High	Transform
Location information visualisation	Don't use it	Transform	High	Transform
Sensor data transmission (e.g. Breathing Apparatus telemetry)	Up to date	Minor Change	Low	Minor change

Station End Equipment	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Printers	Old but serviceable	Significant Change	High	Significant change
Visual Display Unit (VDU)	Up to date	Significant Change	High	Significant change

Records Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

Integrated databases with partners	Don't use it	Significant Change	Low	Minor change
Broadband wireless access in vehicles (e.g. LAN, MDT, mobile)	Old but serviceable	Transform	High	Transform
Image management software (e.g. video, CCTV, pictures, person mounted cameras)	Up to date	Significant Change	High	Transform
Integrated GIS	Up to date	Minor Change	Neither High nor Low	Minor change
Shared Gazetteer	Old but serviceable	Significant Change	High	Minor change
Video Surveillance	Don't use it	Minor Change	Neither High nor Low	Significant change
In-vehicle cameras (cameras facing outwards)	Up to date	Significant Change	High	Significant change
Person mounted cameras	Up to date	Significant Change	High	Significant change
Aerial surveillance (e.g. drones)	Don't use it	Minor Change	Neither High nor Low	Significant change

Securing Fire Service Systems	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Encryption	Up to date	Significant Change	High	Significant change
Data Governance	Up to date	Minor Change	Very High	Significant change
Identification and Access Management (e.g. Single-Sign on)	Up to date	Significant Change	Neither High nor Low	Significant change
PSN Compliance	Don't use it	Significant Change	High	Significant change

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

Analysis and Mapping	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated Management of Business Processes (e.g. Enterprise resources planning tools such as SAP, Oracle, Microsoft Dynamics)	Don't use it	Significant Change	Neither High nor Low	Minor change
Remote recording of data (Home Fire Safety Checks, Fire Hydrant Data)	Up to date	Transform	Very High	Significant change
Tools to extract and clean data	Up to date	Significant Change	High	Minor change
Tools to visualise data	Don't use it	Significant Change	High	Minor change
Analytic software (displaying information on mobile device)	Don't use it	Significant Change	Neither High nor Low	Minor change
Predictive modelling	Up to date	Significant Change	High	Minor change
Use of 3rd party analytic services	Don't use it	Minor Change	Neither High nor Low	Minor change
Investigative software - fire	Up to date	Transform	Very High	Minor change
Collection and analysis of data from private data sources (e.g. insurance data)	Up to date	Minor Change	Neither High nor Low	Minor change
Collection and analysis of data from public data sources (e.g. local	Up to date	Minor Change	Neither High nor Low	Minor change

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales**.**

council, ambulance service and police service)				

The Use of Social Media: Communication with the public	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Twitter	Very often	Significant Change	High
Facebook	Very often	Significant Change	High
Youtube	Occasionally	Significant Change	Neither High nor Low
Flickr	Never	Minor Change	Low
Instagram	Never	Minor Change	Low
Snapchat	Never	Minor Change	Low

The Use of Social Media: Communication within the organisation	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Enterprise networking sites (e.g. Yammer)	Occasionally	Significant Change	Low
Instant messaging (e.g. Chat, Whatsapp)	Often	Significant Change	Low
File Sharing (e.g. Dropbox)	Often	Significant Change	Neither High nor Low

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

Wiki	Occasionally	Minor Change	Low
Collaborative Document Sharing (e.g. Google Docs)	Often	Transform	High
Micro-blogging (e.g. Twitter)	Often	Minor Change	Neither High nor Low
Video conferencing (e.g. Skype, Facetime)	Occasionally	Significant Change	Neither High nor Low
Email	Very often	Significant Change	High

Delivery of systems: IT Outsourcing	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Business Process Outsourcing (Technology and Process)	Very low	Low
Outsourcing (services and support)	Low	Very low
Outsourcing (Infrastructure)	Very low	Very low
Outsourcing (Temporary on project by project basis)	Low	Low
Outsourcing (Total IT)	Very low	Very low
Insourcing	Low	Low

Delivery of systems: Cloud	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

Cloud (Software)	Neither High nor Low	High
Cloud (Platform)	Low	Neither High nor Low
Cloud (Infrastructure)	Low	Neither High nor Low

Development of Systems	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
In-house systems development	Very High	Very High
Collaboration in systems development with other fire services	Neither High nor Low	Neither High nor Low
Collaboration with other public sector bodies	Low	Neither High nor Low

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
GPS for locating firefighters on the fire ground (Location Services)	Don't know	Significant Change	Neither High nor Low	Don't know
GPS for locating firefighters on call (Location Services)	Don't know	Significant Change	Neither High nor Low	Don't know
Automatic vehicle location (for management of resources)	Up to date	Minor Change	High	Don't know
Automatic vehicle location (Predictive analytics)	Up to date	Minor Change	High	Don't know
Quality monitoring of call handling	Up to date	Minor Change	Very High	Minor change
Workforce management systems (Control)	Up to date	Minor Change	Very High	Significant change
Workforce management systems (Corporate)	Old but serviceable	Transform	Very High	Don't know
Shared Control Centre (with more than one FRS or with other emergency services)	Up to date	Minor Change	High	Don't know
Exchange of Information across Emergency Services (e.g. MAIT)	Up to date	Significant Change	High	Don't know
Shared Control Systems (e.g. shared data centres driving multiple Emergency Service Control Centres)	Don't use it	Transform	Neither High nor Low	Don't know
Virtual call centres (e.g. call centres with a cloud based infrastructure)	Up to date	Don't Know	Neither High nor Low	Don't know

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

Automatic call distribution systems				

Survey Results 7: Cornwall Fire and Rescue Service

Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Call Line Identification (e.g. EISEC)	Up to date	Don't Know	High	Don't know
Advanced Mobile Location (AML- Caller location information service for smartphones)	Don't use it	Don't Know	Neither High nor Low	Don't know
Service Access Node H (SANH), or similar	Don't use it	Don't Know	Neither High nor Low	Don't know
Computer aided dispatch	Up to date	Don't Know	High	Minor change

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Data Storage	Up to date	Minor Change	High	Minor change
Data Capture (e.g Video, pictures and updating critical systems)	Old but serviceable	Significant Change	High	Significant change
Data Integration	Up to date	Significant Change	Very High	Don't know
Mobile Office (e.g Laptop, mobile device)	Up to date	Significant Change	Very High	Don't know
Internal Customer Service and help desk	Don't use it	Don't Know	Neither High nor Low	Don't know
Remote access to service systems (e.g. intelligence reports, briefings)	Old but serviceable	Significant Change	High	Don't know

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

Laptop with access to personal information management systems & data processing	Up to date	Minor Change	Very High	Don't know
In-Vehicle Mobile Data Terminal	Up to date	Minor Change	Very High	Transform
Smartphone/PDA - Access to fire service systems	Up to date	Significant Change	Very High	Don't know
Augmented Reality (heads up displays)	Don't use it	Don't Know	Low	Don't know

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Incident Messaging	Don't use it	Don't Know	High	Don't know
Status Messaging	Don't use it	Don't Know	High	Don't know
Command Support Unit	Don't use it	Don't Know	Very High	Minor change
Communication with partners through voice (e.g. Police, Public Health)	Up to date	Minor Change	Very High	Don't know
Communication with partners through data (e.g. Police, Public Health)	Up to date	Minor Change	Very High	Don't know
Partnering with automatic systems failover	Don't know	Don't Know	Very High	Don't know
IP Communications (text, audio, video) for emergency calls from citizens	Don't use it	Don't Know	Neither High nor Low	Don't know

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

Routing of IP Communications (text, audio, video) to first responders	Don't know	Don't Know	Neither High nor Low	Don't know
Routing of IP Communications (text, audio, video) from first responders to control or peer to peer	Don't use it	Don't Know	Neither High nor Low	Don't know
Location information visualisation	Don't use it	Don't Know	Neither High nor Low	Don't know
Sensor data transmission (e.g. Breathing Apparatus telemetry)	Don't know	Don't Know	High	Don't know

Station End Equipment	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Printers	Up to date	Minor Change	Neither High nor Low	Don't know
Visual Display Unit (VDU)	Up to date	Minor Change	Neither High nor Low	Don't know

Records Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated databases with partners	Up to date	Minor Change	High	Don't know
Broadband wireless access in vehicles (e.g. LAN, MDT, mobile)	Obsolete	Significant Change	High	Significant change

Image management software (e.g. video, CCTV, pictures, person mounted cameras)	Don't know	Significant Change	High	Minor change
Integrated GIS	Up to date	Don't Know	Neither High nor Low	Don't know
Shared Gazetteer	Up to date	Don't Know	Neither High nor Low	Don't know
Video Surveillance	Up to date	Minor Change	Neither High nor Low	Don't know
In-vehicle cameras (cameras facing outwards)	Don't use it	Significant Change	High	Don't know
Person mounted cameras	Don't use it	Significant Change	High	Don't know
Aerial surveillance (e.g. drones)	Don't use it	Significant Change	High	Don't know

Securing Fire Service Systems	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Encryption	Don't know	Don't Know	Neither High nor Low	Don't know
Data Governance	Up to date	Minor Change	Very High	Don't know
Identification and Access Management (e.g. Single-Sign on)	Don't know	Don't Know	Very High	Don't know
PSN Compliance	Don't know	Minor Change	High	Significant change

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

Analysis and Mapping	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated Management of Business Processes (e.g. Enterprise resources planning tools such as SAP, Oracle, Microsoft Dynamics)	Up to date	Significant Change	High	Don't know
Remote recording of data (Home Fire Safety Checks, Fire Hydrant Data)	Old but serviceable	Significant Change	Very High	Significant change
Tools to extract and clean data	Up to date	Minor Change	High	Don't know
Tools to visualise data	Up to date	Minor Change	Very High	No change
Analytic software (displaying information on mobile device)	Don't use it	Significant Change	High	No change
Predictive modelling	Old but serviceable	Significant Change	High	Minor change
Use of 3rd party analytic services	Don't use it	Significant Change	Neither High nor Low	Don't know
Investigative software - fire	Don't use it	Don't Know	Neither High nor Low	Don't know
Collection and analysis of data from private data sources (e.g. insurance data)	Don't use it	Minor Change	Neither High nor Low	No change

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

The Use of Social Media: Communication with the public	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Twitter	Often	Minor Change	Neither High nor Low
Facebook	Often	Minor Change	Neither High nor Low
Youtube	Occasionally	Minor Change	Neither High nor Low
Flickr	Don't Know	Don't Know	Neither High nor Low
Instagram	Never	Don't Know	Neither High nor Low
Snapchat	Never	Don't Know	Neither High nor Low

The Use of Social Media: Communication within the organisation	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Enterprise networking sites (e.g. Yammer)	Don't Know	Don't Know	Neither High nor Low
Instant messaging (e.g. Chat, Whatsapp)	Occasionally	Significant Change	Neither High nor Low
File Sharing (e.g. Dropbox)	Never	Significant Change	High
Wiki	Don't Know	Don't Know	Neither High nor Low
Collaborative Document Sharing (e.g. Google Docs)	Never	Significant Change	High
Micro-blogging (e.g. Twitter)	Often	Minor Change	Neither High nor Low
Video conferencing (e.g. Skype, Facetime)	Very often	Minor Change	High
Email	Very often	Minor Change	High

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales**.**

Delivery of systems: IT Outsourcing	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Business Process Outsourcing (Technology and Process)	Very High	Very High
Outsourcing (services and support)	Low	High
Outsourcing (Infrastructure)	Very High	Very High
Outsourcing (Temporary on project by project basis)	Very High	Very High
Outsourcing (Total IT)	Low	Very High
Insourcing	Very High	Very High

Delivery of systems: Cloud	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Cloud (Software)	Very High	Very High
Cloud (Platform)	High	High
Cloud (Infrastructure)	High	High

Development of Systems	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
In-house systems development	High	High

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

Collaboration in systems development with other fire services	Neither High nor Low	Neither High nor Low
Collaboration with other public sector bodies	High	High

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
GPS for locating firefighters on the fire ground (Location Services)	Don't use it	No Change	Neither High nor Low	No change
GPS for locating firefighters on call (Location Services)	Don't use it	No Change	Neither High nor Low	Significant change
Automatic vehicle location (for management of resources)	Up to date	No Change	High	No change
Automatic vehicle location (Predictive analytics)	Up to date	No Change	High	No change
Quality monitoring of call handling	Up to date	No Change	High	No change
Workforce management systems (Control)	Up to date	No Change	Very High	No change
Workforce management systems (Corporate)	Up to date	No Change	Very High	No change
Shared Control Centre (with more than one FRS or with other emergency services)	Don't use it	No Change	Low	No change
Exchange of Information across Emergency Services (e.g. MAIT)	Don't use it	No Change	Neither High nor Low	Significant change
Shared Control Systems (e.g. shared data centres driving multiple Emergency Service Control Centres)	Don't use it	No Change	Low	No change
Virtual call centres (e.g. call centres with a cloud based infrastructure)	Don't use it	Transform	High	Transform

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales**.**

Automatic call distribution systems				

Survey Results 8: County Durham and Darlington Fire and Rescue Service

Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Call Line Identification (e.g. EISEC)	Up to date	Minor Change	High	No change
Advanced Mobile Location (AML- Caller location information service for smartphones)	Don't know	No Change	Neither High nor Low	Minor change
Service Access Node H (SANH), or similar	Up to date	Transform	High	Significant change
Computer aided dispatch	Up to date	Minor Change	High	Minor change

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Data Storage	Up to date	Significant Change	High	Minor change
Data Capture (e.g Video, pictures and updating critical systems)	Up to date	Minor Change	Neither High nor Low	Significant change
Data Integration	Up to date	Significant Change	High	Significant change
Mobile Office (e.g Laptop, mobile device)	Up to date	Minor Change	Neither High nor Low	Minor change
Internal Customer Service and help desk	Up to date	Minor Change	Neither High nor Low	No change
Remote access to service systems (e.g. intelligence reports, briefings)	Up to date	Minor Change	High	Minor change

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

Laptop with access to personal information management systems & data processing	Up to date	Minor Change	High	Minor change
In-Vehicle Mobile Data Terminal	Old but serviceable	Minor Change	Very High	Minor change
Smartphone/PDA - Access to fire service systems	Up to date	Minor Change	Very High	Minor change
Augmented Reality (heads up displays)	Don't use it	No Change	Low	No change

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Incident Messaging	Up to date	Minor Change	Very High	Minor change
Status Messaging	Up to date	Minor Change	Very High	Minor change
Command Support Unit	Old but serviceable	Minor Change	High	Minor change
Communication with partners through voice (e.g. Police, Public Health)	Up to date	Significant Change	Very High	Minor change
Communication with partners through data (e.g. Police, Public Health)	Up to date	Significant Change	Very High	Minor change
Partnering with automatic systems failover	Up to date	Minor Change	Very High	Minor change

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

IP Communications (text, audio, video) for emergency calls from citizens	Up to date	Minor Change	Very High	Minor change
Routing of IP Communications (text, audio, video) to first responders	Up to date	Minor Change	Very High	Minor change
Routing of IP Communications (text, audio, video) from first responders to control or peer to peer	Up to date	Minor Change	Very High	Minor change
Location information visualisation	Up to date	Minor Change	Very High	Minor change
Sensor data transmission (e.g. Breathing Apparatus telemetry)	Up to date	No Change	Very High	No change

Station End Equipment	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Printers	Old but serviceable	Minor Change	Very High	Minor change
Visual Display Unit (VDU)	Up to date	No Change	Very High	No change

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

Records Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated databases with partners	Up to date	Minor Change	High	Minor change
Broadband wireless access in vehicles (e.g. LAN, MDT, mobile)	Don't use it	Significant Change	High	Significant change
Image management software (e.g. video, CCTV, pictures, person mounted cameras)	Up to date	Minor Change	High	Significant change
Integrated GIS	Up to date	Minor Change	High	Minor change
Shared Gazetteer	Up to date	Minor Change	High	Minor change
Video Surveillance	Up to date	Minor Change	High	Minor change
In-vehicle cameras (cameras facing outwards)	Up to date	Minor Change	High	Minor change
Person mounted cameras	Don't use it	Significant Change	High	Significant change
Aerial surveillance (e.g. drones)	Up to date	Significant Change	High	Significant change

Securing Fire Service Systems	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Encryption	Up to date	Minor Change	Very High	Minor change
Data Governance	Up to date	Minor Change	Very High	Minor change
Identification and Access Management (e.g. Single-Sign on)	Up to date	Minor Change	High	Minor change
PSN Compliance	Up to date	Minor Change	High	Minor change

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

Analysis and Mapping	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated Management of Business Processes (e.g. Enterprise resources planning tools such as SAP, Oracle, Microsoft Dynamics)	Up to date	Minor Change	Very High	Minor change
Remote recording of data (Home Fire Safety Checks, Fire Hydrant Data)	Up to date	Significant Change	Very High	Minor change
Tools to extract and clean data	Up to date	Minor Change	High	No change
Tools to visualise data	Up to date	Minor Change	High	No change
Analytic software (displaying information on mobile device)	Up to date	Minor Change	High	No change
Predictive modelling	Up to date	Minor Change	High	No change
Use of 3rd party analytic services	Don't use it	No Change	Neither High nor Low	No change
Investigative software - fire	Up to date	Minor Change	High	No change
Collection and analysis of data from private data sources (e.g. insurance data)	Up to date	Minor Change	High	No change

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales**.**

The Use of Social Media: Communication with the public	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Twitter	Very often	Minor Change	High
Facebook	Very often	Minor Change	Very High
Youtube	Occasionally	Minor Change	Neither High nor Low
Flickr	Never	No Change	Neither High nor Low
Instagram	Often	Minor Change	Neither High nor Low
Snapchat	Never	No Change	Neither High nor Low

The Use of Social Media: Communication within the organisation	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Enterprise networking sites (e.g. Yammer)	Occasionally	Significant Change	Neither High nor Low
Instant messaging (e.g. Chat, Whatsapp)	Never	No Change	Very Low
File Sharing (e.g. Dropbox)	Very often	Significant Change	High
Wiki	Never	No Change	Very Low
Collaborative Document Sharing (e.g. Google Docs)	Very often	Significant Change	High
Micro-blogging (e.g. Twitter)	Occasionally	No Change	Low
Video conferencing (e.g. Skype, Facetime)	Occasionally	Minor Change	Neither High nor Low
Email	Very often	Significant Change	High

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

Delivery of systems: IT Outsourcing	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Business Process Outsourcing (Technology and Process)	Low	Neither High nor Low
Outsourcing (services and support)	High	High
Outsourcing (Infrastructure)	Neither High nor Low	High
Outsourcing (Temporary on project by project basis)	Low	High
Outsourcing (Total IT)	Neither High nor Low	Neither High nor Low
Insourcing	Low	Low

Delivery of systems: Cloud	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Cloud (Software)	Neither High nor Low	High
Cloud (Platform)	Neither High nor Low	High
Cloud (Infrastructure)	Neither High nor Low	High

Development of Systems	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
In-house systems development	Low	Neither High nor Low
Collaboration in systems development with other fire services	Low	High

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Collaboration with other public sector bodies	Low	High

Survey Results 9: Cumbria Fire and Rescue Service

Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
GPS for locating firefighters on the fire ground (Location Services)	Don't use it	No Change	Low	Significant change
GPS for locating firefighters on call (Location Services)	Don't use it	No Change	Very Low	Don't know
Automatic vehicle location (for management of resources)	Up to date	No Change	High	No change
Automatic vehicle location (Predictive analytics)	Don't know	Don't Know	Neither High nor Low	Don't know
Quality monitoring of call handling	Up to date	Minor Change	High	Significant change
Workforce management systems (Control)	Don't know	Don't Know	High	Don't know
Workforce management systems (Corporate)	Up to date	Minor Change	High	Significant change
Shared Control Centre (with more than one FRS or with other emergency services)	Up to date	No Change	High	No change
Exchange of Information across Emergency Services (e.g. MAIT)	Up to date	Minor Change	High	Significant change
Shared Control Systems (e.g. shared data centres driving multiple Emergency Service Control Centres)	Don't know	Don't Know	Neither High nor Low	Don't know
Virtual call centres (e.g. call centres with a cloud-based infrastructure)	Don't know	Don't Know	Low	Don't know
Automatic call distribution	Up to date		High	

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales**.**

Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Call Line Identification (e.g. EISEC)	Up to date	Minor Change	Neither High nor Low	Minor change
Advanced Mobile Location (AML- Caller location information service for smartphones)	Old but serviceable	Significant Change	High	Significant change
Service Access Node H (SANH), or similar	Up to date	Minor Change	Neither High nor Low	Don't know
Computer aided dispatch	Up to date	Minor Change	High	Significant change

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Data Storage	Old but serviceable	Significant Change	High	Significant change
Data Capture (e.g Video, pictures and updating critical systems)	Old but serviceable	Significant Change	Neither High nor Low	Significant change
Data Integration	Old but serviceable	Significant Change	High	Significant change
Mobile Office (e.g Laptop, mobile device)	Up to date	Significant Change	Neither High nor Low	Significant change
Internal Customer Service and help desk	Don't know	Don't Know	Neither High nor Low	Minor change

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales**.**

	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Remote access to service systems (e.g. intelligence reports, briefings)	Old but serviceable	Significant Change	High	Significant change
Laptop with access to personal information management systems & data processing	Old but serviceable	Significant Change	High	Significant change
In-Vehicle Mobile Data Terminal	Old but serviceable	Significant Change	Very High	Significant change
Smartphone/PDA - Access to fire service systems	Old but serviceable	Significant Change	High	Minor change
Augmented Reality (heads up displays)	Don't use it	Significant Change	Neither High nor Low	Minor change
Fire ground Management	**Condition of Technology**	**Expected Change 3-5 Year Period**	**Priority Level**	**Expected Changes due to ESN**
Incident Messaging	Up to date	Significant Change	Neither High nor Low	Significant change
Status Messaging	Up to date	Significant Change	Neither High nor Low	Significant change
Command Support Unit	Old but serviceable	Significant Change	High	Significant change
Communication with partners through voice (e.g. Police, Public Health)	Old but serviceable	Significant Change	High	Significant change
Communication with partners through data (e.g. Police, Public Health)	Old but serviceable	Significant Change	High	Significant change
Partnering with automatic systems failover	Don't know	Don't Know	Very High	Don't know
IP Communications (text, audio, video) for emergency calls from citizens	Don't know	Significant Change	High	Significant change

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales**.**

Routing of IP Communications (text, audio, video) to first responders	Don't know	Significant Change	Neither High nor Low	Minor change
Routing of IP Communications (text, audio, video) from first responders to control or peer to peer	Don't know	Significant Change	Neither High nor Low	Minor change
Location information visualisation	Don't know	Significant Change	Neither High nor Low	Minor change
Sensor data transmission (e.g. Breathing Apparatus telemetry)	Old but serviceable	Significant Change	High	Significant change

Station End Equipment	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Printers	Old but serviceable	Significant Change	Neither High nor Low	Significant change
Visual Display Unit (VDU)	Old but serviceable	Significant Change	Neither High nor Low	Significant change

Records Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated databases with partners	Don't know	Don't Know	High	Significant change
Broadband wireless access in vehicles (e.g. LAN, MDT, mobile)	Old but serviceable	Significant Change	High	Minor change

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

Image management software (e.g. video, CCTV, pictures, person mounted cameras)	Don't use it	Significant Change	Neither High nor Low	Significant change
Integrated GIS	Don't know	Don't Know	Neither High nor Low	Minor change
Shared Gazetteer	Don't know	Don't Know	Neither High nor Low	Minor change
Video Surveillance	Don't use it	Significant Change	Neither High nor Low	Significant change
In-vehicle cameras (cameras facing outwards)	Old but serviceable	Significant Change	Neither High nor Low	Minor change
Person mounted cameras	Don't use it	Significant Change	Neither High nor Low	Significant change
Aerial surveillance (e.g. drones)	Don't use it	Significant Change	Neither High nor Low	Significant change

Securing Fire Service Systems	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Encryption	Up to date	Significant Change	Very High	Significant change
Data Governance	Up to date	Significant Change	Very High	Significant change
Identification and Access Management (e.g. Single-Sign on)	Don't use it	Significant Change	High	Significant change
PSN Compliance	Up to date	Minor Change	Very High	Minor change

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

Analysis and Mapping	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated Management of Business Processes (e.g. Enterprise resources planning tools such as SAP, Oracle, Microsoft Dynamics)	Don't know	Don't Know	Neither High nor Low	Don't know
Remote recording of data (Home Fire Safety Checks, Fire Hydrant Data)	Don't use it	Significant Change	High	Significant change
Tools to extract and clean data	Don't know	Don't Know	Neither High nor Low	Don't know
Tools to visualise data	Don't know	Don't Know	Neither High nor Low	Don't know
Analytic software (displaying information on mobile device)	Don't know	Don't Know	Neither High nor Low	Don't know
Predictive modelling	Don't know	Don't Know	Neither High nor Low	Don't know
Use of 3rd party analytic services	Don't know	Don't Know	Neither High nor Low	Don't know
Investigative software - fire	Don't use it	Significant Change	Neither High nor Low	Don't know
Collection and analysis of data from private data sources (e.g. insurance data)	Don't use it	Don't Know	Neither High nor Low	Don't know

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

The Use of Social Media: Communication with the public	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Twitter	Occasionally	Significant Change	Neither High nor Low
Facebook	Occasionally	Significant Change	Neither High nor Low
Youtube	Never	Significant Change	Low
Flickr	Never	Significant Change	Low
Instagram	Never	Significant Change	Low
Snapchat	Never	Significant Change	Low

The Use of Social Media: Communication within the organisation	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Enterprise networking sites (e.g. Yammer)	Never	Significant Change	Low
Instant messaging (e.g. Chat, Whatsapp)	Never	Significant Change	Low
File Sharing (e.g. Dropbox)	Never	Significant Change	Low
Wiki	Never	Significant Change	Low
Collaborative Document Sharing (e.g. Google Docs)	Never	Significant Change	Low
Micro-blogging (e.g. Twitter)	Never	Significant Change	Neither High nor Low
Video conferencing (e.g. Skype, Facetime)	Occasionally	Significant Change	Neither High nor Low
Email	Very often	Minor Change	Neither High nor Low

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

Delivery of systems: IT Outsourcing	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Business Process Outsourcing (Technology and Process)	Low	Low
Outsourcing (services and support)	Neither High nor Low	Low
Outsourcing (Infrastructure)	Low	Low
Outsourcing (Temporary on project by project basis)	Low	Low
Outsourcing (Total IT)	Low	Low
Insourcing	Low	Low

Delivery of systems: Cloud	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Cloud (Software)	Low	Low
Cloud (Platform)	Low	Low
Cloud (Infrastructure)	Low	Low

Development of Systems	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
In-house systems development	Low	Low

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

Collaboration in systems development with other fire services	Neither High nor Low	Neither High nor Low
Collaboration with other public sector bodies	Neither High nor Low	Neither High nor Low

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

Survey Results 10: Derbyshire Fire and Rescue Service

Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
GPS for locating firefighters on the fire ground (Location Services)	Don't use it	Significant Change	Neither High nor Low	Minor change
GPS for locating firefighters on call (Location Services)	Don't use it	Significant Change	Low	Minor change
Automatic vehicle location (for management of resources)	Up to date	Minor Change	High	No change
Automatic vehicle location (Predictive analytics)	Up to date	Minor Change	Neither High nor Low	No change
Quality monitoring of call handling	Up to date	No Change	High	Minor change
Workforce management systems (Control)	Up to date	Minor Change	High	No change
Workforce management systems (Corporate)	Up to date	Minor Change	High	No change
Shared Control Centre (with more than one FRS or with other emergency services)	Up to date	Significant Change	Very High	Significant change
Exchange of Information across Emergency Services (e.g. MAIT)	Don't use it	Significant Change	High	Transform
Shared Control Systems (e.g. shared data centres driving multiple Emergency Service Control Centres)	Up to date	Transform	High	Transform
Virtual call centres (e.g. call centres with a cloud based infrastructure)	Don't use it	Significant Change	Low	Significant change
Automatic call distribution	Up to date		High	

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Call Line Identification (e.g. EISEC)	Old but serviceable	Minor Change	Neither High nor Low	Minor change
Advanced Mobile Location (AML- Caller location information service for smartphones)	Don't know	Minor Change	Neither High nor Low	Minor change
Service Access Node H (SANH), or similar	Up to date	Significant Change	Neither High nor Low	No change
Computer aided dispatch	Up to date	Significant Change	Neither High nor Low	Minor change

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Data Storage	Up to date	Significant Change	High	No change
Data Capture (e.g Video, pictures and updating critical systems)	Old but serviceable	Minor Change	Neither High nor Low	Significant change
Data Integration	Up to date	Minor Change	High	Minor change
Mobile Office (e.g Laptop, mobile device)	Up to date	Minor Change	Neither High nor Low	Minor change
Internal Customer Service and help desk	Up to date	No Change	Neither High nor Low	No change

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

Remote access to service systems (e.g. intelligence reports, briefings)	Up to date	Minor Change	High	Minor change
Laptop with access to personal information management systems & data processing	Up to date	Minor Change	High	No change
In-Vehicle Mobile Data Terminal	Old but serviceable	Significant Change	Very High	No change
Smartphone/PDA - Access to fire service systems	Up to date	Minor Change	Neither High nor Low	No change
Augmented Reality (heads up displays)	Don't use it	Significant Change	Neither High nor Low	Minor change
Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Incident Messaging	Up to date	Minor Change	Very High	Minor change
Status Messaging	Old but serviceable	Significant Change	Very High	Minor change
Command Support Unit	Old but serviceable	Significant Change	Very High	Minor change
Communication with partners through voice (e.g. Police, Public Health)	Up to date	Minor Change	Neither High nor Low	Minor change
Communication with partners through data (e.g. Police, Public Health)	Up to date	Minor Change	Neither High nor Low	Significant change
Partnering with automatic systems failover	Up to date	Minor Change	Neither High nor Low	Significant change
IP Communications (text, audio, video) for emergency calls from citizens	Old but serviceable	Minor Change	Neither High nor Low	Minor change

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

Routing of IP Communications (text, audio, video) to first responders	Old but serviceable	Minor Change	Neither High nor Low	Minor change
Routing of IP Communications (text, audio, video) from first responders to control or peer to peer	Don't use it	Significant Change	Neither High nor Low	Minor change
Location information visualisation	Up to date	Minor Change	Neither High nor Low	Minor change
Sensor data transmission (e.g. Breathing Apparatus telemetry)	Up to date	Minor Change	Neither High nor Low	Minor change

Station End Equipment	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Printers	Up to date	No Change	Low	Minor change
Visual Display Unit (VDU)	Old but serviceable	No Change	Low	Minor change

Records Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated databases with partners	Up to date	Minor Change	Neither High nor Low	Minor change
Broadband wireless access in vehicles (e.g. LAN, MDT, mobile)	Don't use it	Significant Change	High	Significant change

Image management software (e.g. video, CCTV, pictures, person mounted cameras)	Old but serviceable	Significant Change	Neither High nor Low	Minor change
Integrated GIS	Up to date	Minor Change	Neither High nor Low	No change
Shared Gazetteer	Up to date	Minor Change	Neither High nor Low	No change
Video Surveillance	Don't use it	Minor Change	Neither High nor Low	Minor change
In-vehicle cameras (cameras facing outwards)	Up to date	Minor Change	Neither High nor Low	No change
Person mounted cameras	Don't use it	Significant Change	High	No change
Aerial surveillance (e.g. drones)	Don't use it	Minor Change	Low	No change

Securing Fire Service Systems	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Encryption	Up to date	Minor Change	High	Minor change
Data Governance	Up to date	Minor Change	High	Minor change
Identification and Access Management (e.g. Single-Sign on)	Old but serviceable	Minor Change	Neither High nor Low	Minor change
PSN Compliance	Up to date	Significant Change	High	Significant change

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

Analysis and Mapping	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated Management of Business Processes (e.g. Enterprise resources planning tools such as SAP, Oracle, Microsoft Dynamics)	Old but serviceable	Significant Change	Neither High nor Low	Minor change
Remote recording of data (Home Fire Safety Checks, Fire Hydrant Data)	Old but serviceable	Minor Change	High	Minor change
Tools to extract and clean data	Up to date	Minor Change	High	Minor change
Tools to visualise data	Up to date	Significant Change	High	Minor change
Analytic software (displaying information on mobile device)	Old but serviceable	Minor Change	Neither High nor Low	Minor change
Predictive modelling	Old but serviceable	Minor Change	Low	No change
Use of 3rd party analytic services	Don't use it	Minor Change	Very Low	No change
Investigative software - fire	Old but serviceable	Minor Change	Neither High nor Low	Minor change
Collection and analysis of data from private data sources (e.g. insurance data)	Don't use it	No Change	Low	No change

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

The Use of Social Media: Communication with the public	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Twitter	Very often	Significant Change	High
Facebook	Very often	Minor Change	Neither High nor Low
Youtube	Very often	Minor Change	Neither High nor Low
Flickr	Often	Minor Change	Low
Instagram	Very often	Minor Change	Neither High nor Low
Snapchat	Very often	Minor Change	Neither High nor Low

The Use of Social Media: Communication within the organisation	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Enterprise networking sites (e.g. Yammer)	Often	Minor Change	Neither High nor Low
Instant messaging (e.g. Chat, Whatsapp)	Often	Minor Change	Neither High nor Low
File Sharing (e.g. Dropbox)	Never	Minor Change	Neither High nor Low
Wiki	Never	No Change	Very Low
Collaborative Document Sharing (e.g. Google Docs)	Never	Minor Change	Low
Micro-blogging (e.g. Twitter)	Never	Minor Change	Low
Video conferencing (e.g. Skype, Facetime)	Very often	Minor Change	Neither High nor Low
Email	Very often	No Change	High

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

Delivery of systems: IT Outsourcing	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Business Process Outsourcing (Technology and Process)	Very low	Very low
Outsourcing (services and support)	Very low	Very low
Outsourcing (Infrastructure)	Very low	Low
Outsourcing (Temporary on project by project basis)	Very low	Low
Outsourcing (Total IT)	Very low	Very low
Insourcing	Neither High nor Low	Neither High nor Low

Delivery of systems: Cloud	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Cloud (Software)	Low	High
Cloud (Platform)	Low	High
Cloud (Infrastructure)	Low	High

Development of Systems	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
In-house systems development	Low	Very low

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Collaboration in systems development with other fire services	High	High
Collaboration with other public sector bodies	High	High

Survey Results 11: Devon and Somerset Fire and Rescue Service

Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
GPS for locating firefighters on the fire ground (Location Services)	Don't use it	Transform	Neither High nor Low	Don't know
GPS for locating firefighters on call (Location Services)	Don't use it	Transform	High	Transform
Automatic vehicle location (for management of resources)	Up to date	Don't Know	High	Transform
Automatic vehicle location (Predictive analytics)	Don't use it	Transform	High	Don't know
Quality monitoring of call handling	Up to date	Don't Know	Neither High nor Low	Don't know
Workforce management systems (Control)	Don't know	Don't Know	High	Transform
Workforce management systems (Corporate)	Don't know	Don't Know	High	Transform
Shared Control Centre (with more than one FRS or with other emergency services)	Up to date	Don't Know	Neither High nor Low	Don't know
Exchange of Information across Emergency Services (e.g. MAIT)	Don't use it	Transform	High	Transform
Shared Control Systems (e.g. shared data centres driving multiple Emergency Service Control Centres)	Up to date	Don't Know	Neither High nor Low	Don't know
Virtual call centres (e.g. call centres with a cloud based infrastructure)	Don't use it	Don't Know	Neither High nor Low	Don't know
Automatic call distribution	Up to date		High	

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Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Call Line Identification (e.g. EISEC)	Up to date	Don't Know	Low	Don't know
Advanced Mobile Location (AML- Caller location information service for smartphones)	Don't use it	Transform	High	Don't know
Service Access Node H (SANH), or similar	Don't use it	Don't Know	Neither High nor Low	Don't know
Computer aided dispatch	Don't use it	Transform	High	Transform

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Data Storage	Up to date	Minor Change	Neither High nor Low	Transform
Data Capture (e.g Video, pictures and updating critical systems)	Don't use it	Transform	High	Transform
Data Integration	Up to date	Transform	High	Significant change
Mobile Office (e.g Laptop, mobile device)	Up to date	Minor Change	Neither High nor Low	Minor change
Internal Customer Service and help desk	Up to date	Minor Change	Neither High nor Low	No change
Remote access to service systems (e.g. intelligence reports, briefings)	Up to date	Transform	High	Transform
Laptop with access to personal information management systems & data processing	Up to date	Transform	Neither High nor Low	No change
In-Vehicle Mobile Data Terminal	Up to date	Transform	High	Transform

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales**.**

Smartphone/PDA - Access to fire service systems	Up to date	Transform	High	Transform
Augmented Reality (heads up displays)	Don't use it	Transform	Neither High nor Low	Transform

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Incident Messaging	Up to date	Transform	High	Transform
Status Messaging	Up to date	Transform	Neither High nor Low	No change
Command Support Unit	Old but serviceable	Transform	High	Transform
Communication with partners through voice (e.g. Police, Public Health)	Up to date	Minor Change	Neither High nor Low	No change
Communication with partners through data (e.g. Police, Public Health)	Up to date	Transform	High	Transform
Partnering with automatic systems failover	Up to date	Significant Change	Neither High nor Low	Don't know
IP Communications (text, audio, video) for emergency calls from citizens	Don't use it	Transform	High	Don't know
Routing of IP Communications (text, audio, video) to first responders	Don't use it	Transform	High	Transform

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales**.**

Routing of IP Communications (text, audio, video) from first responders to control or peer to peer	Don't use it	Transform	High	Transform
Location information visualisation	Old but serviceable	Transform	High	Transform
Sensor data transmission (e.g. Breathing Apparatus telemetry)	Don't use it	Transform	High	Transform

Station End Equipment	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Printers	Old but serviceable	Transform	Neither High nor Low	Transform
Visual Display Unit (VDU)	Up to date	Transform	Neither High nor Low	Transform

Records Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated databases with partners	Up to date	Significant Change	High	Don't know
Broadband wireless access in vehicles (e.g. LAN, MDT, mobile)	Old but serviceable	Transform	High	Transform
Image management software (e.g. video, CCTV, pictures, person mounted cameras)	Don't use it	Transform	High	Transform

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Integrated GIS	Up to date	Transform	High	Transform
Shared Gazetteer	Up to date	Transform	High	Transform
Video Surveillance	Don't use it	Don't Know	Neither High nor Low	Don't know
In-vehicle cameras (cameras facing outwards)	Don't use it	Don't Know	Neither High nor Low	Don't know
Person mounted cameras	Don't use it	Transform	Neither High nor Low	Don't know
Aerial surveillance (e.g. drones)	Don't use it	Transform	High	Transform

Securing Fire Service Systems	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Encryption	Up to date	Minor Change	Neither High nor Low	Minor change
Data Governance	Don't use it	Transform	Very High	Transform
Identification and Access Management (e.g. Single-Sign on)	Up to date	Transform	High	Transform
PSN Compliance	Don't use it	Transform	Neither High nor Low	Don't know

Analysis and Mapping	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated Management of Business Processes (e.g.	Don't use it	No Change	Very Low	No change

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Enterprise resources planning tools such as SAP, Oracle, Microsoft Dynamics)				
Remote recording of data (Home Fire Safety Checks, Fire Hydrant Data)	Up to date	Transform	High	Transform
Tools to extract and clean data	Up to date	Transform	High	Significant change
Tools to visualise data	Up to date	Transform	High	Transform
Analytic software (displaying information on mobile device)	Don't use it	Transform	High	Transform
Predictive modelling	Don't use it	Transform	High	Transform
Use of 3rd party analytic services	Don't use it	Transform	Neither High nor Low	Don't know
Investigative software - fire	Up to date	Transform	High	Transform
Collection and analysis of data from private data sources (e.g. insurance data)	Don't know	Don't Know	Neither High nor Low	Don't know

The Use of Social Media: Communication with the public	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Twitter	Often	Significant Change	High
Facebook	Often	Significant Change	High
Youtube	Often	Significant Change	High
Flickr	Don't Know	Significant Change	High
Instagram	Don't Know	Significant Change	High
Snapchat	Don't Know	Significant Change	High

The Use of Social Media: Communication within the organisation	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Enterprise networking sites (e.g. Yammer)	Never	Significant Change	Neither High nor Low
Instant messaging (e.g. Chat, Whatsapp)	Often	Significant Change	High
File Sharing (e.g. Dropbox)	Often	Significant Change	Neither High nor Low
Wiki	Often	Minor Change	Neither High nor Low
Collaborative Document Sharing (e.g. Google Docs)	Often	Significant Change	Neither High nor Low
Micro-blogging (e.g. Twitter)	Often	Significant Change	High
Video conferencing (e.g. Skype, Facetime)	Occasionally	Transform	Very High
Email	Very often	Minor Change	Neither High nor Low

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

Delivery of systems: IT Outsourcing	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Business Process Outsourcing (Technology and Process)	Very low	Very low
Outsourcing (services and support)	Very low	Low
Outsourcing (Infrastructure)	Very low	Low
Outsourcing (Temporary on project by project basis)	Very low	Low
Outsourcing (Total IT)	Very low	Very low
Insourcing	Neither High nor Low	Neither High nor Low

Delivery of systems: Cloud	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Cloud (Software)	Low	High
Cloud (Platform)	Very low	High
Cloud (Infrastructure)	Very low	Very High

Development of Systems	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
In-house systems development	Very High	Very High
Collaboration in systems development with other fire services	Low	High
Collaboration with other public sector bodies	Very low	Low

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Survey Results 12: Dorset and Wiltshire Fire and Rescue Service

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales**.**

Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
GPS for locating firefighters on the fire ground (Location Services)	Don't use it	Control Infrastructure	Neither High nor Low	Control Infrastructure
GPS for locating firefighters on call (Location Services)	Don't use it	Significant Change	Neither High nor Low	No change
Automatic vehicle location (for management of resources)	Up to date	Minor Change	High	Minor change
Automatic vehicle location (Predictive analytics)	Don't use it	Significant Change	Neither High nor Low	Significant change
Quality monitoring of call handling	Up to date	No Change	High	Minor change
Workforce management systems (Control)	Up to date	Minor Change	High	No change
Workforce management systems (Corporate)	Up to date	Minor Change	High	No change
Shared Control Centre (with more than one FRS or with other emergency services)	Up to date	No Change	High	Significant change
Exchange of Information across Emergency Services (e.g. MAIT)	Don't use it	Significant Change	High	Significant change
Shared Control Systems (e.g. shared data centres driving multiple Emergency Service Control Centres)	Up to date	No Change	Very High	No change
Virtual call centres (e.g. call centres with a cloud based infrastructure)	Don't use it	Significant Change	Neither High nor Low	No change
Automatic call distribution	Up to date		High	

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Call Line Identification (e.g. EISEC)	Up to date	Minor Change	High	No change
Advanced Mobile Location (AML- Caller location information service for smartphones)	Up to date	Minor Change	High	No change
Service Access Node H (SANH), or similar	Up to date	Transform	High	Transform
Computer aided dispatch	Up to date	Minor Change	High	Transform

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Data Storage	Up to date	Significant Change	High	Significant change
Data Capture (e.g Video, pictures and updating critical systems)	Up to date	Significant Change	High	Significant change
Data Integration	Up to date	Transform	High	Minor change
Mobile Office (e.g Laptop, mobile device)	Up to date	Minor Change	High	No change
Internal Customer Service and help desk	Up to date	Minor Change	High	No change
Remote access to service systems (e.g. intelligence reports, briefings)	Up to date	Significant Change	High	Minor change
Laptop with access to personal information management systems & data processing	Up to date	Minor Change	High	Minor change
In-Vehicle Mobile Data Terminal	Up to date	Minor Change	High	Minor change

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Smartphone/PDA - Access to fire service systems	Up to date	Significant Change	High	Minor change
Augmented Reality (heads up displays)	Don't use it	Significant Change	Neither High nor Low	No change

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Incident Messaging	Up to date	Minor Change	High	No change
Status Messaging	Up to date	Minor Change	High	No change
Command Support Unit	Up to date	Minor Change	High	Significant change
Communication with partners through voice (e.g. Police, Public Health)	Up to date	Minor Change	High	Minor change
Communication with partners through data (e.g. Police, Public Health)	Up to date	Significant Change	High	Transform
Partnering with automatic systems failover	Up to date	Minor Change	High	Minor change
IP Communications (text, audio, video) for emergency calls from citizens	Don't use it	Significant Change	Neither High nor Low	Minor change
Routing of IP Communications (text, audio, video) to first responders	Up to date	Significant Change	High	Significant change
Routing of IP Communications (text, audio, video) from first	Up to date	Significant Change	High	Significant change

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responders to control or peer to peer				
Location information visualisation	Don't use it	Transform	High	Minor change
Sensor data transmission (e.g. Breathing Apparatus telemetry)	Don't use it	Significant Change	Neither High nor Low	Significant change

Station End Equipment	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Printers	Up to date	Minor Change	Neither High nor Low	No change
Visual Display Unit (VDU)	Up to date	Minor Change	Neither High nor Low	No change

Records Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated databases with partners	Up to date	Minor Change	High	Significant change
Broadband wireless access in vehicles (e.g. LAN, MDT, mobile)	Up to date	Minor Change	High	Significant change
Image management software (e.g. video, CCTV, pictures, person mounted cameras)	Up to date	Significant Change	Neither High nor Low	Minor change
Integrated GIS	Up to date	Minor Change	High	No change
Shared Gazetteer	Up to date	Minor Change	High	No change
Video Surveillance	Don't use it	Minor Change	Neither High nor Low	No change

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In-vehicle cameras (cameras facing outwards)	Up to date	Minor Change	High	Minor change
Person mounted cameras	Up to date	Significant Change	Neither High nor Low	Minor change
Aerial surveillance (e.g. drones)	Up to date	Minor Change	High	Minor change

Securing Fire Service Systems	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Encryption	Up to date	Significant Change	High	Minor change
Data Governance	Up to date	Minor Change	High	Minor change
Identification and Access Management (e.g. Single-Sign on)	Up to date	Minor Change	High	Minor change
PSN Compliance	Up to date	No Change	High	No change

Analysis and Mapping	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated Management of Business Processes (e.g. Enterprise resources planning	Up to date	Significant Change	High	No change

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tools such as SAP, Oracle, Microsoft Dynamics)				
Remote recording of data (Home Fire Safety Checks, Fire Hydrant Data)	Up to date	Minor Change	High	No change
Tools to extract and clean data	Up to date	Minor Change	Neither High nor Low	No change
Tools to visualise data	Up to date	Significant Change	High	No change
Analytic software (displaying information on mobile device)	Up to date	Minor Change	Neither High nor Low	Minor change
Predictive modelling	Up to date	Significant Change	High	No change
Use of 3rd party analytic services	Up to date	Minor Change	Neither High nor Low	No change
Investigative software - fire	Up to date	Minor Change	High	No change
Collection and analysis of data from private data sources (e.g. insurance data)	Up to date	Minor Change	Neither High nor Low	No change

The Use of Social Media: Communication with the public	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Twitter	Very often	Minor Change	Neither High nor Low
Facebook	Very often	Minor Change	Neither High nor Low
Youtube	Very often	Minor Change	Neither High nor Low
Flickr	Occasionally	Minor Change	Low
Instagram	Often	Minor Change	Neither High nor Low
Snapchat	Occasionally	Minor Change	Low

The Use of Social Media: Communication within the organisation	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level

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Enterprise networking sites (e.g. Yammer)	Often	Significant Change	Neither High nor Low
Instant messaging (e.g. Chat, Whatsapp)	Often	Significant Change	High
File Sharing (e.g. Dropbox)	Occasionally	Minor Change	Low
Wiki	Never	Minor Change	Very Low
Collaborative Document Sharing (e.g. Google Docs)	Very often	Significant Change	High
Micro-blogging (e.g. Twitter)	Never	No Change	Very Low
Video conferencing (e.g. Skype, Facetime)	Very often	Significant Change	High
Email	Very often	Significant Change	Neither High nor Low

Delivery of systems: IT Outsourcing	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Business Process Outsourcing (Technology and Process)	Low	Neither High nor Low
Outsourcing (services and support)	Low	Neither High nor Low
Outsourcing (Infrastructure)	Low	Neither High nor Low
Outsourcing (Temporary on project by project basis)	Neither High nor Low	Neither High nor Low
Outsourcing (Total IT)	Low	Neither High nor Low
Insourcing	High	High

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

Delivery of systems: Cloud	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Cloud (Software)	Very High	Very High
Cloud (Platform)	Very High	Very High
Cloud (Infrastructure)	High	High

Development of Systems	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
In-house systems development	High	High
Collaboration in systems development with other fire services	Neither High nor Low	Low
Collaboration with other public sector bodies	Low	Low

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

Survey Results 13: East Sussex Fire and Rescue Service

Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
GPS for locating firefighters on the fire ground (Location Services)	Don't use it	Transform	Neither High nor Low	Minor change
GPS for locating firefighters on call (Location Services)	Don't use it	Minor Change	Neither High nor Low	No change
Automatic vehicle location (for management of resources)	Old but serviceable	Minor Change	Neither High nor Low	No change
Automatic vehicle location (Predictive analytics)	Don't use it	Significant Change	Neither High nor Low	Minor change
Quality monitoring of call handling	Don't know	Don't Know	Neither High nor Low	Don't know
Workforce management systems (Control)	Up to date	Significant Change	High	No change
Workforce management systems (Corporate)	Up to date	Significant Change	High	No change
Shared Control Centre (with more than one FRS or with other emergency services)	Up to date	Significant Change	Very High	Significant change
Exchange of Information across Emergency Services (e.g. MAIT)	Don't use it	Significant Change	High	No change
Shared Control Systems (e.g. shared data centres driving multiple Emergency Service Control Centres)	Up to date	Transform	High	Significant change
Virtual call centres (e.g. call centres with a cloud based infrastructure)	Don't use it	Transform	Very High	Transform
Automatic call distribution	Up to date		High	

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Call Line Identification (e.g. EISEC)	Up to date	No Change	Low	No change
Advanced Mobile Location (AML- Caller location information service for smartphones)	Don't use it	Significant Change	Neither High nor Low	No change
Service Access Node H (SANH), or similar	Up to date	Transform	High	Transform
Computer aided dispatch	Up to date	Transform	Very High	Transform

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Data Storage	Up to date	Minor Change	Neither High nor Low	No change
Data Capture (e.g Video, pictures and updating critical systems)	Don't use it	Transform	High	Significant change
Data Integration	Up to date	Significant Change	High	Minor change
Mobile Office (e.g Laptop, mobile device)	Up to date	Transform	High	Transform
Internal Customer Service and help desk	Up to date	Minor Change	Neither High nor Low	Transform
Remote access to service systems (e.g. intelligence reports, briefings)	Old but serviceable	Transform	Very High	Transform
Laptop with access to personal information management systems & data processing	Up to date	Transform	High	No change

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

In-Vehicle Mobile Data Terminal	Old but serviceable	Transform	High	Transform
Smartphone/PDA - Access to fire service systems	Don't use it	Transform	High	Minor change
Augmented Reality (heads up displays)	Don't use it	Significant Change	Neither High nor Low	Minor change
Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Incident Messaging	Up to date	Transform	High	Significant change
Status Messaging	Up to date	Transform	High	Significant change
Command Support Unit	Obsolete	Transform	High	Transform
Communication with partners through voice (e.g. Police, Public Health)	Up to date	Transform	High	Transform
Communication with partners through data (e.g. Police, Public Health)	Don't use it	Transform	High	Significant change
Partnering with automatic systems failover	Don't know	Don't Know	Neither High nor Low	Don't know
IP Communications (text, audio, video) for emergency calls from citizens	Old but serviceable	Transform	High	No change
Routing of IP Communications (text, audio, video) to first responders	Don't use it	Transform	High	Transform
Routing of IP Communications (text, audio, video) from first responders to control or peer to peer	Don't use it	Transform	High	Transform
Location information visualisation	Up to date	Transform	High	Significant change

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

Sensor data transmission (e.g. Breathing Apparatus telemetry)	Don't use it	Transform	High	Minor change

Station End Equipment	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Printers	Old but serviceable	Transform	High	Significant change
Visual Display Unit (VDU)	Old but serviceable	Significant Change	Neither High nor Low	No change

Records Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated databases with partners	Don't use it	Transform	High	No change
Broadband wireless access in vehicles (e.g. LAN, MDT, mobile)	Up to date	Transform	High	Transform
Image management software (e.g. video, CCTV, pictures, person mounted cameras)	Don't use it	Transform	High	Transform
Integrated GIS	Up to date	Minor Change	Neither High nor Low	Minor change
Shared Gazetteer	Don't use it	Significant Change	Neither High nor Low	Minor change
Video Surveillance	Don't use it	Transform	High	Transform

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

In-vehicle cameras (cameras facing outwards)	Don't use it	Transform	High	Significant change
Person mounted cameras	Don't use it	Transform	Neither High nor Low	Significant change
Aerial surveillance (e.g. drones)	Up to date	Significant Change	Neither High nor Low	Minor change

Securing Fire Service Systems	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Encryption	Up to date	Minor Change	High	Minor change
Data Governance	Old but serviceable	Transform	Very High	No change
Identification and Access Management (e.g. Single-Sign on)	Obsolete	Transform	High	No change
PSN Compliance	Don't use it	Don't Know	Neither High nor Low	Don't know

Analysis and Mapping	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated Management of Business Processes (e.g. Enterprise resources planning tools such as SAP, Oracle, Microsoft Dynamics)	Obsolete	Transform	High	No change

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales**.**

Remote recording of data (Home Fire Safety Checks, Fire Hydrant Data)	Old but serviceable	Transform	High	No change
Tools to extract and clean data	Up to date	Transform	High	No change
Tools to visualise data	Old but serviceable	Transform	Very High	No change
Analytic software (displaying information on mobile device)	Don't use it	Transform	High	No change
Predictive modelling	Don't use it	Transform	Neither High nor Low	Significant change
Use of 3rd party analytic services	Up to date	Significant Change	Neither High nor Low	No change
Investigative software - fire	Don't use it	Significant Change	Neither High nor Low	Minor change
Collection and analysis of data from private data sources (e.g. insurance data)	Old but serviceable	Significant Change	Neither High nor Low	No change

The Use of Social Media: Communication with the public	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Twitter	Very often	Transform	Very High
Facebook	Very often	Transform	Very High
Youtube	Often	Significant Change	High
Flickr	Never	No Change	Very Low
Instagram	Never	No Change	Very Low
Snapchat	Never	No Change	Very Low

The Use of Social Media: Communication within the organisation	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Enterprise networking sites (e.g. Yammer)	Never	No Change	Very Low

Instant messaging (e.g. Chat, Whatsapp)	Very often	Transform	Very High
File Sharing (e.g. Dropbox)	Often	Transform	High
Wiki	Never	No Change	Very Low
Collaborative Document Sharing (e.g. Google Docs)	Never	Transform	High
Micro-blogging (e.g. Twitter)	Very often	Significant Change	High
Video conferencing (e.g. Skype, Facetime)	Occasionally	Transform	High
Email	Very often	Minor Change	Very Low

Delivery of systems: IT Outsourcing	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Business Process Outsourcing (Technology and Process)	Very High	Very High
Outsourcing (services and support)	Very High	Very High
Outsourcing (Infrastructure)	Very High	Very High
Outsourcing (Temporary on project by project basis)	High	High
Outsourcing (Total IT)	Very High	Very High
Insourcing	Very low	Very low

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales**.**

Delivery of systems: Cloud	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Cloud (Software)	High	High
Cloud (Platform)	High	High
Cloud (Infrastructure)	High	High

Development of Systems	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
In-house systems development	Very low	Very low
Collaboration in systems development with other fire services	High	High
Collaboration with other public sector bodies	High	High

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

Survey Results 14: Essex Fire and Rescue Service

Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
GPS for locating firefighters on the fire ground (Location Services)	Don't use it	Transform	Low	Minor change
GPS for locating firefighters on call (Location Services)	Don't use it	Transform	Low	Minor change
Automatic vehicle location (for management of resources)	Up to date	Minor Change	Neither High nor Low	Minor change
Automatic vehicle location (Predictive analytics)	Don't use it	Significant Change	Neither High nor Low	Minor change
Quality monitoring of call handling	Up to date	Significant Change	Low	Minor change
Workforce management systems (Control)	Old but serviceable	Significant Change	High	No change
Workforce management systems (Corporate)	Don't use it	Transform	Neither High nor Low	No change
Shared Control Centre (with more than one FRS or with other emergency services)	Don't use it	Significant Change	Very High	Minor change
Exchange of Information across Emergency Services (e.g. MAIT)	Up to date	Significant Change	Very High	No change
Shared Control Systems (e.g. shared data centres driving multiple Emergency Service Control Centres)	Don't use it	Transform	Very High	Minor change
Virtual call centres (e.g. call centres with a cloud based infrastructure)	Don't use it	Transform	Neither High nor Low	No change
Automatic call distribution	Up to date		High	

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Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Call Line Identification (e.g. EISEC)	Don't use it	Minor Change	Neither High nor Low	Minor change
Advanced Mobile Location (AML- Caller location information service for smartphones)	Don't use it	Transform	High	Minor change
Service Access Node H (SANH), or similar	Up to date	Significant Change	High	Significant change
Computer aided dispatch	Up to date	Minor Change	High	No change

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Data Storage	Old but serviceable	Significant Change	High	Transform
Data Capture (e.g Video, pictures and updating critical systems)	Up to date	Minor Change	High	Transform
Data Integration	Old but serviceable	Significant Change	High	Transform
Mobile Office (e.g Laptop, mobile device)	Old but serviceable	Transform	High	Transform
Internal Customer Service and help desk	Up to date	Significant Change	High	Transform
Remote access to service systems (e.g. intelligence reports, briefings)	Old but serviceable	Transform	High	Transform
Laptop with access to personal information management systems & data processing	Obsolete	Transform	High	Transform

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In-Vehicle Mobile Data Terminal	Up to date	Minor Change	Very Low	Minor change
Smartphone/PDA - Access to fire service systems	Old but serviceable	Transform	High	Transform
Augmented Reality (heads up displays)	Don't use it	Significant Change	Low	Significant change
Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Incident Messaging	Old but serviceable	Minor Change	Neither High nor Low	Minor change
Status Messaging	Old but serviceable	Minor Change	Neither High nor Low	Minor change
Command Support Unit	Obsolete	Significant Change	High	Significant change
Communication with partners through voice (e.g. Police, Public Health)	Old but serviceable	Significant Change	Neither High nor Low	Significant change
Communication with partners through data (e.g. Police, Public Health)	Old but serviceable	Significant Change	Neither High nor Low	Significant change
Partnering with automatic systems failover	Don't use it	Significant Change	High	Significant change
IP Communications (text, audio, video) for emergency calls from citizens	Old but serviceable	Significant Change	High	Significant change
Routing of IP Communications (text, audio, video) to first responders	Don't use it	Transform	High	Significant change
Routing of IP Communications (text, audio, video) from first responders to control or peer to peer	Don't use it	Transform	High	Significant change

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Location information visualisation	Don't use it	Transform	Neither High nor Low	Significant change
Sensor data transmission (e.g. Breathing Apparatus telemetry)	Don't know	Don't Know	Neither High nor Low	Minor change

Station End Equipment	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Printers	Old but serviceable	Significant Change	Neither High nor Low	Transform
Visual Display Unit (VDU)	Don't use it	Transform	Neither High nor Low	Transform

Records Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated databases with partners	Old but serviceable	Transform	Neither High nor Low	Transform
Broadband wireless access in vehicles (e.g. LAN, MDT, mobile)	Up to date	Minor Change	Very Low	Minor change
Image management software (e.g. video, CCTV, pictures, person mounted cameras)	Up to date	Significant Change	Low	Don't know
Integrated GIS	Old but serviceable	Significant Change	Neither High nor Low	Don't know
Shared Gazetteer	Old but serviceable	Significant Change	Neither High nor Low	Don't know

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Video Surveillance	Don't use it	Minor Change	Neither High nor Low	Don't know
In-vehicle cameras (cameras facing outwards)	Up to date	Minor Change	Neither High nor Low	Minor change
Person mounted cameras	Don't use it	Transform	Very Low	Transform
Aerial surveillance (e.g. drones)	Don't use it	Transform	Very Low	Transform

Securing Fire Service Systems	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Encryption	Don't use it	No Change	Neither High nor Low	No change
Data Governance	Old but serviceable	No Change	Neither High nor Low	No change
Identification and Access Management (e.g. Single-Sign on)	Old but serviceable	No Change	Neither High nor Low	No change
PSN Compliance	Up to date	No Change	Neither High nor Low	No change

Analysis and Mapping	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated Management of Business Processes (e.g. Enterprise resources planning tools such as SAP, Oracle, Microsoft Dynamics)	Old but serviceable	Transform	Neither High nor Low	Transform

Remote recording of data (Home Fire Safety Checks, Fire Hydrant Data)	Old but serviceable	Transform	High	Transform
Tools to extract and clean data	Up to date	Transform	High	Transform
Tools to visualise data	Up to date	Minor Change	Neither High nor Low	Transform
Analytic software (displaying information on mobile device)	Up to date	Transform	High	Transform
Predictive modelling	Up to date	Transform	High	Transform
Use of 3rd party analytic services	Up to date	Transform	High	Transform
Investigative software - fire	Don't know	Don't Know	High	Transform
Collection and analysis of data from private data sources (e.g. insurance data)	Old but serviceable	Significant Change	Neither High nor Low	No change

The Use of Social Media: Communication with the public	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Twitter	Often	Significant Change	Low
Facebook	Often	Significant Change	Low
Youtube	Often	Significant Change	Low
Flickr	Don't Know	Don't Know	Low
Instagram	Never	Transform	Low
Snapchat	Never	No Change	Very Low

The Use of Social Media: Communication within the organisation	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Enterprise networking sites (e.g. Yammer)	Occasionally	Minor Change	Very Low
Instant messaging (e.g. Chat, Whatsapp)	Occasionally	Minor Change	Low
File Sharing (e.g. Dropbox)	Never	No Change	Very Low

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Wiki	Never	Significant Change	Very Low
Collaborative Document Sharing (e.g. Google Docs)	Never	Significant Change	Low
Micro-blogging (e.g. Twitter)	Occasionally	Significant Change	Low
Video conferencing (e.g. Skype, Facetime)	Often	Transform	High
Email	Very often	Significant Change	High

Delivery of systems: IT Outsourcing	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Business Process Outsourcing (Technology and Process)	Very low	Low
Outsourcing (services and support)	Very low	Very low
Outsourcing (Infrastructure)	Very low	Very low
Outsourcing (Temporary on project by project basis)	Very low	High
Outsourcing (Total IT)	Very low	Very low
Insourcing	Very High	Very High

Delivery of systems: Cloud	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Cloud (Software)	Neither High nor Low	Very High

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Cloud (Platform)	Neither High nor Low	Very High
Cloud (Infrastructure)	Neither High nor Low	Very High

Development of Systems	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
In-house systems development	Neither High nor Low	High
Collaboration in systems development with other fire services	Very High	Very High
Collaboration with other public sector bodies	Very High	Very High

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Survey Results 15: Gloucestershire Fire and Rescue Service

Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
GPS for locating firefighters on the fire ground (Location Services)	Don't use it	Minor Change	Neither High nor Low	No change
GPS for locating firefighters on call (Location Services)	Don't use it	Significant Change	Neither High nor Low	No change
Automatic vehicle location (for management of resources)	Up to date	No Change	No change	No change
Automatic vehicle location (Predictive analytics)	Up to date	No Change	Very High	No change
Quality monitoring of call handling	Up to date	No Change	No change	No change
Workforce management systems (Control)	Up to date	Significant Change	Very High	No change
Workforce management systems (Corporate)	Up to date	Significant Change	No change	No change
Shared Control Centre (with more than one FRS or with other emergency services)	Don't use it	Don't Know	Very High	No change
Exchange of Information across Emergency Services (e.g. MAIT)	Don't use it	Significant Change	No change	No change
Shared Control Systems (e.g. shared data centres driving multiple Emergency Service Control Centres)	Don't use it	No Change	Very High	No change
Virtual call centres (e.g. call centres with a cloud based infrastructure)	Don't use it	Minor Change	No change	No change
Automatic call distribution	Up to date		High	

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Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Call Line Identification (e.g. EISEC)	Up to date	No Change	Very High	No change
Advanced Mobile Location (AML- Caller location information service for smartphones)	Up to date	No Change	No change	No change
Service Access Node H (SANH), or similar	Up to date	No Change	Very Low	No change
Computer aided dispatch	Up to date	No Change	No change	No change

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Data Storage	Up to date	Minor Change	Neither High nor Low	No change
Data Capture (e.g Video, pictures and updating critical systems)	Up to date	Minor Change	High	No change
Data Integration	Up to date	Minor Change	Neither High nor Low	No change
Mobile Office (e.g Laptop, mobile device)	Up to date	Minor Change	Neither High nor Low	No change
Internal Customer Service and help desk	Old but serviceable	Minor Change	High	No change
Remote access to service systems (e.g. intelligence reports, briefings)	Up to date	No Change	Neither High nor Low	No change
Laptop with access to personal information management systems & data processing	Up to date	No Change	Neither High nor Low	No change
In-Vehicle Mobile Data Terminal	Old but serviceable	Significant Change	Very High	Minor change

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Smartphone/PDA - Access to fire service systems	Up to date	Minor Change	High	Minor change
Augmented Reality (heads up displays)	Don't use it	Minor Change	Neither High nor Low	No change
Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Incident Messaging	Up to date	No Change	High	No change
Status Messaging	Up to date	No Change	High	No change
Command Support Unit	Old but serviceable	Significant Change	High	No change
Communication with partners through voice (e.g. Police, Public Health)	Up to date	Minor Change	Very High	Minor change
Communication with partners through data (e.g. Police, Public Health)	Old but serviceable	Minor Change	Very High	Minor change
Partnering with automatic systems failover	Up to date	Minor Change	High	No change
IP Communications (text, audio, video) for emergency calls from citizens	Don't use it	Significant Change	High	No change
Routing of IP Communications (text, audio, video) to first responders	Old but serviceable	Significant Change	High	No change
Routing of IP Communications (text, audio, video) from first responders to control or peer to peer	Old but serviceable	Significant Change	High	No change
Location information visualisation	Don't use it	Minor Change	Neither High nor Low	No change

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Sensor data transmission (e.g. Breathing Apparatus telemetry)	Up to date	Minor Change	High	No change

Station End Equipment	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Printers	Old but serviceable	Minor Change	Neither High nor Low	No change
Visual Display Unit (VDU)	Up to date	No Change	Neither High nor Low	No change

Records Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated databases with partners	Up to date	Significant Change	High	No change
Broadband wireless access in vehicles (e.g. LAN, MDT, mobile)	Up to date	Minor Change	Neither High nor Low	Minor change
Image management software (e.g. video, CCTV, pictures, person mounted cameras)	Up to date	Minor Change	Neither High nor Low	Minor change
Integrated GIS	Up to date	No Change	High	No change
Shared Gazetteer	Up to date	No Change	High	No change
Video Surveillance	Don't use it	No Change	Neither High nor Low	No change
In-vehicle cameras (cameras facing outwards)	Up to date	Minor Change	Neither High nor Low	No change
Person mounted cameras	Don't use it	Don't Know	Neither High nor Low	Minor change

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| Aerial surveillance (e.g. drones) | Don't use it | Minor Change | Neither High nor Low | No change |

Securing Fire Service Systems	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Encryption	Up to date	Minor Change	High	No change
Data Governance	Up to date	Minor Change	High	No change
Identification and Access Management (e.g. Single-Sign on)	Up to date	Minor Change	High	No change
PSN Compliance	Don't use it	Minor Change	Neither High nor Low	No change

Analysis and Mapping	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated Management of Business Processes (e.g. Enterprise resources planning tools such as SAP, Oracle, Microsoft Dynamics)	Old but serviceable	Minor Change	Neither High nor Low	No change
Remote recording of data (Home Fire Safety Checks, Fire Hydrant Data)	Up to date	Minor Change	High	Minor change
Tools to extract and clean data	Up to date	Minor Change	Neither High nor Low	No change
Tools to visualise data	Up to date	Significant Change	Neither High nor Low	No change

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Analytic software (displaying information on mobile device)	Up to date	Minor Change	Neither High nor Low	No change
Predictive modelling	Don't use it	Minor Change	Neither High nor Low	No change
Use of 3rd party analytic services	Don't use it	Minor Change	Low	No change
Investigative software - fire	Don't know	Don't Know	Neither High nor Low	No change
Collection and analysis of data from private data sources (e.g. insurance data)	Don't know	Don't Know	Low	No change

The Use of Social Media: Communication with the public	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Twitter	Very often	No Change	Neither High nor Low
Facebook	Occasionally	Minor Change	Neither High nor Low
Youtube	Occasionally	Minor Change	Neither High nor Low
Flickr	Never	No Change	Neither High nor Low
Instagram	Never	No Change	Neither High nor Low
Snapchat	Never	No Change	Neither High nor Low

The Use of Social Media: Communication within the organisation	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Enterprise networking sites (e.g. Yammer)	Never	Minor Change	Low
Instant messaging (e.g. Chat, Whatsapp)	Very often	No Change	Neither High nor Low
File Sharing (e.g. Dropbox)	Occasionally	Minor Change	Neither High nor Low
Wiki	Never	No Change	Low
Collaborative Document Sharing (e.g. Google Docs)	Occasionally	Minor Change	Neither High nor Low
Micro-blogging (e.g. Twitter)	Occasionally	No Change	Low

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Video conferencing (e.g. Skype, Facetime)	Occasionally	Minor Change	Neither High nor Low
Email	Very often	No Change	Very High

Delivery of systems: IT Outsourcing	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Business Process Outsourcing (Technology and Process)	Very low	Low
Outsourcing (services and support)	High	High
Outsourcing (Infrastructure)	Low	Neither High nor Low
Outsourcing (Temporary on project by project basis)	Very low	Neither High nor Low
Outsourcing (Total IT)	Very low	Very low
Insourcing	Very High	Neither High nor Low

Delivery of systems: Cloud	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Cloud (Software)	Neither High nor Low	Neither High nor Low
Cloud (Platform)	Very low	Neither High nor Low
Cloud (Infrastructure)	Very low	Low

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Development of Systems	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
In-house systems development	Neither High nor Low	Neither High nor Low
Collaboration in systems development with other fire services	Low	Low
Collaboration with other public sector bodies	Low	Low

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Survey Results 16: Greater Manchester Fire and Rescue Service

Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
GPS for locating firefighters on the fire ground (Location Services)	Up to date	Significant Change	Neither High nor Low	Minor change
GPS for locating firefighters on call (Location Services)	Old but serviceable	Significant Change	High	Significant change
Automatic vehicle location (for management of resources)	Up to date	Significant Change	Neither High nor Low	Significant change
Automatic vehicle location (Predictive analytics)	Don't know	Significant Change	Neither High nor Low	Don't know
Quality monitoring of call handling	Old but serviceable	Significant Change	High	Minor change
Workforce management systems (Control)	Old but serviceable	Significant Change	High	Minor change
Workforce management systems (Corporate)	Obsolete	Significant Change	High	Significant change
Shared Control Centre (with more than one FRS or with other emergency services)	Up to date	Minor Change	Neither High nor Low	Significant change
Exchange of Information across Emergency Services (e.g. MAIT)	Old but serviceable	Transform	High	Transform
Shared Control Systems (e.g. shared data centres driving multiple Emergency Service Control Centres)	Up to date	Significant Change	High	Transform
Virtual call centres (e.g. call centres with a cloud based infrastructure)	Old but serviceable	Minor Change	Low	Minor change
Automatic call distribution	Up to date		High	

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Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Call Line Identification (e.g. EISEC)	Obsolete	Minor Change	Very Low	Don't know
Advanced Mobile Location (AML- Caller location information service for smartphones)	Old but serviceable	Minor Change	Very High	Minor change
Service Access Node H (SANH), or similar	Old but serviceable	Significant Change	Very High	Significant change
Computer aided dispatch	Up to date	Significant Change	High	Minor change

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Data Storage	Old but serviceable	No Change	Low	No change
Data Capture (e.g Video, pictures and updating critical systems)	Old but serviceable	No Change	Neither High nor Low	No change
Data Integration	Up to date	Minor Change	High	Significant change
Mobile Office (e.g Laptop, mobile device)	Old but serviceable	Significant Change	High	Significant change
Internal Customer Service and help desk	Obsolete	Minor Change	High	Minor change
Remote access to service systems (e.g. intelligence reports, briefings)	Obsolete	Significant Change	High	Significant change
Laptop with access to personal information management systems & data processing	Up to date	Minor Change	High	Minor change

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In-Vehicle Mobile Data Terminal	Obsolete	Significant Change	High	Significant change
Smartphone/PDA - Access to fire service systems	Old but serviceable	Transform	Very High	Transform
Augmented Reality (heads up displays)	Obsolete	No Change	Very Low	No change
Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Incident Messaging	Old but serviceable	Significant Change	High	Transform
Status Messaging	Old but serviceable	Significant Change	High	Transform
Command Support Unit	Up to date	Significant Change	High	Significant change
Communication with partners through voice (e.g. Police, Public Health)	Old but serviceable	Significant Change	High	Significant change
Communication with partners through data (e.g. Police, Public Health)	Old but serviceable	Transform	Very High	Transform
Partnering with automatic systems failover	Old but serviceable	Minor Change	Neither High nor Low	Significant change
IP Communications (text, audio, video) for emergency calls from citizens	Up to date	Significant Change	Neither High nor Low	Transform
Routing of IP Communications (text, audio, video) to first responders	Old but serviceable	Significant Change	Neither High nor Low	Minor change
Routing of IP Communications (text, audio, video) from first	Old but serviceable	Significant Change	Neither High nor Low	Minor change

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responders to control or peer to peer				
Location information visualisation	Old but serviceable	Significant Change	High	Minor change
Sensor data transmission (e.g. Breathing Apparatus telemetry)	Up to date	Significant Change	High	Significant change

Station End Equipment	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Printers	Old but serviceable	Minor Change	Neither High nor Low	No change
Visual Display Unit (VDU)	Up to date	Minor Change	Neither High nor Low	No change

Records Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated databases with partners	Don't know	Don't Know	Neither High nor Low	Don't know
Broadband wireless access in vehicles (e.g. LAN, MDT, mobile)	Up to date	Significant Change	High	Significant change
Image management software (e.g. video, CCTV, pictures, person mounted cameras)	Old but serviceable	Significant Change	High	Significant change
Integrated GIS	Old but serviceable	Significant Change	High	Transform
Shared Gazetteer	Old but serviceable	Significant Change	Neither High nor Low	Significant change

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Video Surveillance	Old but serviceable	Significant Change	High	Transform
In-vehicle cameras (cameras facing outwards)	Old but serviceable	Significant Change	High	Transform
Person mounted cameras	Don't use it	Significant Change	High	Significant change
Aerial surveillance (e.g. drones)	Up to date	Transform	Neither High nor Low	Significant change

Securing Fire Service Systems	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Encryption	Old but serviceable	Transform	High	Transform
Data Governance	Old but serviceable	Transform	Very High	Transform
Identification and Access Management (e.g. Single-Sign on)	Up to date	Significant Change	Very High	Transform
PSN Compliance	Old but serviceable	Significant Change	Very High	Transform

Analysis and Mapping	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated Management of Business Processes (e.g. Enterprise resources planning tools such as SAP, Oracle, Microsoft Dynamics)	Up to date	Transform	Very High	No change

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Remote recording of data (Home Fire Safety Checks, Fire Hydrant Data)	Old but serviceable	Significant Change	High	Transform
Tools to extract and clean data	Obsolete	Significant Change	Very High	No change
Tools to visualise data	Old but serviceable	Transform	Very High	Minor change
Analytic software (displaying information on mobile device)	Old but serviceable	Significant Change	Very High	Minor change
Predictive modelling	Old but serviceable	No Change	Very High	Minor change
Use of 3rd party analytic services	Obsolete	No Change	Very Low	No change
Investigative software - fire	Don't know	Don't Know	Neither High nor Low	Don't know
Collection and analysis of data from private data sources (e.g. insurance data)	Old but serviceable	Transform	Very High	Minor change

The Use of Social Media: Communication with the public	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Twitter	Occasionally	Minor Change	High
Facebook	Occasionally	Significant Change	Neither High nor Low
Youtube	Often	Significant Change	High
Flickr	Occasionally	Minor Change	Neither High nor Low
Instagram	Very often	Significant Change	Neither High nor Low
Snapchat	Occasionally	Minor Change	Neither High nor Low

The Use of Social Media: Communication within the organisation	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Enterprise networking sites (e.g. Yammer)	Never	Significant Change	Low

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Instant messaging (e.g. Chat, Whatsapp)	Often	Significant Change	Neither High nor Low
File Sharing (e.g. Dropbox)	Never	Significant Change	High
Wiki	Never	Significant Change	Low
Collaborative Document Sharing (e.g. Google Docs)	Often	Significant Change	Very High
Micro-blogging (e.g. Twitter)	Occasionally	Significant Change	Low
Video conferencing (e.g. Skype, Facetime)	Often	Significant Change	High
Email	Very often	Minor Change	Very High

Delivery of systems: IT Outsourcing	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Business Process Outsourcing (Technology and Process)	Very low	Neither High nor Low
Outsourcing (services and support)	Neither High nor Low	Neither High nor Low
Outsourcing (Infrastructure)	Low	Neither High nor Low
Outsourcing (Temporary on project by project basis)	Low	Neither High nor Low
Outsourcing (Total IT)	Very low	Neither High nor Low
Insourcing	Very High	Neither High nor Low

Delivery of systems: Cloud	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level

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Cloud (Software)	Low	Very High
Cloud (Platform)	Low	Very High
Cloud (Infrastructure)	Low	Very High

Development of Systems	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
In-house systems development	High	Neither High nor Low
Collaboration in systems development with other fire services	Low	Neither High nor Low
Collaboration with other public sector bodies	Neither High nor Low	Neither High nor Low

Survey Results 17: Hampshire Fire and Rescue Service

Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
GPS for locating firefighters on the fire ground (Location Services)	Don't use it	Minor Change	High	Transform
GPS for locating firefighters on call (Location Services)	Don't use it	Don't Know	Neither High nor Low	Transform
Automatic vehicle location (for management of resources)	Up to date	Significant Change	High	Minor change
Automatic vehicle location (Predictive analytics)	Don't know	Significant Change	High	Significant change
Quality monitoring of call handling	Up to date	Minor Change	Very High	Minor change
Workforce management systems (Control)	Up to date	Significant Change	Very High	Minor change
Workforce management systems (Corporate)	Up to date	Minor Change	High	Minor change
Shared Control Centre (with more than one FRS or with other emergency services)	Up to date	Minor Change	Very Low	No change
Exchange of Information across Emergency Services (e.g. MAIT)	Old but serviceable	Significant Change	Neither High nor Low	Significant change
Shared Control Systems (e.g. shared data centres driving multiple Emergency Service Control Centres)	Don't use it	Don't Know	Low	No change
Virtual call centres (e.g. call centres with a cloud based infrastructure)	Don't use it	Significant Change	High	Transform
Automatic call distribution	Up to date		High	

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Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Call Line Identification (e.g. EISEC)	Up to date	Don't Know	High	Minor change
Advanced Mobile Location (AML- Caller location information service for smartphones)	Up to date	Significant Change	Very High	Minor change
Service Access Node H (SANH), or similar	Don't know	Don't Know	Neither High nor Low	Don't know
Computer aided dispatch	Up to date	Significant Change	High	Significant change

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Data Storage	Up to date	Significant Change	High	Minor change
Data Capture (e.g Video, pictures and updating critical systems)	Up to date	Transform	Very High	Significant change
Data Integration	Up to date	Significant Change	High	Minor change
Mobile Office (e.g Laptop, mobile device)	Up to date	Significant Change	High	Significant change
Internal Customer Service and help desk	Up to date	Significant Change	Very High	Minor change
Remote access to service systems (e.g. intelligence reports, briefings)	Up to date	Minor Change	High	Transform
Laptop with access to personal information management systems & data processing	Up to date	Minor Change	High	Minor change

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In-Vehicle Mobile Data Terminal	Up to date	Significant Change	Very High	Significant change
Smartphone/PDA - Access to fire service systems	Up to date	Significant Change	Very High	Transform
Augmented Reality (heads up displays)	Don't use it	Transform	Neither High nor Low	Transform

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Incident Messaging	Up to date	Significant Change	Very High	Significant change
Status Messaging	Up to date	Transform	High	Significant change
Command Support Unit	Up to date	Significant Change	Very High	Significant change
Communication with partners through voice (e.g. Police, Public Health)	Up to date	Minor Change	Very High	Transform
Communication with partners through data (e.g. Police, Public Health)	Up to date	Minor Change	Very High	Significant change
Partnering with automatic systems failover	Up to date	Transform	High	Significant change
IP Communications (text, audio, video) for emergency calls from citizens	Up to date	Significant Change	Low	Transform
Routing of IP Communications (text, audio, video) to first responders	Don't use it	No Change	Low	Transform
Routing of IP Communications (text, audio, video) from first	Don't use it	Transform	Very High	Transform

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responders to control or peer to peer				
Location information visualisation	Old but serviceable	Transform	Very High	Transform
Sensor data transmission (e.g. Breathing Apparatus telemetry)	Don't use it	Transform	High	Transform

Station End Equipment	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Printers	Up to date	Minor Change	Very High	Transform
Visual Display Unit (VDU)	Up to date	Significant Change	High	Significant change

Records Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated databases with partners	Don't use it	Transform	Neither High nor Low	Transform
Broadband wireless access in vehicles (e.g. LAN, MDT, mobile)	Don't use it	Transform	Low	Significant change
Image management software (e.g. video, CCTV, pictures, person mounted cameras)	Up to date	Transform	High	Minor change
Integrated GIS	Old but serviceable	Significant Change	Very High	Significant change
Shared Gazetteer	Don't know	Don't Know	Neither High nor Low	Don't know
Video Surveillance	Old but serviceable	Significant Change	High	Significant change
In-vehicle cameras (cameras facing outwards)	Up to date	Minor Change	Very High	Minor change

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Person mounted cameras	Up to date	Significant Change	Very High	Significant change
Aerial surveillance (e.g. drones)	Don't use it	Transform	Low	Significant change

Securing Fire Service Systems	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Encryption	Up to date	Significant Change	Neither High nor Low	Minor change
Data Governance	Up to date	Significant Change	Very High	Minor change
Identification and Access Management (e.g. Single-Sign on)	Up to date	Significant Change	Very High	Minor change
PSN Compliance	Up to date	Don't Know	Very Low	Minor change

Analysis and Mapping	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated Management of Business Processes (e.g. Enterprise resources planning tools such as SAP, Oracle, Microsoft Dynamics)	Old but serviceable	Significant Change	Very High	Significant change
Remote recording of data (Home Fire Safety Checks, Fire Hydrant Data)	Don't use it	Significant Change	High	Transform

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Tools to extract and clean data	Old but serviceable	Transform	Very High	Significant change
Tools to visualise data	Up to date	Significant Change	High	Minor change
Analytic software (displaying information on mobile device)	Up to date	Significant Change	Very High	Transform
Predictive modelling	Don't know	Transform	Very High	Don't know
Use of 3rd party analytic services	Don't use it	Minor Change	Neither High nor Low	Don't know
Investigative software - fire	Don't use it	Significant Change	Very High	Don't know
Collection and analysis of data from private data sources (e.g. insurance data)	Old but serviceable	Minor Change	High	Don't know

The Use of Social Media: Communication with the public	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Twitter	Occasionally	No Change	High
Facebook	Occasionally	No Change	Neither High nor Low
Youtube	Often	No Change	Very High
Flickr	Don't Know	No Change	Neither High nor Low
Instagram	Never	No Change	Neither High nor Low
Snapchat	Never	No Change	Very Low

The Use of Social Media: Communication within the organisation	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Enterprise networking sites (e.g. Yammer)	Very often	Minor Change	Low
Instant messaging (e.g. Chat, Whatsapp)	Very often	Significant Change	High
File Sharing (e.g. Dropbox)	Often	Minor Change	High
Wiki	Often	No Change	Neither High nor Low

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Collaborative Document Sharing (e.g. Google Docs)	Very often	Significant Change	Very High
Micro-blogging (e.g. Twitter)	Often	Minor Change	High
Video conferencing (e.g. Skype, Facetime)	Occasionally	Transform	Low
Email	Very often	Minor Change	High

Delivery of systems: IT Outsourcing	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Business Process Outsourcing (Technology and Process)	Low	Low
Outsourcing (services and support)	Low	Low
Outsourcing (Infrastructure)	High	High
Outsourcing (Temporary on project by project basis)	High	Very High
Outsourcing (Total IT)	Low	Very low
Insourcing	Neither High nor Low	Neither High nor Low

Delivery of systems: Cloud	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Cloud (Software)	High	Very High
Cloud (Platform)	High	Very High

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Cloud (Infrastructure)	High	Very High

Development of Systems	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
In-house systems development	High	High
Collaboration in systems development with other fire services	High	Very High
Collaboration with other public sector bodies	Low	High

Survey Results 18: Hereford and Worcester Fire and Rescue Service

Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
GPS for locating firefighters on the fire ground (Location Services)	Don't use it	Significant Change	Neither High nor Low	Don't know
GPS for locating firefighters on call (Location Services)	Don't use it	Significant Change	Neither High nor Low	Don't know
Automatic vehicle location (for management of resources)	Up to date	No Change	High	No change
Automatic vehicle location (Predictive analytics)	Don't know	Don't Know	Neither High nor Low	Don't know
Quality monitoring of call handling	Up to date	Minor Change	High	Don't know
Workforce management systems (Control)	Up to date	Don't Know	High	Don't know
Workforce management systems (Corporate)	Up to date	Don't Know	High	Don't know
Shared Control Centre (with more than one FRS or with other emergency services)	Up to date	Significant Change	High	Don't know
Exchange of Information across Emergency Services (e.g. MAIT)	Up to date	Significant Change	High	Don't know
Shared Control Systems (e.g. shared data centres driving multiple Emergency Service Control Centres)	Up to date	Significant Change	High	Don't know
Virtual call centres (e.g. call centres with a cloud-based infrastructure)	Don't know	Don't Know	Neither High nor Low	Don't know
Automatic call distribution	Up to date		High	

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Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Call Line Identification (e.g. EISEC)	Up to date	No Change	High	Don't know
Advanced Mobile Location (AML- Caller location information service for smartphones)	Don't know	Don't Know	Neither High nor Low	Don't know
Service Access Node H (SANH), or similar	Up to date	Significant Change	High	Don't know
Computer aided dispatch	Don't know	Don't Know	Neither High nor Low	Don't know

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Data Storage	Up to date	Don't Know	Neither High nor Low	Don't know
Data Capture (e.g Video, pictures and updating critical systems)	Up to date	Transform	High	Don't know
Data Integration	Up to date	Don't Know	Neither High nor Low	Don't know
Mobile Office (e.g Laptop, mobile device)	Up to date	Transform	High	Don't know
Internal Customer Service and help desk	Up to date	Significant Change	High	Don't know
Remote access to service systems (e.g. intelligence reports, briefings)	Old but serviceable	Transform	High	Don't know
Laptop with access to personal information management systems & data processing	Don't know	Don't Know	Neither High nor Low	Don't know
In-Vehicle Mobile Data Terminal	Up to date	Transform	High	Don't know

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Smartphone/PDA - Access to fire service systems	Up to date	Transform	High	Don't know
Augmented Reality (heads up displays)	Up to date	Transform	Neither High nor Low	Don't know

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Incident Messaging	Don't use it	Don't Know	Neither High nor Low	Don't know
Status Messaging	Don't use it	Don't Know	Neither High nor Low	Don't know
Command Support Unit	Up to date	Transform	High	Don't know
Communication with partners through voice (e.g. Police, Public Health)	Don't know	Don't Know	Neither High nor Low	Don't know
Communication with partners through data (e.g. Police, Public Health)	Up to date	Transform	High	Don't know
Partnering with automatic systems failover	Up to date	Transform	Very High	Don't know
IP Communications (text, audio, video) for emergency calls from citizens	Up to date	Transform	Very High	Don't know
Routing of IP Communications (text, audio, video) to first responders	Don't know	Don't Know	Neither High nor Low	Don't know
Routing of IP Communications (text, audio, video) from first responders to control or peer to peer	Don't use it	Significant Change	Neither High nor Low	Don't know
Location information visualisation	Up to date	Transform	High	Don't know

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Sensor data transmission (e.g. Breathing Apparatus telemetry)	Up to date	Transform	High	Don't know

Station End Equipment	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Printers	Up to date	Minor Change	High	Don't know
Visual Display Unit (VDU)	Up to date	Significant Change	High	Don't know

Records Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated databases with partners	Don't use it	Don't Know	Neither High nor Low	Don't know
Broadband wireless access in vehicles (e.g. LAN, MDT, mobile)	Up to date	Significant Change	High	Don't know
Image management software (e.g. video, CCTV, pictures, person mounted cameras)	Up to date	Transform	Very High	Don't know
Integrated GIS	Up to date	Transform	High	Don't know
Shared Gazetteer	Up to date	No Change	Neither High nor Low	Don't know
Video Surveillance	Up to date	Significant Change	High	Don't know
In-vehicle cameras (cameras facing outwards)	Don't know	Don't Know	Neither High nor Low	Don't know
Person mounted cameras	Don't use it	Don't Know	High	Don't know
Aerial surveillance (e.g. drones)	Up to date	Transform	High	Don't know

Securing Fire Service Systems	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN

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Encryption	Up to date	Minor Change	High	Don't know
Data Governance	Up to date	Minor Change	High	Don't know
Identification and Access Management (e.g. Single-Sign on)	Up to date	Significant Change	High	Don't know
PSN Compliance	Up to date	Minor Change	Very High	Don't know

Analysis and Mapping	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated Management of Business Processes (e.g. Enterprise resources planning tools such as SAP, Oracle, Microsoft Dynamics)	Up to date	Significant Change	High	Don't know
Remote recording of data (Home Fire Safety Checks, Fire Hydrant Data)	Up to date	Minor Change	High	Don't know
Tools to extract and clean data	Obsolete	No Change	Very Low	No change
Tools to visualise data	Up to date	Minor Change	Neither High nor Low	Don't know
Analytic software (displaying information on mobile device)	Up to date	Transform	High	Don't know
Predictive modelling	Up to date	Transform	High	No change
Use of 3rd party analytic services	Obsolete	No Change	Very Low	Don't know
Investigative software - fire	Up to date	Transform	High	Don't know
Collection and analysis of data from private data sources (e.g. insurance data)	Don't use it	No Change	Neither High nor Low	Don't know

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The Use of Social Media: Communication with the public	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Twitter	Often	Significant Change	High
Facebook	Often	Significant Change	High
Youtube	Often	Significant Change	High
Flickr	Often	Significant Change	High
Instagram	Often	Significant Change	High
Snapchat	Often	Significant Change	High

The Use of Social Media: Communication within the organisation	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Enterprise networking sites (e.g. Yammer)	Never	No Change	Very Low
Instant messaging (e.g. Chat, Whatsapp)	Never	No Change	Very Low
File Sharing (e.g. Dropbox)	Often	Significant Change	High
Wiki	Never	No Change	Very Low
Collaborative Document Sharing (e.g. Google Docs)	Often	Significant Change	Neither High nor Low
Micro-blogging (e.g. Twitter)	Occasionally	Minor Change	Low

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Video conferencing (e.g. Skype, Facetime)	Often	Transform	High
Email	Often	Minor Change	High

Delivery of systems: IT Outsourcing	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Business Process Outsourcing (Technology and Process)	Very low	Very low
Outsourcing (services and support)	Very low	Very low
Outsourcing (Infrastructure)	Very low	Very low
Outsourcing (Temporary on project by project basis)	Low	Low
Outsourcing (Total IT)	Very low	Very low
Insourcing	Very High	Very High

Delivery of systems: Cloud	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Cloud (Software)	Low	Low
Cloud (Platform)	Low	Low
Cloud (Infrastructure)	Low	Low

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Development of Systems	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
In-house systems development	Low	Low
Collaboration in systems development with other fire services	Low	Low
Collaboration with other public sector bodies	Very low	Very low

Survey Results 19: Hertfordshire Fire and Rescue Service

Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
GPS for locating firefighters on the fire ground (Location Services)	Don't use it	Transform	High	Don't know
GPS for locating firefighters on call (Location Services)	Don't use it	Significant Change	Neither High nor Low	Don't know
Automatic vehicle location (for management of resources)	Up to date	Minor Change	Neither High nor Low	Don't know
Automatic vehicle location (Predictive analytics)	Don't use it	Significant Change	Neither High nor Low	Don't know
Quality monitoring of call handling	Up to date	Minor Change	Neither High nor Low	No change
Workforce management systems (Control)	Up to date	Minor Change	Neither High nor Low	No change
Workforce management systems (Corporate)	Up to date	Minor Change	Neither High nor Low	No change
Shared Control Centre (with more than one FRS or with other emergency services)	Up to date	Significant Change	Neither High nor Low	Significant change
Exchange of Information across Emergency Services (e.g. MAIT)	Don't use it	Significant Change	High	Significant change
Shared Control Systems (e.g. shared data centres driving multiple Emergency Service Control Centres)	Up to date	Significant Change	Neither High nor Low	Significant change
Virtual call centres (e.g. call centres with a cloud based infrastructure)	Don't use it	Significant Change	Neither High nor Low	Significant change
Automatic call distribution	Up to date		High	

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Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Call Line Identification (e.g. EISEC)	Up to date	Minor Change	Neither High nor Low	Don't know
Advanced Mobile Location (AML- Caller location information service for smartphones)	Up to date	Minor Change	Neither High nor Low	Don't know
Service Access Node H (SANH), or similar	Up to date	Transform	High	Transform
Computer aided dispatch	Up to date	Minor Change	Neither High nor Low	Minor change

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Data Storage	Obsolete	Transform	Very High	Transform
Data Capture (e.g Video, pictures and updating critical systems)	Up to date	Transform	High	Transform
Data Integration	Obsolete	Transform	High	Transform
Mobile Office (e.g Laptop, mobile device)	Up to date	Significant Change	Neither High nor Low	Minor change
Internal Customer Service and help desk	Old but serviceable	Transform	High	Significant change
Remote access to service systems (e.g. intelligence reports, briefings)	Up to date	Significant Change	High	Significant change
Laptop with access to personal information management systems & data processing	Up to date	Significant Change	High	Significant change
In-Vehicle Mobile Data Terminal	Up to date	Significant Change	High	Minor change

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Smartphone/PDA - Access to fire service systems	Old but serviceable	Transform	High	Minor change
Augmented Reality (heads up displays)	Don't use it	Don't Know	Neither High nor Low	Significant change

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Incident Messaging	Up to date	Significant Change	High	Significant change
Status Messaging	Up to date	Significant Change	High	Significant change
Command Support Unit	Up to date	Significant Change	High	Significant change
Communication with partners through voice (e.g. Police, Public Health)	Old but serviceable	Significant Change	High	Significant change
Communication with partners through data (e.g. Police, Public Health)	Obsolete	Significant Change	High	Significant change
Partnering with automatic systems failover	Don't know	Don't Know	Very High	Don't know
IP Communications (text, audio, video) for emergency calls from citizens	Don't know	Transform	High	Significant change
Routing of IP Communications (text, audio, video) to first responders	Don't use it	Don't Know	High	Significant change
Routing of IP Communications (text, audio, video) from first	Don't use it	Don't Know	High	Significant change

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responders to control or peer to peer				
Location information visualisation	Don't use it	Transform	High	Significant change
Sensor data transmission (e.g. Breathing Apparatus telemetry)	Don't use it	Significant Change	High	Significant change

Station End Equipment	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Printers	Up to date	Significant Change	Neither High nor Low	Minor change
Visual Display Unit (VDU)	Up to date	Significant Change	Neither High nor Low	Minor change

Records Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated databases with partners	Old but serviceable	Significant Change	High	Significant change
Broadband wireless access in vehicles (e.g. LAN, MDT, mobile)	Up to date	Significant Change	Very High	Transform
Image management software (e.g. video, CCTV, pictures, person mounted cameras)	Up to date	Significant Change	High	Significant change
Integrated GIS	Up to date	Significant Change	High	Significant change
Shared Gazetteer	Up to date	Significant Change	High	Significant change

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Video Surveillance	Up to date	Significant Change	Neither High nor Low	Significant change
In-vehicle cameras (cameras facing outwards)	Up to date	Minor Change	Neither High nor Low	Minor change
Person mounted cameras	Don't use it	Significant Change	High	Significant change
Aerial surveillance (e.g. drones)	Up to date	Significant Change	High	Significant change

Securing Fire Service Systems	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Encryption	Up to date	Minor Change	High	Minor change
Data Governance	Up to date	Minor Change	High	Minor change
Identification and Access Management (e.g. Single-Sign on)	Old but serviceable	Minor Change	High	Significant change
PSN Compliance	Up to date	Minor Change	High	Minor change

Analysis and Mapping	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated Management of Business Processes (e.g. Enterprise resources planning tools such as SAP, Oracle, Microsoft Dynamics)	Obsolete	Significant Change	High	Significant change
Remote recording of data (Home Fire Safety Checks, Fire Hydrant Data)	Obsolete	Significant Change	High	Transform

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Tools to extract and clean data	Obsolete	Significant Change	High	Minor change
Tools to visualise data	Old but serviceable	Significant Change	High	Minor change
Analytic software (displaying information on mobile device)	Don't use it	Significant Change	High	Significant change
Predictive modelling	Don't use it	Significant Change	Neither High nor Low	Don't know
Use of 3rd party analytic services	Don't know	Don't Know	Neither High nor Low	Don't know
Investigative software - fire	Old but serviceable	Significant Change	High	Don't know
Collection and analysis of data from private data sources (e.g. insurance data)	Don't know	Don't Know	Neither High nor Low	Don't know

The Use of Social Media: Communication with the public	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Twitter	Very often	Minor Change	Neither High nor Low
Facebook	Often	Minor Change	Neither High nor Low
Youtube	Occasionally	Minor Change	Neither High nor Low
Flickr	Never	No Change	Very Low
Instagram	Never	No Change	Neither High nor Low
Snapchat	Never	No Change	Neither High nor Low

The Use of Social Media: Communication within the organisation	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Enterprise networking sites (e.g. Yammer)	Very often	Significant Change	High
Instant messaging (e.g. Chat, Whatsapp)	Very often	Minor Change	High

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File Sharing (e.g. Dropbox)	Never	Significant Change	High
Wiki	Very often	Significant Change	High
Collaborative Document Sharing (e.g. Google Docs)	Never	Significant Change	High
Micro-blogging (e.g. Twitter)	Often	Minor Change	Neither High nor Low
Video conferencing (e.g. Skype, Facetime)	Occasionally	Significant Change	High
Email	Very often	Minor Change	Neither High nor Low

Delivery of systems: IT Outsourcing	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Business Process Outsourcing (Technology and Process)	Very low	Neither High nor Low
Outsourcing (services and support)	Neither High nor Low	Neither High nor Low
Outsourcing (Infrastructure)	High	High
Outsourcing (Temporary on project by project basis)	Very low	Neither High nor Low
Outsourcing (Total IT)	Low	Neither High nor Low
Insourcing	Neither High nor Low	Neither High nor Low

Delivery of systems: Cloud	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Cloud (Software)	Low	High

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| Cloud (Platform) | Very low | Neither High nor Low |
| Cloud (Infrastructure) | Very low | Neither High nor Low |

Development of Systems	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
In-house systems development	Very low	High
Collaboration in systems development with other fire services	Very low	High
Collaboration with other public sector bodies	Low	High

Survey Results 20: Humberside Fire and Rescue Service

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
GPS for locating firefighters on the fire ground (Location Services)	Don't use it	Significant Change	High	Significant change
GPS for locating firefighters on call (Location Services)	Don't use it	Significant Change	High	Significant change
Automatic vehicle location (for management of resources)	Up to date	Minor Change	High	Minor change
Automatic vehicle location (Predictive analytics)	Up to date	Minor Change	High	Minor change
Quality monitoring of call handling	Up to date	Minor Change	High	Minor change
Workforce management systems (Control)	Up to date	Significant Change	High	Minor change
Workforce management systems (Corporate)	Up to date	Significant Change	High	Minor change
Shared Control Centre (with more than one FRS or with other emergency services)	Up to date	Significant Change	Neither High nor Low	Significant change
Exchange of Information across Emergency Services (e.g. MAIT)	Don't use it	Significant Change	High	Significant change
Shared Control Systems (e.g. shared data centres driving multiple Emergency Service Control Centres)	Don't use it	Significant Change	Neither High nor Low	Significant change
Virtual call centres (e.g. call centres with a cloud based infrastructure)	Don't use it	Significant Change	Neither High nor Low	Significant change
Automatic call distribution	Up to date		High	

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Call Line Identification (e.g. EISEC)	Don't use it	Significant Change	High	Significant change
Advanced Mobile Location (AML- Caller location information service for smartphones)	Don't use it	Significant Change	High	Significant change
Service Access Node H (SANH), or similar	Don't use it	Significant Change	High	Significant change
Computer aided dispatch	Up to date	Significant Change	High	Significant change

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Data Storage	Up to date	Significant Change	Neither High nor Low	Significant change
Data Capture (e.g Video, pictures and updating critical systems)	Up to date	Significant Change	High	Significant change
Data Integration	Up to date	Significant Change	High	Significant change
Mobile Office (e.g Laptop, mobile device)	Up to date	Significant Change	Neither High nor Low	Significant change
Internal Customer Service and help desk	Up to date	Minor Change	Neither High nor Low	Significant change
Remote access to service systems (e.g. intelligence reports, briefings)	Up to date	Significant Change	Neither High nor Low	Significant change
Laptop with access to personal information management systems & data processing	Up to date	Significant Change	High	Significant change

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

In-Vehicle Mobile Data Terminal	Up to date	Significant Change	High	Significant change
Smartphone/PDA - Access to fire service systems	Up to date	Significant Change	High	Significant change
Augmented Reality (heads up displays)	Don't use it	Significant Change	Neither High nor Low	Significant change

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Incident Messaging	Up to date	Significant Change	High	Significant change
Status Messaging	Up to date	Significant Change	High	Significant change
Command Support Unit	Up to date	Significant Change	High	Significant change
Communication with partners through voice (e.g. Police, Public Health)	Up to date	Significant Change	High	Significant change
Communication with partners through data (e.g. Police, Public Health)	Up to date	Significant Change	High	Significant change
Partnering with automatic systems failover	Up to date	Significant Change	High	Significant change
IP Communications (text, audio, video) for emergency calls from citizens	Up to date	Significant Change	High	Significant change
Routing of IP Communications (text, audio, video) to first responders	Up to date	Significant Change	High	Significant change
Routing of IP Communications (text, audio, video) from first	Up to date	Significant Change	Neither High nor Low	Significant change

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

responders to control or peer to peer				
Location information visualisation	Don't use it	Significant Change	Neither High nor Low	Minor change
Sensor data transmission (e.g. Breathing Apparatus telemetry)	Don't use it	Significant Change	Neither High nor Low	Minor change

Station End Equipment	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Printers	Old but serviceable	Minor Change	Very High	Significant change
Visual Display Unit (VDU)	Old but serviceable	Minor Change	High	Significant change

Records Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated databases with partners	Don't use it	Significant Change	Neither High nor Low	Significant change
Broadband wireless access in vehicles (e.g. LAN, MDT, mobile)	Don't use it	Significant Change	High	Significant change
Image management software (e.g. video, CCTV, pictures, person mounted cameras)	Up to date	Significant Change	High	Significant change
Integrated GIS	Up to date	Significant Change	High	Significant change
Shared Gazetteer	Up to date	Significant Change	Neither High nor Low	Significant change

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Video Surveillance	Don't use it	Significant Change	Neither High nor Low	Significant change
In-vehicle cameras (cameras facing outwards)	Up to date	Significant Change	High	Significant change
Person mounted cameras	Up to date	Significant Change	High	Significant change
Aerial surveillance (e.g. drones)	Up to date	Significant Change	High	Significant change

Securing Fire Service Systems	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Encryption	Up to date	Significant Change	Very High	Significant change
Data Governance	Up to date	Significant Change	Very High	Significant change
Identification and Access Management (e.g. Single-Sign on)	Don't use it	Significant Change	Neither High nor Low	Significant change
PSN Compliance	Don't use it	Significant Change	High	Significant change

Analysis and Mapping	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated Management of Business Processes (e.g. Enterprise resources planning tools such as SAP, Oracle, Microsoft Dynamics)	Don't use it	Minor Change	Neither High nor Low	Minor change

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Remote recording of data (Home Fire Safety Checks, Fire Hydrant Data)	Old but serviceable	Significant Change	High	Significant change
Tools to extract and clean data	Up to date	Minor Change	Neither High nor Low	Minor change
Tools to visualise data	Don't know	Minor Change	High	Significant change
Analytic software (displaying information on mobile device)	Don't know	Minor Change	High	Significant change
Predictive modelling	Don't know	Minor Change	High	Significant change
Use of 3rd party analytic services	Don't know	Minor Change	Neither High nor Low	Minor change
Investigative software - fire	Don't use it	Minor Change	Neither High nor Low	Minor change
Collection and analysis of data from private data sources (e.g. insurance data)	Don't use it	Minor Change	Neither High nor Low	Minor change

The Use of Social Media: Communication with the public	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Twitter	Very often	No Change	High
Facebook	Very often	No Change	High
Youtube	Often	Minor Change	Neither High nor Low
Flickr	Never	No Change	Very Low
Instagram	Never	No Change	Very Low
Snapchat	Never	No Change	Very Low

The Use of Social Media: Communication within the organisation	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Enterprise networking sites (e.g. Yammer)	Never	No Change	Very Low
Instant messaging (e.g. Chat, Whatsapp)	Very often	Significant Change	High
File Sharing (e.g. Dropbox)	Often	Significant Change	High

Wiki	Often	Significant Change	High
Collaborative Document Sharing (e.g. Google Docs)	Very often	Significant Change	Neither High nor Low
Micro-blogging (e.g. Twitter)	Often	Minor Change	Low
Video conferencing (e.g. Skype, Facetime)	Very often	Significant Change	Neither High nor Low
Email	Very often	Significant Change	Neither High nor Low

Delivery of systems: IT Outsourcing	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Business Process Outsourcing (Technology and Process)	Very low	Very low
Outsourcing (services and support)	Very low	Very low
Outsourcing (Infrastructure)	Very low	Very low
Outsourcing (Temporary on project by project basis)	Very low	Very low
Outsourcing (Total IT)	Very low	Very low
Insourcing	High	Neither High nor Low

Delivery of systems: Cloud	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Cloud (Software)	Neither High nor Low	High

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Cloud (Platform)	High	High
Cloud (Infrastructure)	High	High

Development of Systems	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
In-house systems development	High	High
Collaboration in systems development with other fire services	High	High
Collaboration with other public sector bodies	High	High

Survey Results 21: Isle of Wight Fire and Rescue Service

Survey Results 22: Kent Fire and Rescue Service

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Survey Results 23: Leicestershire Fire and Rescue Service

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Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
GPS for locating firefighters on the fire ground (Location Services)	Up to date	Minor Change	Neither High nor Low	Minor change
GPS for locating firefighters on call (Location Services)	Up to date	Minor Change	Neither High nor Low	Minor change
Automatic vehicle location (for management of resources)	Up to date	Minor Change	Neither High nor Low	Significant change
Automatic vehicle location (Predictive analytics)	Up to date	Significant Change	Neither High nor Low	Transform
Quality monitoring of call handling	Don't know	Minor Change	Low	No change
Workforce management systems (Control)	Don't use it	No Change	Very Low	No change
Workforce management systems (Corporate)	Up to date	Significant Change	High	No change
Shared Control Centre (with more than one FRS or with other emergency services)	Don't use it	Significant Change	Neither High nor Low	Significant change
Exchange of Information across Emergency Services (e.g. MAIT)	Don't use it	Transform	High	Transform
Shared Control Systems (e.g. shared data centres driving multiple Emergency Service Control Centres)	Don't use it	Don't Know	Low	Transform
Virtual call centres (e.g. call centres with a cloud based infrastructure)	Don't use it	Transform	Low	No change
Automatic call distribution	Up to date		High	

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Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Call Line Identification (e.g. EISEC)	Up to date	No Change	Neither High nor Low	No change
Advanced Mobile Location (AML- Caller location information service for smartphones)	Don't use it	Minor Change	Low	No change
Service Access Node H (SANH), or similar	Old but serviceable	Transform	Very High	Transform
Computer aided dispatch	Up to date	Minor Change	Neither High nor Low	Significant change

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Data Storage	Up to date	Significant Change	Neither High nor Low	No change
Data Capture (e.g Video, pictures and updating critical systems)	Don't use it	Significant Change	Neither High nor Low	Significant change
Data Integration	Up to date	Transform	High	Minor change
Mobile Office (e.g Laptop, mobile device)	Up to date	Minor Change	Neither High nor Low	No change
Internal Customer Service and help desk	Up to date	Minor Change	Very High	No change
Remote access to service systems (e.g. intelligence reports, briefings)	Up to date	Significant Change	High	Minor change
Laptop with access to personal information management systems & data processing	Don't know	Don't Know	Neither High nor Low	Don't know

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In-Vehicle Mobile Data Terminal	Up to date	Significant Change	Neither High nor Low	Significant change
Smartphone/PDA - Access to fire service systems	Up to date	Significant Change	Neither High nor Low	Significant change
Augmented Reality (heads up displays)	Up to date	Transform	High	No change

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Incident Messaging	Up to date	Minor Change	Neither High nor Low	Minor change
Status Messaging	Up to date	Minor Change	Neither High nor Low	Minor change
Command Support Unit	Up to date	Minor Change	Neither High nor Low	Minor change
Communication with partners through voice (e.g. Police, Public Health)	Old but serviceable	Transform	Very High	Transform
Communication with partners through data (e.g. Police, Public Health)	Old but serviceable	Transform	Very High	Transform
Partnering with automatic systems failover	Up to date	Minor Change	Neither High nor Low	No change
IP Communications (text, audio, video) for emergency calls from citizens	Don't use it	Transform	Neither High nor Low	Don't know
Routing of IP Communications (text, audio, video) to first responders	Don't use it	Transform	Neither High nor Low	Transform
Routing of IP Communications (text, audio, video) from first responders to control or peer to peer	Don't use it	Transform	Neither High nor Low	Transform

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Location information visualisation	Obsolete	No Change	Very Low	No change
Sensor data transmission (e.g. Breathing Apparatus telemetry)	Up to date	Minor Change	High	Minor change

Station End Equipment	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Printers	Up to date	Significant Change	Low	Minor change
Visual Display Unit (VDU)	Up to date	Minor Change	Neither High nor Low	Minor change

Records Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated databases with partners	Up to date	Transform	Neither High nor Low	Transform
Broadband wireless access in vehicles (e.g. LAN, MDT, mobile)	Up to date	Transform	Neither High nor Low	Significant change
Image management software (e.g. video, CCTV, pictures, person mounted cameras)	Old but serviceable	Significant Change	High	Significant change
Integrated GIS	Up to date	Minor Change	Neither High nor Low	No change
Shared Gazetteer	Up to date	Significant Change	Neither High nor Low	Minor change
Video Surveillance	Up to date	Significant Change	Neither High nor Low	Significant change

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In-vehicle cameras (cameras facing outwards)	Up to date	Minor Change	Neither High nor Low	Minor change
Person mounted cameras	Don't use it	Significant Change	Neither High nor Low	Transform
Aerial surveillance (e.g. drones)	Don't use it	Minor Change	Very Low	No change

Securing Fire Service Systems	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Encryption	Up to date	Transform	High	No change
Data Governance	Don't use it	Transform	High	No change
Identification and Access Management (e.g. Single-Sign on)	Don't use it	Minor Change	Low	No change
PSN Compliance	Don't use it	No Change	Low	No change

Analysis and Mapping	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated Management of Business Processes (e.g. Enterprise resources planning tools such as SAP, Oracle, Microsoft Dynamics)	Up to date	Transform	Very High	No change
Remote recording of data (Home Fire Safety Checks, Fire Hydrant Data)	Don't use it	Significant Change	Very High	Significant change
Tools to extract and clean data	Up to date	Transform	High	No change

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Tools to visualise data	Up to date	Transform	High	No change
Analytic software (displaying information on mobile device)	Don't use it	Significant Change	High	Minor change
Predictive modelling	Up to date	Significant Change	High	Minor change
Use of 3rd party analytic services	Obsolete	No Change	Very Low	No change
Investigative software - fire	Don't use it	Minor Change	Low	No change
Collection and analysis of data from private data sources (e.g. insurance data)	Up to date	Transform	Neither High nor Low	Transform

The Use of Social Media: Communication with the public	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Twitter	Very often	Minor Change	High
Facebook	Very often	Minor Change	High
Youtube	Occasionally	Minor Change	Neither High nor Low
Flickr	Never	Minor Change	Very Low
Instagram	Never	Minor Change	Very Low
Snapchat	Never	Minor Change	Very Low

The Use of Social Media: Communication within the organisation	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Enterprise networking sites (e.g. Yammer)	Never	Significant Change	Low
Instant messaging (e.g. Chat, Whatsapp)	Often	Significant Change	Neither High nor Low
File Sharing (e.g. Dropbox)	Occasionally	Minor Change	Low
Wiki	Never	Don't Know	Low

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Collaborative Document Sharing (e.g. Google Docs)	Occasionally	Significant Change	Neither High nor Low
Micro-blogging (e.g. Twitter)	Occasionally	Minor Change	Low
Video conferencing (e.g. Skype, Facetime)	Occasionally	Significant Change	High
Email	Very often	Minor Change	Neither High nor Low

Delivery of systems: IT Outsourcing	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Business Process Outsourcing (Technology and Process)	Very low	Low
Outsourcing (services and support)	Very low	Low
Outsourcing (Infrastructure)	Low	Neither High nor Low
Outsourcing (Temporary on project by project basis)	Low	Neither High nor Low
Outsourcing (Total IT)	Very low	Very low
Insourcing	Very low	Very low

Delivery of systems: Cloud	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Cloud (Software)	Low	Neither High nor Low
Cloud (Platform)	Low	Neither High nor Low

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Cloud (Infrastructure)	Low	Neither High nor Low

Development of Systems	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
In-house systems development	Very low	Neither High nor Low
Collaboration in systems development with other fire services	Very low	Low
Collaboration with other public sector bodies	Very low	Low

Survey Results 24: Lincolnshire Fire and Rescue Service

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Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
GPS for locating firefighters on the fire ground (Location Services)	Don't use it	Don't Know	Neither High nor Low	No change
GPS for locating firefighters on call (Location Services)	Don't use it	No Change	Low	No change
Automatic vehicle location (for management of resources)	Up to date	No Change	High	Don't know
Automatic vehicle location (Predictive analytics)	Don't use it	No Change	Neither High nor Low	Don't know
Quality monitoring of call handling	Up to date	No Change	Low	No change
Workforce management systems (Control)	Up to date	No Change	High	Significant change
Workforce management systems (Corporate)	Old but serviceable	Minor Change	Neither High nor Low	Minor change
Shared Control Centre (with more than one FRS or with other emergency services)	Don't use it	No Change	Very Low	No change
Exchange of Information across Emergency Services (e.g. MAIT)	Don't use it	Don't Know	High	Transform
Shared Control Systems (e.g. shared data centres driving multiple Emergency Service Control Centres)	Don't use it	Transform	Very High	Transform
Virtual call centres (e.g. call centres with a cloud based infrastructure)	Don't use it	No Change	Very Low	Don't know
Automatic call distribution	Up to date		High	

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Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Call Line Identification (e.g. EISEC)	Up to date	Minor Change	High	Don't know
Advanced Mobile Location (AML- Caller location information service for smartphones)	Don't use it	Don't Know	Neither High nor Low	Don't know
Service Access Node H (SANH), or similar	Don't know	Don't Know	Low	Minor change
Computer aided dispatch	Up to date	Minor Change	High	Don't know

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Data Storage	Up to date	Minor Change	Very Low	No change
Data Capture (e.g Video, pictures and updating critical systems)	Don't use it	Significant Change	Low	No change
Data Integration	Up to date	Minor Change	Low	No change
Mobile Office (e.g Laptop, mobile device)	Up to date	Minor Change	Very Low	Minor change
Internal Customer Service and help desk	Don't use it	No Change	Very Low	No change
Remote access to service systems (e.g. intelligence reports, briefings)	Old but serviceable	Minor Change	Neither High nor Low	Don't know
Laptop with access to personal information management systems & data processing	Up to date	Minor Change	Neither High nor Low	No change
In-Vehicle Mobile Data Terminal	Old but serviceable	Significant Change	High	Minor change

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Smartphone/PDA - Access to fire service systems	Up to date	Don't Know	Neither High nor Low	No change
Augmented Reality (heads up displays)	Don't use it	Don't Know	Very Low	No change

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Incident Messaging	Up to date	Minor Change	Neither High nor Low	Minor change
Status Messaging	Up to date	Minor Change	Neither High nor Low	Minor change
Command Support Unit	Old but serviceable	Transform	High	Significant change
Communication with partners through voice (e.g. Police, Public Health)	Up to date	Don't Know	Low	Minor change
Communication with partners through data (e.g. Police, Public Health)	Don't use it	Don't Know	Low	Minor change
Partnering with automatic systems failover	Up to date	Don't Know	High	Minor change
IP Communications (text, audio, video) for emergency calls from citizens	Don't use it	Don't Know	Low	Minor change
Routing of IP Communications (text, audio, video) to first responders	Don't use it	Don't Know	Low	Minor change
Routing of IP Communications (text, audio, video) from first responders to control or peer to peer	Don't use it	Don't Know	Low	Minor change
Location information visualisation	Don't know	Don't Know	Low	Minor change

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| Sensor data transmission (e.g. Breathing Apparatus telemetry) | Don't use it | Significant Change | Neither High nor Low | No change |

Station End Equipment	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Printers	Old but serviceable	Significant Change	Neither High nor Low	No change
Visual Display Unit (VDU)	Don't use it	Significant Change	Neither High nor Low	No change

Records Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated databases with partners	Don't know	Significant Change	Low	Minor change
Broadband wireless access in vehicles (e.g. LAN, MDT, mobile)	Don't use it	Transform	High	Significant change
Image management software (e.g. video, CCTV, pictures, person mounted cameras)	Don't use it	Don't Know	Low	No change
Integrated GIS	Don't know	Don't Know	Low	No change
Shared Gazetteer	Don't know	Significant Change	Neither High nor Low	No change

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Video Surveillance	Don't use it	Don't Know	Low	No change
In-vehicle cameras (cameras facing outwards)	Up to date	Minor Change	Low	No change
Person mounted cameras	Don't use it	No Change	Low	Don't know
Aerial surveillance (e.g. drones)	Up to date	Minor Change	Neither High nor Low	Don't know

Securing Fire Service Systems	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Encryption	Up to date	Don't Know	High	No change
Data Governance	Up to date	Don't Know	High	Minor change
Identification and Access Management (e.g. Single-Sign on)	Up to date	Don't Know	High	Minor change
PSN Compliance	Up to date	Don't Know	High	Minor change

Analysis and Mapping	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated Management of Business Processes (e.g. Enterprise resources planning tools such as SAP, Oracle, Microsoft Dynamics)	Don't know	Don't Know	Neither High nor Low	No change
Remote recording of data (Home Fire Safety Checks, Fire Hydrant Data)	Old but serviceable	Minor Change	Neither High nor Low	No change

Tools to extract and clean data	Don't use it	Minor Change	Neither High nor Low	No change
Tools to visualise data	Old but serviceable	No Change	High	No change
Analytic software (displaying information on mobile device)	Don't use it	No Change	Neither High nor Low	No change
Predictive modelling	Up to date	No Change	High	No change
Use of 3rd party analytic services	Don't use it	No Change	Neither High nor Low	No change
Investigative software - fire	Don't use it	Don't Know	Neither High nor Low	No change
Collection and analysis of data from private data sources (e.g. insurance data)	Don't know	Don't Know	Neither High nor Low	No change

The Use of Social Media: Communication with the public	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Twitter	Very often	Minor Change	High
Facebook	Very often	Minor Change	High
Youtube	Occasionally	Minor Change	Low
Flickr	Occasionally	Minor Change	Low
Instagram	Occasionally	Significant Change	Neither High nor Low
Snapchat	Never	Minor Change	Very Low

The Use of Social Media: Communication within the organisation	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Enterprise networking sites (e.g. Yammer)	Very often	Minor Change	Neither High nor Low
Instant messaging (e.g. Chat, Whatsapp)	Often	Significant Change	Low
File Sharing (e.g. Dropbox)	Occasionally	Minor Change	Neither High nor Low
Wiki	Never	No Change	Very Low

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Collaborative Document Sharing (e.g. Google Docs)	Occasionally	Minor Change	High
Micro-blogging (e.g. Twitter)	Often	Minor Change	Neither High nor Low
Video conferencing (e.g. Skype, Facetime)	Often	Minor Change	High
Email	Very often	Minor Change	High

Delivery of systems: IT Outsourcing	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Business Process Outsourcing (Technology and Process)	High	Very low
Outsourcing (services and support)	High	Very low
Outsourcing (Infrastructure)	High	Very low
Outsourcing (Temporary on project by project basis)	High	Very low
Outsourcing (Total IT)	Very High	Very low
Insourcing	Neither High nor Low	High

Delivery of systems: Cloud	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level

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Cloud (Software)	Low	Neither High nor Low
Cloud (Platform)	Low	Neither High nor Low
Cloud (Infrastructure)	Low	Neither High nor Low

Development of Systems	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
In-house systems development	Very low	Very low
Collaboration in systems development with other fire services	High	High
Collaboration with other public sector bodies	High	High

Survey Results 25: London Fire Brigade

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Survey Results 26: Merseyside Fire and Rescue Service

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Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
GPS for locating firefighters on the fire ground (Location Services)	Don't use it	Significant Change	Neither High nor Low	Transform
GPS for locating firefighters on call (Location Services)	Don't use it	Significant Change	Neither High nor Low	Transform
Automatic vehicle location (for management of resources)	Up to date	Minor Change	Very High	Minor change
Automatic vehicle location (Predictive analytics)	Don't use it	Significant Change	High	Transform
Quality monitoring of call handling	Up to date	Minor Change	High	Minor change
Workforce management systems (Control)	Up to date	Minor Change	Very High	Minor change
Workforce management systems (Corporate)	Up to date	Minor Change	Very High	Minor change
Shared Control Centre (with more than one FRS or with other emergency services)	Don't use it	Transform	Low	No change
Exchange of Information across Emergency Services (e.g. MAIT)	Don't use it	Significant Change	High	Significant change
Shared Control Systems (e.g. shared data centres driving multiple Emergency Service Control Centres)	Don't use it	Transform	Neither High nor Low	No change
Virtual call centres (e.g. call centres with a cloud based infrastructure)	Don't use it	No Change	Very Low	No change
Automatic call distribution	Up to date		High	

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Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Call Line Identification (e.g. EISEC)	Up to date	Minor Change	Very High	No change
Advanced Mobile Location (AML- Caller location information service for smartphones)	Up to date	Minor Change	Very High	No change
Service Access Node H (SANH), or similar	Up to date	Significant Change	Very High	Significant change
Computer aided dispatch	Up to date	Minor Change	Very High	Minor change

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Data Storage	Up to date	Transform	Very High	Significant change
Data Capture (e.g Video, pictures and updating critical systems)	Up to date	Transform	High	Significant change
Data Integration	Up to date	Significant Change	High	Significant change
Mobile Office (e.g Laptop, mobile device)	Up to date	Transform	High	Minor change
Internal Customer Service and help desk	Up to date	Minor Change	High	Significant change
Remote access to service systems (e.g. intelligence reports, briefings)	Up to date	Significant Change	Very High	Minor change
Laptop with access to personal information management systems & data processing	Up to date	Significant Change	High	Minor change
In-Vehicle Mobile Data Terminal	Up to date	Minor Change	Very High	Minor change

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Smartphone/PDA - Access to fire service systems	Up to date	Transform	High	Minor change
Augmented Reality (heads up displays)	Don't use it	Transform	Neither High nor Low	Minor change

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Incident Messaging	Up to date	Significant Change	Very High	Minor change
Status Messaging	Up to date	Significant Change	Very High	Minor change
Command Support Unit	Up to date	Significant Change	Very High	Significant change
Communication with partners through voice (e.g. Police, Public Health)	Up to date	Minor Change	Very High	No change
Communication with partners through data (e.g. Police, Public Health)	Up to date	Transform	Very High	Transform
Partnering with automatic systems failover	Don't use it	Significant Change	Neither High nor Low	No change
IP Communications (text, audio, video) for emergency calls from citizens	Don't use it	Transform	High	No change
Routing of IP Communications (text, audio, video) to first responders	Don't use it	Transform	High	Significant change
Routing of IP Communications (text, audio, video) from first responders to control or peer to peer	Don't use it	Transform	High	Significant change

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Location information visualisation	Don't use it	Transform	High	Significant change
Sensor data transmission (e.g. Breathing Apparatus telemetry)	Don't use it	Significant Change	Very High	Transform

Station End Equipment	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Printers	Up to date	No Change	High	No change
Visual Display Unit (VDU)	Don't use it	Minor Change	Neither High nor Low	Minor change

Records Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated databases with partners	Don't use it	Transform	High	Transform
Broadband wireless access in vehicles (e.g. LAN, MDT, mobile)	Up to date	Minor Change	High	Minor change
Image management software (e.g. video, CCTV, pictures, person mounted cameras)	Up to date	Significant Change	High	Minor change
Integrated GIS	Up to date	Minor Change	High	No change
Shared Gazetteer	Up to date	Significant Change	High	No change
Video Surveillance	Don't use it	No Change	Very Low	No change

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

In-vehicle cameras (cameras facing outwards)	Up to date	Minor Change	High	Significant change
Person mounted cameras	Don't use it	Significant Change	High	Transform
Aerial surveillance (e.g. drones)	Up to date	Significant Change	High	Significant change

Securing Fire Service Systems	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Encryption	Up to date	Significant Change	Very High	Minor change
Data Governance	Up to date	Significant Change	Very High	Minor change
Identification and Access Management (e.g. Single-Sign on)	Up to date	Transform	Very High	Minor change
PSN Compliance	Don't use it	Significant Change	Neither High nor Low	Minor change

Analysis and Mapping	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated Management of Business Processes (e.g. Enterprise resources planning tools such as SAP, Oracle, Microsoft Dynamics)	Don't use it	Don't Know	Neither High nor Low	Minor change
Remote recording of data (Home Fire Safety Checks, Fire Hydrant Data)	Up to date	Significant Change	Very High	Significant change

Tools to extract and clean data	Up to date	Significant Change	High	Significant change
Tools to visualise data	Up to date	Significant Change	High	Minor change
Analytic software (displaying information on mobile device)	Don't use it	Significant Change	High	Significant change
Predictive modelling	Don't use it	Transform	High	Minor change
Use of 3rd party analytic services	Don't use it	Don't Know	Neither High nor Low	No change
Investigative software - fire	Up to date	Significant Change	High	Significant change
Collection and analysis of data from private data sources (e.g. insurance data)	Don't use it	Minor Change	Neither High nor Low	Minor change

The Use of Social Media: Communication with the public	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Twitter	Often	Significant Change	Neither High nor Low
Facebook	Often	Significant Change	Neither High nor Low
Youtube	Occasionally	Significant Change	Neither High nor Low
Flickr	Don't Know	Significant Change	Neither High nor Low
Instagram	Don't Know	Significant Change	Neither High nor Low
Snapchat	Don't Know	Significant Change	Neither High nor Low

The Use of Social Media: Communication within the organisation	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Enterprise networking sites (e.g. Yammer)	Don't Know	Significant Change	Neither High nor Low
Instant messaging (e.g. Chat, Whatsapp)	Don't Know	Significant Change	Neither High nor Low
File Sharing (e.g. Dropbox)	Don't Know	Significant Change	Neither High nor Low

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Wiki	Don't Know	Significant Change	Neither High nor Low
Collaborative Document Sharing (e.g. Google Docs)	Don't Know	Significant Change	Neither High nor Low
Micro-blogging (e.g. Twitter)	Don't Know	Significant Change	Neither High nor Low
Video conferencing (e.g. Skype, Facetime)	Occasionally	Significant Change	Neither High nor Low
Email	Very often	Significant Change	Neither High nor Low

Delivery of systems: IT Outsourcing	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Business Process Outsourcing (Technology and Process)	Very low	Low
Outsourcing (services and support)	Very High	Very High
Outsourcing (Infrastructure)	Neither High nor Low	High
Outsourcing (Temporary on project by project basis)	Very low	Neither High nor Low
Outsourcing (Total IT)	High	High
Insourcing	Very low	Low

Delivery of systems: Cloud	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Cloud (Software)	Neither High nor Low	High

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| Cloud (Platform) | Neither High nor Low | High |
| Cloud (Infrastructure) | Neither High nor Low | High |

Development of Systems	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
In-house systems development	Neither High nor Low	High
Collaboration in systems development with other fire services	Low	Low
Collaboration with other public sector bodies	Low	Neither High nor Low

Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
GPS for locating firefighters on the fire ground (Location Services)	Don't use it	Significant Change	Neither High nor Low	No change
GPS for locating firefighters on call (Location Services)	Don't use it	No Change	Neither High nor Low	Don't know
Automatic vehicle location (for management of resources)	Up to date	Minor Change	High	Minor change
Automatic vehicle location (Predictive analytics)	Up to date	Minor Change	High	Minor change
Quality monitoring of call handling		Don't know	Neither High nor Low	Significant change
Workforce management systems (Control)		Don't know	Neither High nor Low	Significant change
Workforce management systems (Corporate)		Don't know	Neither High nor Low	Significant change
Shared Control Centre (with more than one FRS or with other emergency services)	Up to date	Minor Change	Very High	Significant change
Exchange of Information across Emergency Services (e.g. MAIT)	Don't use it	Significant Change	High	Transform
Shared Control Systems (e.g. shared data centres driving multiple Emergency Service Control Centres)	Don't use it	Significant Change	High	Minor change
Virtual call centres (e.g. call centres with a cloud based infrastructure)				Significant change
Automatic call distribution	Up to date	Minor change	High	No change

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales**.**

Survey Results 28: Norfolk Fire and Rescue Service

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Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Call Line Identification (e.g. EISEC)	Old but serviceable	Significant Change	Very High	No change
Advanced Mobile Location (AML- Caller location information service for smartphones)	Old but serviceable	Significant Change	Very High	No change
Service Access Node H (SANH), or similar	Don't use it	Significant Change	Neither High nor Low	Transform
Computer aided dispatch	Old but serviceable	Significant Change	Very High	Transform

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Data Storage	Old but serviceable	Significant Change	High	No change
Data Capture (e.g Video, pictures and updating critical systems)	Old but serviceable	Transform	Neither High nor Low	No change
Data Integration				
Mobile Office (e.g Laptop, mobile device)	Up to date			
Internal Customer Service and help desk				
Remote access to service systems (e.g. intelligence reports, briefings)				
Laptop with access to personal information management systems & data processing				

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In-Vehicle Mobile Data Terminal				
Smartphone/PDA - Access to fire service systems				
Augmented Reality (heads up displays)				

Survey Results 27: Northamptonshire Fire and Rescue Service

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Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
GPS for locating firefighters on the fire ground (Location Services)	Don't use it	Significant Change	High	No change
GPS for locating firefighters on call (Location Services)	Don't use it	No Change	Neither High nor Low	No change
Automatic vehicle location (for management of resources)	Up to date	Minor Change	High	Minor change
Automatic vehicle location (Predictive analytics)	Up to date	Minor Change	Neither High nor Low	Don't know
Quality monitoring of call handling	Old but serviceable	Significant Change	Neither High nor Low	No change
Workforce management systems (Control)	Up to date	Minor Change	High	No change
Workforce management systems (Corporate)	Old but serviceable	Transform	High	No change
Shared Control Centre (with more than one FRS or with other emergency services)	Up to date	Minor Change	Very High	Significant change
Exchange of Information across Emergency Services (e.g. MAIT)	Don't use it	Significant Change	High	Transform
Shared Control Systems (e.g. shared data centres driving multiple Emergency Service Control Centres)	Don't use it	Significant Change	High	Minor change
Virtual call centres (e.g. call centres with a cloud based infrastructure)	Don't use it	No Change	Low	Don't know
Automatic call distribution	Up to date		High	

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Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Call Line Identification (e.g. EISEC)	Up to date	Minor Change	High	No change
Advanced Mobile Location (AML- Caller location information service for smartphones)	Don't use it	Minor Change	Neither High nor Low	No change
Service Access Node H (SANH), or similar	Up to date	Minor Change	High	Significant change
Computer aided dispatch	Up to date	Significant Change	Very High	Significant change

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Data Storage	Up to date	Significant Change	High	No change
Data Capture (e.g Video, pictures and updating critical systems)	Obsolete	Transform	Neither High nor Low	No change
Data Integration	Old but serviceable	Significant Change	Neither High nor Low	No change
Mobile Office (e.g Laptop, mobile device)	Up to date	Transform	High	No change
Internal Customer Service and help desk	Old but serviceable	Minor Change	Low	Minor change
Remote access to service systems (e.g. intelligence reports, briefings)	Old but serviceable	Minor Change	High	No change
Laptop with access to personal information management systems & data processing	Up to date	Minor Change	High	No change

In-Vehicle Mobile Data Terminal	Up to date	Minor Change	Very High	Significant change
Smartphone/PDA - Access to fire service systems	Old but serviceable	Transform	High	Significant change
Augmented Reality (heads up displays)	Don't use it	Transform	Neither High nor Low	Minor change

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Incident Messaging	Up to date	Significant Change	Very High	Significant change
Status Messaging	Old but serviceable	Significant Change	Very High	Significant change
Command Support Unit	Up to date	Minor Change	Very High	Significant change
Communication with partners through voice (e.g. Police, Public Health)	Up to date	Minor Change	Very High	Significant change
Communication with partners through data (e.g. Police, Public Health)	Old but serviceable	Transform	Very High	Significant change
Partnering with automatic systems failover	Old but serviceable	Transform	Low	No change
IP Communications (text, audio, video) for emergency calls from citizens	Obsolete	Transform	Neither High nor Low	Minor change
Routing of IP Communications (text, audio, video) to first responders	Obsolete	Transform	Neither High nor Low	Minor change
Routing of IP Communications (text, audio, video) from first	Obsolete	Transform	Neither High nor Low	Minor change

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responders to control or peer to peer				
Location information visualisation	Obsolete	Significant Change	Neither High nor Low	Minor change
Sensor data transmission (e.g. Breathing Apparatus telemetry)	Up to date	Minor Change	Very High	No change

Station End Equipment	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Printers	Old but serviceable	Minor Change	Neither High nor Low	No change
Visual Display Unit (VDU)	Old but serviceable	Minor Change	Neither High nor Low	No change

Records Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated databases with partners	Don't use it	Transform	High	Don't know
Broadband wireless access in vehicles (e.g. LAN, MDT, mobile)	Up to date	Minor Change	High	Significant change
Image management software (e.g. video, CCTV, pictures, person mounted cameras)	Old but serviceable	Significant Change	High	Minor change
Integrated GIS	Up to date	Minor Change	Neither High nor Low	No change
Shared Gazetteer	Old but serviceable	Minor Change	Neither High nor Low	No change

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Video Surveillance	Up to date	No Change	Neither High nor Low	No change
In-vehicle cameras (cameras facing outwards)	Up to date	No Change	Neither High nor Low	Significant change
Person mounted cameras	Don't use it	Significant Change	Neither High nor Low	Don't know
Aerial surveillance (e.g. drones)	Up to date	Minor Change	High	Significant change

Securing Fire Service Systems	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Encryption	Up to date	Minor Change	Neither High nor Low	Minor change
Data Governance	Old but serviceable	Significant Change	High	Significant change
Identification and Access Management (e.g. Single-Sign on)	Old but serviceable	Significant Change	Neither High nor Low	Significant change
PSN Compliance	Don't use it	Transform	Neither High nor Low	Transform

Analysis and Mapping	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated Management of Business Processes (e.g. Enterprise resources planning tools such as SAP, Oracle, Microsoft Dynamics)	Don't use it	Minor Change	High	Transform
Remote recording of data (Home Fire Safety Checks, Fire Hydrant Data)	Old but serviceable	Minor Change	High	Minor change

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Tools to extract and clean data	Don't use it	Significant Change	Neither High nor Low	Transform
Tools to visualise data	Don't use it	Significant Change	Neither High nor Low	Don't know
Analytic software (displaying information on mobile device)	Don't use it	Transform	Neither High nor Low	Significant change
Predictive modelling	Up to date	Transform	High	Significant change
Use of 3rd party analytic services	Don't use it	Transform	Low	Don't know
Investigative software - fire	Don't use it	Significant Change	High	Minor change
Collection and analysis of data from private data sources (e.g. insurance data)	Don't use it	Minor Change	Neither High nor Low	Minor change

The Use of Social Media: Communication with the public	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Twitter	Often	No Change	High
Facebook	Occasionally	No Change	High
Youtube	Occasionally	No Change	Neither High nor Low
Flickr	Never	Don't Know	Low
Instagram	Never	Don't Know	Low
Snapchat	Never	Don't Know	Low

The Use of Social Media: Communication within the organisation	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Enterprise networking sites (e.g. Yammer)	Never	Minor Change	Neither High nor Low
Instant messaging (e.g. Chat, Whatsapp)	Often	Minor Change	Neither High nor Low
File Sharing (e.g. Dropbox)	Occasionally	Significant Change	Neither High nor Low
Wiki	Don't Know	Don't Know	Neither High nor Low

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Collaborative Document Sharing (e.g. Google Docs)	Occasionally	Significant Change	Neither High nor Low
Micro-blogging (e.g. Twitter)	Don't Know	Don't Know	Neither High nor Low
Video conferencing (e.g. Skype, Facetime)	Often	Minor Change	Neither High nor Low
Email	Very often	Minor Change	Neither High nor Low

Delivery of systems: IT Outsourcing	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Business Process Outsourcing (Technology and Process)	High	High
Outsourcing (services and support)	High	High
Outsourcing (Infrastructure)	Neither High nor Low	Neither High nor Low
Outsourcing (Temporary on project by project basis)	Low	Low
Outsourcing (Total IT)	Low	Low
Insourcing	High	High

Delivery of systems: Cloud	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Cloud (Software)	Neither High nor Low	Neither High nor Low
Cloud (Platform)	Low	Low

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Cloud (Infrastructure)	Low	Low

Development of Systems	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
In-house systems development	High	High
Collaboration in systems development with other fire services	High	High
Collaboration with other public sector bodies	High	High

Survey Results 28: Northumberland Fire and Rescue Service

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Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
GPS for locating firefighters on the fire ground (Location Services)	Don't use it	Significant Change	Neither High nor Low	Transform
GPS for locating firefighters on call (Location Services)	Don't use it	Minor Change	Neither High nor Low	Significant change
Automatic vehicle location (for management of resources)	Up to date	Minor Change	Very High	No change
Automatic vehicle location (Predictive analytics)	Don't use it	Don't Know	High	Significant change
Quality monitoring of call handling	Up to date	Minor Change	High	No change
Workforce management systems (Control)	Old but serviceable	Transform	High	No change
Workforce management systems (Corporate)	Old but serviceable	Transform	High	No change
Shared Control Centre (with more than one FRS or with other emergency services)	Don't use it	Transform	Neither High nor Low	Transform
Exchange of Information across Emergency Services (e.g. MAIT)	Don't use it	Transform	Neither High nor Low	Transform
Shared Control Systems (e.g. shared data centres driving multiple Emergency Service Control Centres)	Up to date	No Change	High	No change
Virtual call centres (e.g. call centres with a cloud based infrastructure)	Don't use it	Transform	Neither High nor Low	Transform
Automatic call distribution	Up to date		High	

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Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Call Line Identification (e.g. EISEC)	Up to date	No Change	Very High	No change
Advanced Mobile Location (AML- Caller location information service for smartphones)	Up to date	No Change	Very High	No change
Service Access Node H (SANH), or similar	Up to date	No Change	Very High	No change
Computer aided dispatch	Up to date	No Change	Very High	No change

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Data Storage	Up to date	Minor Change	Very High	Minor change
Data Capture (e.g Video, pictures and updating critical systems)	Don't use it	Significant Change	High	Transform
Data Integration	Don't know	Don't Know	High	Minor change
Mobile Office (e.g Laptop, mobile device)	Up to date	Minor Change	Neither High nor Low	Minor change
Internal Customer Service and help desk	Up to date	Minor Change	High	No change
Remote access to service systems (e.g. intelligence reports, briefings)	Up to date	Minor Change	Neither High nor Low	No change
Laptop with access to personal information management systems & data processing	Old but serviceable	Significant Change	High	Minor change
In-Vehicle Mobile Data Terminal	Old but serviceable	Minor Change	Very High	Minor change

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| Smartphone/PDA - Access to fire service systems | Up to date | Minor Change | High | Minor change |
| Augmented Reality (heads up displays) | Don't use it | Transform | Low | Significant change |

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Incident Messaging	Old but serviceable	Significant Change	Very High	Minor change
Status Messaging	Up to date	Minor Change	Very High	Minor change
Command Support Unit	Old but serviceable	Minor Change	High	Significant change
Communication with partners through voice (e.g. Police, Public Health)	Up to date	Minor Change	Very High	Minor change
Communication with partners through data (e.g. Police, Public Health)	Don't use it	Significant Change	Neither High nor Low	Significant change
Partnering with automatic systems failover	Up to date	Minor Change	Very High	Minor change
IP Communications (text, audio, video) for emergency calls from citizens	Don't use it	Transform	Neither High nor Low	Significant change
Routing of IP Communications (text, audio, video) to first responders	Don't use it	Transform	Neither High nor Low	Transform
Routing of IP Communications (text, audio, video) from first responders to control or peer to peer	Don't use it	Transform	Neither High nor Low	Transform

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Location information visualisation	Old but serviceable	Transform	Neither High nor Low	Transform
Sensor data transmission (e.g. Breathing Apparatus telemetry)	Old but serviceable	Significant Change	High	Minor change

Station End Equipment	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Printers	Old but serviceable	No Change	Very High	Minor change
Visual Display Unit (VDU)	Up to date	No Change	Neither High nor Low	Minor change

Records Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated databases with partners	Up to date	Minor Change	Very High	Minor change
Broadband wireless access in vehicles (e.g. LAN, MDT, mobile)	Up to date	Minor Change	High	Minor change
Image management software (e.g. video, CCTV, pictures, person mounted cameras)	Old but serviceable	Significant Change	Low	Significant change
Integrated GIS	Up to date	Significant Change	Very High	Minor change
Shared Gazetteer	Up to date	Minor Change	Very High	Minor change
Video Surveillance	Don't use it	Don't Know	Neither High nor Low	Significant change

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In-vehicle cameras (cameras facing outwards)	Old but serviceable	Significant Change	Neither High nor Low	Significant change
Person mounted cameras	Don't use it	Significant Change	Neither High nor Low	Transform
Aerial surveillance (e.g. drones)	Don't use it	Significant Change	Neither High nor Low	Transform

Securing Fire Service Systems	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Encryption	Up to date	Significant Change	Very High	Significant change
Data Governance	Old but serviceable	Significant Change	Neither High nor Low	Significant change
Identification and Access Management (e.g. Single-Sign on)	Up to date	Minor Change	Neither High nor Low	Minor change
PSN Compliance	Up to date	Minor Change	Very High	Significant change

Analysis and Mapping	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated Management of Business Processes (e.g. Enterprise resources planning tools such as SAP, Oracle, Microsoft Dynamics)	Don't know	Don't Know	Neither High nor Low	Don't know
Remote recording of data (Home Fire Safety Checks, Fire Hydrant Data)	Old but serviceable	Transform	High	Significant change

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Tools to extract and clean data	Don't know	Don't Know	Neither High nor Low	Don't know
Tools to visualise data	Old but serviceable	Significant Change	Neither High nor Low	Minor change
Analytic software (displaying information on mobile device)	Don't know	Significant Change	Neither High nor Low	Transform
Predictive modelling	Old but serviceable	Significant Change	High	Minor change
Use of 3rd party analytic services	Don't know	Don't Know	Neither High nor Low	Minor change
Investigative software - fire	Don't use it	Significant Change	Very Low	Don't know
Collection and analysis of data from private data sources (e.g. insurance data)	Don't know	Don't Know	Very Low	No change

The Use of Social Media: Communication with the public	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Twitter	Often	Significant Change	Very High
Facebook	Very often	Significant Change	Very High
Youtube	Occasionally	Significant Change	High
Flickr	Never	No Change	Very Low
Instagram	Occasionally	Significant Change	Very High
Snapchat	Never	No Change	Very Low

The Use of Social Media: Communication within the organisation	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Enterprise networking sites (e.g. Yammer)	Occasionally	Don't Know	Low
Instant messaging (e.g. Chat, Whatsapp)	Often	Significant Change	High
File Sharing (e.g. Dropbox)	Very often	Significant Change	High
Wiki	Never	Don't Know	Neither High nor Low

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Collaborative Document Sharing (e.g. Google Docs)	Very often	Transform	Very High
Micro-blogging (e.g. Twitter)	Very often	Significant Change	Very High
Video conferencing (e.g. Skype, Facetime)	Often	Transform	Very High
Email	Very often	Significant Change	Very High

Delivery of systems: IT Outsourcing	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Business Process Outsourcing (Technology and Process)	Neither High nor Low	High
Outsourcing (services and support)	Neither High nor Low	High
Outsourcing (Infrastructure)	Very low	Neither High nor Low
Outsourcing (Temporary on project by project basis)	Very low	Neither High nor Low
Outsourcing (Total IT)	Low	Neither High nor Low
Insourcing	High	Neither High nor Low

Delivery of systems: Cloud	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Cloud (Software)	Neither High nor Low	High
Cloud (Platform)	Very low	Neither High nor Low
Cloud (Infrastructure)	Very low	Neither High nor Low

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Development of Systems	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
In-house systems development	Neither High nor Low	High
Collaboration in systems development with other fire services	Very low	Very low
Collaboration with other public sector bodies	Neither High nor Low	Neither High nor Low

Survey Results 29: North Yorkshire Fire and Rescue Service

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Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
GPS for locating firefighters on the fire ground (Location Services)	Don't use it	Significant Change	Neither High nor Low	Significant change
GPS for locating firefighters on call (Location Services)	Don't use it	Significant Change	Neither High nor Low	Significant change
Automatic vehicle location (for management of resources)	Up to date	Minor Change	Neither High nor Low	Significant change
Automatic vehicle location (Predictive analytics)	Up to date	Minor Change	Neither High nor Low	Significant change
Quality monitoring of call handling	Don't use it	Significant Change	High	Significant change
Workforce management systems (Control)	Old but serviceable	Significant Change	High	Minor change
Workforce management systems (Corporate)	Old but serviceable	Significant Change	High	Minor change
Shared Control Centre (with more than one FRS or with other emergency services)	Don't use it	Significant Change	High	Minor change
Exchange of Information across Emergency Services (e.g. MAIT)	Don't know	Significant Change	High	Minor change
Shared Control Systems (e.g. shared data centres driving multiple Emergency Service Control Centres)	Don't use it	Significant Change	Neither High nor Low	Minor change
Virtual call centres (e.g. call centres with a cloud based infrastructure)	Don't use it	Significant Change	High	Minor change
Automatic call distribution	Up to date		High	

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Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Call Line Identification (e.g. EISEC)	Up to date	Minor Change	Neither High nor Low	Minor change
Advanced Mobile Location (AML- Caller location information service for smartphones)	Don't use it	Significant Change	Neither High nor Low	Minor change
Service Access Node H (SANH), or similar	Don't use it	Significant Change	Neither High nor Low	Transform
Computer aided dispatch	Don't know	Significant Change	Neither High nor Low	Significant change

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Data Storage	Old but serviceable	Significant Change	High	Significant change
Data Capture (e.g Video, pictures and updating critical systems)	Old but serviceable	Significant Change	Neither High nor Low	Significant change
Data Integration	Old but serviceable	Significant Change	High	Significant change
Mobile Office (e.g Laptop, mobile device)	Old but serviceable	Minor Change	High	Significant change
Internal Customer Service and help desk	Old but serviceable	Significant Change	Neither High nor Low	Significant change
Remote access to service systems (e.g. intelligence reports, briefings)	Old but serviceable	Significant Change	Neither High nor Low	Significant change
Laptop with access to personal information management systems & data processing	Don't know	Minor Change	Neither High nor Low	Significant change

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales**.**

In-Vehicle Mobile Data Terminal	Old but serviceable	Significant Change	High	Minor change
Smartphone/PDA - Access to fire service systems	Up to date	Significant Change	High	Significant change
Augmented Reality (heads up displays)	Don't use it	Minor Change	Neither High nor Low	Minor change

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Incident Messaging	Up to date	Minor Change	High	Minor change
Status Messaging	Up to date	Minor Change	High	Minor change
Command Support Unit	Old but serviceable	Significant Change	Neither High nor Low	Significant change
Communication with partners through voice (e.g. Police, Public Health)	Old but serviceable	Minor Change	High	Significant change
Communication with partners through data (e.g. Police, Public Health)	Old but serviceable	Minor Change	High	Significant change
Partnering with automatic systems failover	Old but serviceable	Don't Know	Neither High nor Low	Don't know
IP Communications (text, audio, video) for emergency calls from citizens	Up to date	Transform	High	Significant change
Routing of IP Communications (text, audio, video) to first responders	Don't know	Don't Know	Neither High nor Low	Don't know
Routing of IP Communications (text, audio, video) from first	Don't know	Don't Know	High	Significant change

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales**.**

responders to control or peer to peer				
Location information visualisation	Don't use it	Significant Change	Neither High nor Low	Minor change
Sensor data transmission (e.g. Breathing Apparatus telemetry)	Don't use it	Significant Change	High	Minor change

Station End Equipment	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Printers	Old but serviceable	Significant Change	Neither High nor Low	Minor change
Visual Display Unit (VDU)	Don't use it	Significant Change	Neither High nor Low	Minor change

Records Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated databases with partners	Don't know	Significant Change	High	Minor change
Broadband wireless access in vehicles (e.g. LAN, MDT, mobile)	Don't use it	Transform	Neither High nor Low	Minor change
Image management software (e.g. video, CCTV, pictures, person mounted cameras)	Don't use it	Significant Change	Neither High nor Low	Minor change
Integrated GIS	Old but serviceable	Minor Change	Neither High nor Low	Minor change
Shared Gazetteer	Up to date	Minor Change	Neither High nor Low	Minor change

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

Video Surveillance	Don't use it	No Change	Low	Minor change
In-vehicle cameras (cameras facing outwards)	Don't use it	Significant Change	Neither High nor Low	Minor change
Person mounted cameras	Don't use it	Minor Change	Low	Minor change
Aerial surveillance (e.g. drones)	Don't use it	Significant Change	High	Significant change

Securing Fire Service Systems	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Encryption	Up to date	Significant Change	High	Significant change
Data Governance	Up to date	Significant Change	High	Minor change
Identification and Access Management (e.g. Single-Sign on)	Up to date	Significant Change	High	Significant change
PSN Compliance	Don't use it	Minor Change	Neither High nor Low	Minor change

Analysis and Mapping	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated Management of Business Processes (e.g. Enterprise resources planning tools such as SAP, Oracle, Microsoft Dynamics)	Old but serviceable	Significant Change	Neither High nor Low	Don't know

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Remote recording of data (Home Fire Safety Checks, Fire Hydrant Data)	Up to date	Significant Change	High	Minor change
Tools to extract and clean data	Old but serviceable	Significant Change	High	Don't know
Tools to visualise data	Old but serviceable	Significant Change	High	Don't know
Analytic software (displaying information on mobile device)	Old but serviceable	Significant Change	High	Don't know
Predictive modelling	Old but serviceable	Significant Change	Neither High nor Low	Don't know
Use of 3rd party analytic services	Don't use it	Significant Change	Neither High nor Low	Don't know
Investigative software - fire	Don't use it	Significant Change	Neither High nor Low	Don't know
Collection and analysis of data from private data sources (e.g. insurance data)	Don't use it	Significant Change	High	Minor change

The Use of Social Media: Communication with the public	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Twitter	Very often	Significant Change	High
Facebook	Often	Significant Change	Neither High nor Low
Youtube	Occasionally	Significant Change	High
Flickr	Never	Significant Change	Neither High nor Low
Instagram	Never	Significant Change	Neither High nor Low
Snapchat	Never	Significant Change	Neither High nor Low

The Use of Social Media: Communication within the organisation	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level

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Enterprise networking sites (e.g. Yammer)	Never	Minor Change	Neither High nor Low
Instant messaging (e.g. Chat, Whatsapp)	Occasionally	Significant Change	High
File Sharing (e.g. Dropbox)	Occasionally	Significant Change	High
Wiki	Never	Significant Change	Neither High nor Low
Collaborative Document Sharing (e.g. Google Docs)	Never	Significant Change	Neither High nor Low
Micro-blogging (e.g. Twitter)	Occasionally	Significant Change	Neither High nor Low
Video conferencing (e.g. Skype, Facetime)	Very often	Significant Change	High
Email	Very often	Significant Change	High

Delivery of systems: IT Outsourcing	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Business Process Outsourcing (Technology and Process)	Low	High
Outsourcing (services and support)	Low	High
Outsourcing (Infrastructure)	Low	Very High
Outsourcing (Temporary on project by project basis)	Neither High nor Low	High
Outsourcing (Total IT)	Low	High
Insourcing	High	High

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Delivery of systems: Cloud	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Cloud (Software)	Low	Very High
Cloud (Platform)	Low	Very High
Cloud (Infrastructure)	Low	Very High

Development of Systems	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
In-house systems development	Low	Low
Collaboration in systems development with other fire services	Low	High
Collaboration with other public sector bodies	Low	High

Survey Results 30: Nottinghamshire Fire and Rescue Service

Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
GPS for locating firefighters on the fire ground (Location Services)	Don't use it	Transform	High	Significant change
GPS for locating firefighters on call (Location Services)	Up to date	Minor Change	Low	No change
Automatic vehicle location (for management of resources)	Up to date	Don't Know	Very Low	Don't know
Automatic vehicle location (Predictive analytics)	Up to date	Don't Know	Low	Don't know
Quality monitoring of call handling	Up to date	Minor Change	Neither High nor Low	Don't know
Workforce management systems (Control)	Old but serviceable	Significant Change	High	Don't know
Workforce management systems (Corporate)	Old but serviceable	Significant Change	Neither High nor Low	Don't know
Shared Control Centre (with more than one FRS or with other emergency services)	Up to date	Significant Change	High	Significant change
Exchange of Information across Emergency Services (e.g. MAIT)	Don't know	Don't Know	Neither High nor Low	Don't know
Shared Control Systems (e.g. shared data centres driving multiple Emergency Service Control Centres)	Up to date	Significant Change	High	Don't know
Virtual call centres (e.g. call centres with a cloud based infrastructure)	Up to date	Don't Know	Very Low	Don't know
Automatic call distribution	Up to date		High	

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Call Line Identification (e.g. EISEC)	Up to date	Minor Change	Very Low	Don't know
Advanced Mobile Location (AML- Caller location information service for smartphones)	Up to date	Minor Change	Very Low	Don't know
Service Access Node H (SANH), or similar	Don't know	Don't Know	Very Low	Don't know
Computer aided dispatch	Up to date	Minor Change	Low	Don't know

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Data Storage	Don't know	Don't Know	Neither High nor Low	No change
Data Capture (e.g Video, pictures and updating critical systems)	Don't know	Don't Know	Neither High nor Low	Significant change
Data Integration	Don't know	Don't Know	Neither High nor Low	Don't know
Mobile Office (e.g Laptop, mobile device)	Don't know	Don't Know	Neither High nor Low	Significant change
Internal Customer Service and help desk	Up to date	Minor Change	Neither High nor Low	Significant change
Remote access to service systems (e.g. intelligence reports, briefings)	Don't use it	Significant Change	Neither High nor Low	No change
Laptop with access to personal information management systems & data processing	Don't use it	Minor Change	Neither High nor Low	Minor change
In-Vehicle Mobile Data Terminal	Old but serviceable	Significant Change	Neither High nor Low	Minor change

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| Smartphone/PDA - Access to fire service systems | Don't use it | Significant Change | Neither High nor Low | Significant change |
| Augmented Reality (heads up displays) | Don't use it | Don't Know | Neither High nor Low | Don't know |

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Incident Messaging	Old but serviceable	Minor Change	Neither High nor Low	Don't know
Status Messaging	Old but serviceable	Minor Change	Neither High nor Low	Don't know
Command Support Unit	Old but serviceable	Significant Change	Very High	Don't know
Communication with partners through voice (e.g. Police, Public Health)	Up to date	Significant Change	Neither High nor Low	Don't know
Communication with partners through data (e.g. Police, Public Health)	Up to date	Significant Change	Neither High nor Low	Don't know
Partnering with automatic systems failover	Up to date	Significant Change	Neither High nor Low	Don't know
IP Communications (text, audio, video) for emergency calls from citizens	Up to date	Significant Change	Neither High nor Low	Don't know
Routing of IP Communications (text, audio, video) to first responders	Up to date	Don't Know	Neither High nor Low	Don't know
Routing of IP Communications (text, audio, video) from first responders to control or peer to peer	Up to date	Don't Know	Neither High nor Low	Don't know

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Location information visualisation	Up to date	Don't Know	Neither High nor Low	Don't know
Sensor data transmission (e.g. Breathing Apparatus telemetry)	Don't know	Don't Know	Neither High nor Low	Don't know

Station End Equipment	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Printers	Up to date	Minor Change	Neither High nor Low	Minor change
Visual Display Unit (VDU)	Up to date	Minor Change	Neither High nor Low	Minor change

Records Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated databases with partners	Don't use it	Don't Know	Neither High nor Low	Don't know
Broadband wireless access in vehicles (e.g. LAN, MDT, mobile)	Up to date	Significant Change	Neither High nor Low	Significant change
Image management software (e.g. video, CCTV, pictures, person mounted cameras)	Don't use it	Significant Change	Neither High nor Low	Don't know
Integrated GIS	Up to date	Significant Change	Neither High nor Low	Don't know
Shared Gazetteer	Up to date	Significant Change	Neither High nor Low	Don't know
Video Surveillance	Don't use it	Significant Change	Neither High nor Low	Don't know

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In-vehicle cameras (cameras facing outwards)	Up to date	Significant Change	Neither High nor Low	Don't know
Person mounted cameras	Don't use it	Significant Change	Neither High nor Low	Significant change
Aerial surveillance (e.g. drones)	Don't use it	Significant Change	Neither High nor Low	Significant change

Securing Fire Service Systems	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Encryption	Up to date	Minor Change	High	Don't know
Data Governance	Up to date	Minor Change	High	Don't know
Identification and Access Management (e.g. Single-Sign on)	Up to date	No Change	High	Don't know
PSN Compliance	Don't use it	No Change	Very High	Minor change

Analysis and Mapping	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated Management of Business Processes (e.g. Enterprise resources planning tools such as SAP, Oracle, Microsoft Dynamics)	Up to date	Minor Change	Neither High nor Low	Don't know
Remote recording of data (Home Fire Safety Checks, Fire Hydrant Data)	Up to date	Minor Change	Neither High nor Low	Don't know
Tools to extract and clean data	Up to date	Minor Change	Neither High nor Low	Don't know

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Tools to visualise data	Up to date	Don't Know	Neither High nor Low	Don't know
Analytic software (displaying information on mobile device)	Don't know	Don't Know	Neither High nor Low	Don't know
Predictive modelling	Don't know	Don't Know	Neither High nor Low	Don't know
Use of 3rd party analytic services	Obsolete	No Change	Very Low	No change
Investigative software - fire	Don't know	Don't Know	Neither High nor Low	Don't know
Collection and analysis of data from private data sources (e.g. insurance data)	Don't know	Don't Know	Neither High nor Low	Don't know

The Use of Social Media: Communication with the public	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Twitter	Very often	Don't Know	High
Facebook	Very often	Don't Know	High
Youtube	Often	Don't Know	Neither High nor Low
Flickr	Never	Don't Know	Very Low
Instagram	Occasionally	Don't Know	Neither High nor Low
Snapchat	Never	Don't Know	Very Low

The Use of Social Media: Communication within the organisation	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Enterprise networking sites (e.g. Yammer)	Occasionally	Transform	Low
Instant messaging (e.g. Chat, Whatsapp)	Never	Significant Change	Neither High nor Low
File Sharing (e.g. Dropbox)	Occasionally	Minor Change	Low
Wiki	Never	No Change	Very Low

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Collaborative Document Sharing (e.g. Google Docs)	Very often	Significant Change	High
Micro-blogging (e.g. Twitter)	Never	Minor Change	Low
Video conferencing (e.g. Skype, Facetime)	Often	Significant Change	High
Email	Very often	Minor Change	Very High

Delivery of systems: IT Outsourcing	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Business Process Outsourcing (Technology and Process)	Neither High nor Low	Neither High nor Low
Outsourcing (services and support)	Neither High nor Low	Neither High nor Low
Outsourcing (Infrastructure)	Neither High nor Low	Neither High nor Low
Outsourcing (Temporary on project by project basis)	Neither High nor Low	Neither High nor Low
Outsourcing (Total IT)	Neither High nor Low	Neither High nor Low
Insourcing	Neither High nor Low	Neither High nor Low

Delivery of systems: Cloud	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Cloud (Software)	Neither High nor Low	Neither High nor Low
Cloud (Platform)	Neither High nor Low	Neither High nor Low
Cloud (Infrastructure)	Neither High nor Low	Neither High nor Low

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Development of Systems	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
In-house systems development	Low	Low
Collaboration in systems development with other fire services	Low	Low
Collaboration with other public sector bodies	Neither High nor Low	High

Survey Results 31: Oxfordshire Fire and Rescue Service

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
GPS for locating firefighters on the fire ground (Location Services)	Don't use it	Significant Change	Neither High nor Low	Don't know
GPS for locating firefighters on call (Location Services)	Don't use it	Significant Change	Neither High nor Low	Don't know
Automatic vehicle location (for management of resources)	Up to date	Minor Change	Neither High nor Low	Don't know
Automatic vehicle location (Predictive analytics)	Don't know	Significant Change	Neither High nor Low	Don't know
Quality monitoring of call handling	Up to date	Minor Change	High	Don't know
Workforce management systems (Control)	Up to date	Minor Change	Neither High nor Low	Don't know
Workforce management systems (Corporate)	Up to date	Minor Change	Neither High nor Low	Don't know
Shared Control Centre (with more than one FRS or with other emergency services)	Up to date	No Change	High	Significant change
Exchange of Information across Emergency Services (e.g. MAIT)	Up to date	Minor Change	High	Significant change
Shared Control Systems (e.g. shared data centres driving multiple Emergency Service Control Centres)	Up to date	Minor Change	Neither High nor Low	No change
Virtual call centres (e.g. call centres with a cloud based infrastructure)	Don't know	Minor Change	Neither High nor Low	Don't know
Automatic call distribution	Up to date		High	

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales**.**

Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Call Line Identification (e.g. EISEC)	Up to date	Minor Change	Neither High nor Low	Don't know
Advanced Mobile Location (AML- Caller location information service for smartphones)	Up to date	Minor Change	Neither High nor Low	Don't know
Service Access Node H (SANH), or similar	Up to date	Minor Change	Neither High nor Low	Don't know
Computer aided dispatch	Up to date	Minor Change	Neither High nor Low	Don't know

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Data Storage	Up to date	Significant Change	High	Minor change
Data Capture (e.g Video, pictures and updating critical systems)	Old but serviceable	Transform	High	No change
Data Integration	Don't use it	Transform	High	Minor change
Mobile Office (e.g Laptop, mobile device)	Up to date	Transform	High	Significant change
Internal Customer Service and help desk	Old but serviceable	Minor Change	Low	Minor change
Remote access to service systems (e.g. intelligence reports, briefings)	Old but serviceable	Transform	Low	Transform
Laptop with access to personal information management systems & data processing	Up to date	Significant Change	Neither High nor Low	Significant change

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In-Vehicle Mobile Data Terminal	Up to date	Significant Change	Neither High nor Low	Significant change
Smartphone/PDA - Access to fire service systems	Up to date	Significant Change	Neither High nor Low	Significant change
Augmented Reality (heads up displays)	Don't use it	Significant Change	High	Significant change

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Incident Messaging	Up to date	Minor Change	Neither High nor Low	Minor change
Status Messaging	Up to date	Minor Change	Neither High nor Low	Minor change
Command Support Unit	Old but serviceable	Significant Change	High	Minor change
Communication with partners through voice (e.g. Police, Public Health)	Up to date	Minor Change	High	Significant change
Communication with partners through data (e.g. Police, Public Health)	Up to date	Minor Change	High	Significant change
Partnering with automatic systems failover	Up to date	Minor Change	Neither High nor Low	No change
IP Communications (text, audio, video) for emergency calls from citizens	Don't use it	Don't Know	Neither High nor Low	No change
Routing of IP Communications (text, audio, video) to first responders	Don't know	Don't Know	Very High	Don't know
Routing of IP Communications (text, audio, video) from first	Don't know	Don't Know	Very High	Don't know

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responders to control or peer to peer				
Location information visualisation	Don't know	Don't Know	Very High	Don't know
Sensor data transmission (e.g. Breathing Apparatus telemetry)	Don't know	Don't Know	Very High	Don't know

Station End Equipment	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Printers	Old but serviceable	No Change	Very Low	No change
Visual Display Unit (VDU)	Old but serviceable	Minor Change	Low	No change

Records Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated databases with partners	Don't use it	Significant Change	Low	No change
Broadband wireless access in vehicles (e.g. LAN, MDT, mobile)	Don't use it	Significant Change	Low	Don't know
Image management software (e.g. video, CCTV, pictures, person mounted cameras)	Don't use it	Significant Change	Low	No change
Integrated GIS	Up to date	Minor Change	Neither High nor Low	Don't know
Shared Gazetteer	Up to date	Minor Change	Neither High nor Low	Don't know

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Video Surveillance	Don't use it	Significant Change	Neither High nor Low	No change
In-vehicle cameras (cameras facing outwards)	Up to date	Minor Change	Neither High nor Low	No change
Person mounted cameras	Don't use it	Significant Change	Neither High nor Low	No change
Aerial surveillance (e.g. drones)	Don't use it	Significant Change	Neither High nor Low	No change

Securing Fire Service Systems	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Encryption	Up to date	Don't Know	Neither High nor Low	Don't know
Data Governance	Up to date	Don't Know	Neither High nor Low	Don't know
Identification and Access Management (e.g. Single-Sign on)	Up to date	Don't Know	Neither High nor Low	Don't know
PSN Compliance	Up to date	No Change	Very High	Don't know

Analysis and Mapping	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated Management of Business Processes (e.g. Enterprise resources planning tools such as SAP, Oracle, Microsoft Dynamics)	Up to date	Significant Change	High	No change

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Remote recording of data (Home Fire Safety Checks, Fire Hydrant Data)	Up to date	Significant Change	High	No change
Tools to extract and clean data	Don't know	Minor Change	High	No change
Tools to visualise data	Old but serviceable	Significant Change	High	No change
Analytic software (displaying information on mobile device)	Don't know	Significant Change	High	No change
Predictive modelling	Don't use it	Significant Change	High	No change
Use of 3rd party analytic services	Obsolete	No Change	Very Low	No change
Investigative software - fire	Don't know	Minor Change	Very High	No change
Collection and analysis of data from private data sources (e.g. insurance data)	Up to date	Significant Change	Neither High nor Low	No change

The Use of Social Media: Communication with the public	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Twitter	Don't Know	Don't Know	High
Facebook	Don't Know	Don't Know	High
Youtube	Never	Don't Know	Neither High nor Low
Flickr	Never	Don't Know	Neither High nor Low
Instagram	Never	Don't Know	Neither High nor Low
Snapchat	Never	Don't Know	Neither High nor Low

The Use of Social Media: Communication within the organisation	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level

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Enterprise networking sites (e.g. Yammer)	Very often	Significant Change	Neither High nor Low
Instant messaging (e.g. Chat, Whatsapp)	Very often	Significant Change	Neither High nor Low
File Sharing (e.g. Dropbox)	Occasionally	Significant Change	Neither High nor Low
Wiki	Never	Don't Know	Neither High nor Low
Collaborative Document Sharing (e.g. Google Docs)	Very often	Significant Change	Neither High nor Low
Micro-blogging (e.g. Twitter)	Occasionally	Significant Change	Neither High nor Low
Video conferencing (e.g. Skype, Facetime)	Very often	Significant Change	Neither High nor Low
Email	Don't Know	Significant Change	Neither High nor Low

Delivery of systems: IT Outsourcing	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Business Process Outsourcing (Technology and Process)	Very High	Very High
Outsourcing (services and support)	Neither High nor Low	Very low
Outsourcing (Infrastructure)	Neither High nor Low	Very low
Outsourcing (Temporary on project by project basis)	Neither High nor Low	Low
Outsourcing (Total IT)	Neither High nor Low	Very low
Insourcing	High	High

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

Delivery of systems: Cloud	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Cloud (Software)	High	High
Cloud (Platform)	High	High
Cloud (Infrastructure)	High	High

Development of Systems	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
In-house systems development	Very High	Very High
Collaboration in systems development with other fire services	High	High
Collaboration with other public sector bodies	High	High

Survey Results 32: Shropshire Fire and Rescue Service

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales**.**

Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
GPS for locating firefighters on the fire ground (Location Services)	Don't use it	Transform	Very High	No change
GPS for locating firefighters on call (Location Services)	Don't use it	Transform	High	No change
Automatic vehicle location (for management of resources)	Up to date	No Change	Very Low	No change
Automatic vehicle location (Predictive analytics)	Up to date	Significant Change	High	Minor change
Quality monitoring of call handling	Up to date	No Change	Very Low	No change
Workforce management systems (Control)	Up to date	No Change	Very Low	No change
Workforce management systems (Corporate)	Up to date	Significant Change	Neither High nor Low	No change
Shared Control Centre (with more than one FRS or with other emergency services)	Don't use it	Transform	High	Significant change
Exchange of Information across Emergency Services (e.g. MAIT)	Don't use it	Significant Change	Neither High nor Low	Significant change
Shared Control Systems (e.g. shared data centres driving multiple Emergency Service Control Centres)	Don't use it	Transform	Neither High nor Low	Significant change
Virtual call centres (e.g. call centres with a cloud based infrastructure)	Up to date	Significant Change	High	Transform
Automatic call distribution	Up to date		High	

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Call Line Identification (e.g. EISEC)	Old but serviceable	Significant Change	Neither High nor Low	Significant change
Advanced Mobile Location (AML- Caller location information service for smartphones)	Don't use it	Minor Change	Low	Minor change
Service Access Node H (SANH), or similar	Old but serviceable	No Change	Neither High nor Low	Significant change
Computer aided dispatch	Old but serviceable	Minor Change	Neither High nor Low	Minor change

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Data Storage	Up to date	Significant Change	Neither High nor Low	No change
Data Capture (e.g Video, pictures and updating critical systems)	Up to date	Transform	Very High	No change
Data Integration	Up to date	Minor Change	High	Minor change
Mobile Office (e.g Laptop, mobile device)	Up to date	Significant Change	Neither High nor Low	Minor change
Internal Customer Service and help desk	Up to date	Significant Change	Neither High nor Low	No change
Remote access to service systems (e.g. intelligence reports, briefings)	Up to date	Minor Change	Neither High nor Low	No change
Laptop with access to personal information management systems & data processing	Up to date	Minor Change	Neither High nor Low	No change

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

In-Vehicle Mobile Data Terminal	Old but serviceable	Transform	High	Significant change
Smartphone/PDA - Access to fire service systems	Up to date	Significant Change	High	No change
Augmented Reality (heads up displays)	Don't use it	Significant Change	Neither High nor Low	No change

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Incident Messaging	Don't use it	Significant Change	Neither High nor Low	Significant change
Status Messaging	Up to date	Minor Change	Low	Minor change
Command Support Unit	Old but serviceable	Significant Change	High	Minor change
Communication with partners through voice (e.g. Police, Public Health)	Up to date	Significant Change	High	Minor change
Communication with partners through data (e.g. Police, Public Health)	Don't use it	Significant Change	Low	Minor change
Partnering with automatic systems failover	Up to date	Minor Change	Neither High nor Low	No change
IP Communications (text, audio, video) for emergency calls from citizens	Up to date	Minor Change	High	No change
Routing of IP Communications (text, audio, video) to first responders	Up to date	Transform	Very High	Minor change
Routing of IP Communications (text, audio, video) from first	Up to date	Transform	Very High	Minor change

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales**.**

responders to control or peer to peer				
Location information visualisation	Up to date	Transform	Very High	Minor change
Sensor data transmission (e.g. Breathing Apparatus telemetry)	Don't use it	Minor Change	Neither High nor Low	No change

Station End Equipment	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Printers	Old but serviceable	Minor Change	Low	Minor change
Visual Display Unit (VDU)	Up to date	Minor Change	Low	No change

Records Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated databases with partners	Up to date	Minor Change	Neither High nor Low	Minor change
Broadband wireless access in vehicles (e.g. LAN, MDT, mobile)	Up to date	Minor Change	Neither High nor Low	Minor change
Image management software (e.g. video, CCTV, pictures, person mounted cameras)	Don't use it	Significant Change	Low	Minor change
Integrated GIS	Don't use it	No Change	Very Low	No change
Shared Gazetteer	Don't use it	Transform	High	No change
Video Surveillance	Don't use it	Minor Change	Low	No change

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In-vehicle cameras (cameras facing outwards)	Don't use it	Minor Change	Very Low	No change
Person mounted cameras	Don't use it	No Change	Very Low	No change
Aerial surveillance (e.g. drones)	Don't use it	Minor Change	Low	Minor change

Securing Fire Service Systems	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Encryption	Don't use it	Minor Change	High	No change
Data Governance	Up to date	Minor Change	High	No change
Identification and Access Management (e.g. Single-Sign on)	Up to date	Minor Change	High	No change
PSN Compliance	Up to date	Minor Change	High	No change

Analysis and Mapping	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated Management of Business Processes (e.g. Enterprise resources planning tools such as SAP, Oracle, Microsoft Dynamics)	Don't use it	No Change	Very Low	No change
Remote recording of data (Home Fire Safety Checks, Fire Hydrant Data)	Up to date	Significant Change	High	Minor change

Tools to extract and clean data	Up to date	Significant Change	High	No change
Tools to visualise data	Up to date	Significant Change	High	No change
Analytic software (displaying information on mobile device)	Up to date	Significant Change	High	No change
Predictive modelling	Up to date	Significant Change	High	No change
Use of 3rd party analytic services	Obsolete	No Change	Very Low	No change
Investigative software - fire	Don't know	Minor Change	Low	Minor change
Collection and analysis of data from private data sources (e.g. insurance data)	Up to date	Transform	High	Minor change

The Use of Social Media: Communication with the public	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Twitter	Often	Minor Change	Neither High nor Low
Facebook	Often	Minor Change	Neither High nor Low
Youtube	Never	No Change	Low
Flickr	Never	No Change	Low
Instagram	Never	No Change	Low
Snapchat	Never	No Change	Low

The Use of Social Media: Communication within the organisation	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Enterprise networking sites (e.g. Yammer)	Occasionally	Minor Change	Low
Instant messaging (e.g. Chat, Whatsapp)	Very often	Minor Change	Neither High nor Low
File Sharing (e.g. Dropbox)	Occasionally	Minor Change	Low

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Wiki	Never	No Change	Very Low
Collaborative Document Sharing (e.g. Google Docs)	Occasionally	Minor Change	Low
Micro-blogging (e.g. Twitter)	Never	No Change	Very Low
Video conferencing (e.g. Skype, Facetime)	Often	Minor Change	Low
Email	Very often	Minor Change	Low

Delivery of systems: IT Outsourcing	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Business Process Outsourcing (Technology and Process)	Neither High nor Low	Neither High nor Low
Outsourcing (services and support)	Neither High nor Low	Neither High nor Low
Outsourcing (Infrastructure)	Neither High nor Low	Neither High nor Low
Outsourcing (Temporary on project by project basis)	Low	Low
Outsourcing (Total IT)	Very low	Very low
Insourcing	Low	Neither High nor Low

Delivery of systems: Cloud	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Cloud (Software)	Neither High nor Low	Neither High nor Low
Cloud (Platform)	Neither High nor Low	Neither High nor Low

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Cloud (Infrastructure)	Neither High nor Low	Neither High nor Low

Development of Systems	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
In-house systems development	Low	Low
Collaboration in systems development with other fire services	Very low	Low
Collaboration with other public sector bodies	Very low	Low

Survey Results 33: South Yorkshire Fire and Rescue Service

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Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
GPS for locating firefighters on the fire ground (Location Services)	Don't use it	Minor Change	Low	No change
GPS for locating firefighters on call (Location Services)	Don't use it	Minor Change	Low	No change
Automatic vehicle location (for management of resources)	Up to date	Minor Change	High	Minor change
Automatic vehicle location (Predictive analytics)	Up to date	Minor Change	High	Minor change
Quality monitoring of call handling	Up to date	No Change	Neither High nor Low	No change
Workforce management systems (Control)	Old but serviceable	Significant Change	High	No change
Workforce management systems (Corporate)	Old but serviceable	Significant Change	Neither High nor Low	No change
Shared Control Centre (with more than one FRS or with other emergency services)	Don't use it	No Change	Low	No change
Exchange of Information across Emergency Services (e.g. MAIT)	Don't use it	Minor Change	Neither High nor Low	Minor change
Shared Control Systems (e.g. shared data centres driving multiple Emergency Service Control Centres)	Don't use it	No Change	Low	No change
Virtual call centres (e.g. call centres with a cloud based infrastructure)	Don't use it	No Change	High	No change
Automatic call distribution	Up to date		High	

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Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Call Line Identification (e.g. EISEC)	Up to date	No Change	Neither High nor Low	No change
Advanced Mobile Location (AML- Caller location information service for smartphones)	Don't use it	Significant Change	High	Significant change
Service Access Node H (SANH), or similar	Up to date	Minor Change	Neither High nor Low	Minor change
Computer aided dispatch	Up to date	Minor Change	Neither High nor Low	Minor change

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Data Storage	Up to date	Significant Change	Neither High nor Low	No change
Data Capture (e.g Video, pictures and updating critical systems)	Up to date	Transform	Very High	No change
Data Integration	Up to date	Minor Change	High	Minor change
Mobile Office (e.g Laptop, mobile device)	Up to date	Significant Change	Neither High nor Low	Minor change
Internal Customer Service and help desk	Up to date	Significant Change	Neither High nor Low	No change
Remote access to service systems (e.g. intelligence reports, briefings)	Up to date	Minor Change	Neither High nor Low	No change
Laptop with access to personal information management systems & data processing	Up to date	Minor Change	Neither High nor Low	No change

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In-Vehicle Mobile Data Terminal	Old but serviceable	Transform	High	Significant change
Smartphone/PDA - Access to fire service systems	Up to date	Significant Change	High	No change
Augmented Reality (heads up displays)	Don't use it	Significant Change	Neither High nor Low	No change

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Incident Messaging	Up to date	Minor Change	Neither High nor Low	Minor change
Status Messaging	Up to date	Minor Change	Neither High nor Low	Minor change
Command Support Unit	Old but serviceable	Significant Change	Neither High nor Low	No change
Communication with partners through voice (e.g. Police, Public Health)	Up to date	Minor Change	Neither High nor Low	Minor change
Communication with partners through data (e.g. Police, Public Health)	Old but serviceable	Significant Change	Neither High nor Low	Minor change
Partnering with automatic systems failover	Up to date	No Change	Neither High nor Low	Minor change
IP Communications (text, audio, video) for emergency calls from citizens	Don't use it	Minor Change	Neither High nor Low	Minor change
Routing of IP Communications (text, audio, video) to first responders	Don't use it	Minor Change	Neither High nor Low	Minor change
Routing of IP Communications (text, audio, video) from first	Don't use it	Minor Change	Neither High nor Low	Minor change

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responders to control or peer to peer				
Location information visualisation	Don't use it	Minor Change	Neither High nor Low	Minor change
Sensor data transmission (e.g. Breathing Apparatus telemetry)	Old but serviceable	Minor Change	Low	Minor change

Station End Equipment	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Printers	Up to date	No Change	Low	No change
Visual Display Unit (VDU)	Don't use it	No Change	Very Low	No change

Records Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated databases with partners	Old but serviceable	Significant Change	Neither High nor Low	No change
Broadband wireless access in vehicles (e.g. LAN, MDT, mobile)	Up to date	Significant Change	Neither High nor Low	No change
Image management software (e.g. video, CCTV, pictures, person mounted cameras)	Up to date	Significant Change	Neither High nor Low	Minor change
Integrated GIS	Up to date	Minor Change	Neither High nor Low	Minor change
Shared Gazetteer	Up to date	Minor Change	Neither High nor Low	Minor change
Video Surveillance	Don't use it	No Change	Low	No change

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In-vehicle cameras (cameras facing outwards)	Up to date	Minor Change	Neither High nor Low	No change
Person mounted cameras	Old but serviceable	Significant Change	Neither High nor Low	Minor change
Aerial surveillance (e.g. drones)	Up to date	Minor Change	Neither High nor Low	No change

Securing Fire Service Systems	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Encryption	Old but serviceable	Minor Change	High	No change
Data Governance	Old but serviceable	Minor Change	Neither High nor Low	No change
Identification and Access Management (e.g. Single-Sign on)	Old but serviceable	Significant Change	Low	Minor change
PSN Compliance	Old but serviceable	Minor Change	Neither High nor Low	No change

Analysis and Mapping	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated Management of Business Processes (e.g. Enterprise resources planning tools such as SAP, Oracle, Microsoft Dynamics)	Up to date	Significant Change	High	Minor change

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Remote recording of data (Home Fire Safety Checks, Fire Hydrant Data)	Don't use it	Minor Change	Neither High nor Low	Significant change
Tools to extract and clean data	Up to date	Significant Change	Very High	No change
Tools to visualise data	Up to date	Significant Change	Very High	Don't know
Analytic software (displaying information on mobile device)	Up to date	Significant Change	Neither High nor Low	Don't know
Predictive modelling	Up to date	Significant Change	Very High	Don't know
Use of 3rd party analytic services	Obsolete	No Change	Very Low	No change
Investigative software - fire	Don't use it	No Change	High	Don't know
Collection and analysis of data from private data sources (e.g. insurance data)	Don't use it	No Change	Low	Don't know

The Use of Social Media: Communication with the public	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Twitter	Very often	Significant Change	High
Facebook	Very often	Significant Change	High
Youtube	Very often	Significant Change	Low
Flickr	Occasionally	Significant Change	Very Low
Instagram	Never	Significant Change	Very Low
Snapchat	Never	Significant Change	Very Low

The Use of Social Media: Communication within the organisation	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Enterprise networking sites (e.g. Yammer)	Very often	Transform	High

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Instant messaging (e.g. Chat, Whatsapp)	Often	Transform	High
File Sharing (e.g. Dropbox)	Very often	Minor Change	Neither High nor Low
Wiki	Occasionally	Minor Change	Neither High nor Low
Collaborative Document Sharing (e.g. Google Docs)	Never	Don't Know	Neither High nor Low
Micro-blogging (e.g. Twitter)	Very often	Transform	Neither High nor Low
Video conferencing (e.g. Skype, Facetime)	Occasionally	Minor Change	Neither High nor Low
Email	Very often	Minor Change	Neither High nor Low

Delivery of systems: IT Outsourcing	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Business Process Outsourcing (Technology and Process)	Very low	Very low
Outsourcing (services and support)	Very low	Very low
Outsourcing (Infrastructure)	Very low	Very low
Outsourcing (Temporary on project by project basis)	Very low	Very low
Outsourcing (Total IT)	Very low	Very low
Insourcing	Very High	Very High

Delivery of systems: Cloud	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level

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Cloud (Software)	Neither High nor Low	Neither High nor Low
Cloud (Platform)	Neither High nor Low	Neither High nor Low
Cloud (Infrastructure)	Neither High nor Low	Neither High nor Low

Development of Systems	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
In-house systems development	High	High
Collaboration in systems development with other fire services	Low	Low
Collaboration with other public sector bodies	Low	Low

Survey Results 34: Staffordshire Fire and Rescue Service

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
GPS for locating firefighters on the fire ground (Location Services)	Don't use it	Significant Change	Neither High nor Low	Minor change
GPS for locating firefighters on call (Location Services)	Don't use it	Significant Change	Neither High nor Low	Minor change
Automatic vehicle location (for management of resources)	Up to date	Minor Change	Very High	Minor change
Automatic vehicle location (Predictive analytics)	Up to date	Significant Change	High	Minor change
Quality monitoring of call handling	Up to date	Significant Change	Neither High nor Low	Minor change
Workforce management systems (Control)	Up to date	Significant Change	Very High	Minor change
Workforce management systems (Corporate)	Up to date	Significant Change	High	Minor change
Shared Control Centre (with more than one FRS or with other emergency services)	Up to date	Significant Change	Neither High nor Low	Minor change
Exchange of Information across Emergency Services (e.g. MAIT)	Don't use it	Transform	Neither High nor Low	Significant change
Shared Control Systems (e.g. shared data centres driving multiple Emergency Service Control Centres)	Don't use it	Significant Change	Low	No change
Virtual call centres (e.g. call centres with a cloud based infrastructure)	Don't use it	Significant Change	Low	No change
Automatic call distribution	Up to date		High	

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales**.**

Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Call Line Identification (e.g. EISEC)	Up to date	Minor Change	Neither High nor Low	No change
Advanced Mobile Location (AML- Caller location information service for smartphones)	Up to date	Minor Change	Neither High nor Low	No change
Service Access Node H (SANH), or similar	Up to date	Minor Change	High	Transform
Computer aided dispatch	Up to date	Significant Change	Neither High nor Low	Significant change

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Data Storage	Up to date	Significant Change	High	Significant change
Data Capture (e.g Video, pictures and updating critical systems)	Old but serviceable	Significant Change	High	Transform
Data Integration	Old but serviceable	Transform	High	Transform
Mobile Office (e.g Laptop, mobile device)	Up to date	Significant Change	High	Significant change
Internal Customer Service and help desk	Up to date	Minor Change	Low	Minor change
Remote access to service systems (e.g. intelligence reports, briefings)	Up to date	Significant Change	High	Significant change
Laptop with access to personal information management systems & data processing	Up to date	Significant Change	Neither High nor Low	Significant change

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In-Vehicle Mobile Data Terminal	Up to date	Significant Change	High	Significant change
Smartphone/PDA - Access to fire service systems	Up to date	Significant Change	Neither High nor Low	Significant change
Augmented Reality (heads up displays)	Don't use it	Minor Change	Low	Minor change

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Incident Messaging	Old but serviceable	Minor Change	Neither High nor Low	Minor change
Status Messaging	Up to date	Minor Change	Neither High nor Low	No change
Command Support Unit	Old but serviceable	Significant Change	Neither High nor Low	Significant change
Communication with partners through voice (e.g. Police, Public Health)	Up to date	Minor Change	Neither High nor Low	Minor change
Communication with partners through data (e.g. Police, Public Health)	Old but serviceable	Transform	High	Significant change
Partnering with automatic systems failover	Old but serviceable	Significant Change	Neither High nor Low	Minor change
IP Communications (text, audio, video) for emergency calls from citizens	Up to date	Significant Change	Low	Minor change
Routing of IP Communications (text, audio, video) to first responders	Don't use it	Significant Change	Neither High nor Low	Transform
Routing of IP Communications (text, audio, video) from first	Don't use it	Significant Change	Neither High nor Low	Transform

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responders to control or peer to peer				
Location information visualisation	Don't use it	Minor Change	Low	Significant change
Sensor data transmission (e.g. Breathing Apparatus telemetry)	Up to date	Significant Change	High	Minor change

Station End Equipment	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Printers	Up to date	Minor Change	Very Low	No change
Visual Display Unit (VDU)	Don't use it	Minor Change	Very Low	No change

Records Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated databases with partners	Old but serviceable	Transform	High	Significant change
Broadband wireless access in vehicles (e.g. LAN, MDT, mobile)	Up to date	Significant Change	Neither High nor Low	Transform
Image management software (e.g. video, CCTV, pictures, person mounted cameras)	Up to date	Significant Change	High	Transform
Integrated GIS	Old but serviceable	Minor Change	Low	Minor change
Shared Gazetteer	Old but serviceable	Significant Change	High	Minor change

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Video Surveillance	Don't use it	Significant Change	Low	Significant change
In-vehicle cameras (cameras facing outwards)	Up to date	Significant Change	Neither High nor Low	Significant change
Person mounted cameras	Up to date	Transform	High	Transform
Aerial surveillance (e.g. drones)	Don't use it	Significant Change	Neither High nor Low	Transform

Securing Fire Service Systems	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Encryption	Up to date	Significant Change	High	No change
Data Governance	Up to date	Significant Change	Very High	Significant change
Identification and Access Management (e.g. Single-Sign on)	Old but serviceable	Significant Change	Neither High nor Low	Minor change
PSN Compliance	Up to date	Significant Change	High	Significant change

Analysis and Mapping	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated Management of Business Processes (e.g. Enterprise resources planning	Up to date	Transform	High	Minor change

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tools such as SAP, Oracle, Microsoft Dynamics)			
Remote recording of data (Home Fire Safety Checks, Fire Hydrant Data)	Up to date	Significant Change	High	Significant change
Tools to extract and clean data	Old but serviceable	Transform	High	No change
Tools to visualise data	Old but serviceable	Transform	High	No change
Analytic software (displaying information on mobile device)	Don't use it	Significant Change	High	Significant change
Predictive modelling	Up to date	Transform	High	Significant change
Use of 3rd party analytic services	Obsolete	No Change	Very Low	No change
Investigative software - fire	Don't use it	Significant Change	Neither High nor Low	Minor change
Collection and analysis of data from private data sources (e.g. insurance data)	Don't use it	Significant Change	Neither High nor Low	Minor change

The Use of Social Media: Communication with the public	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Twitter	Very often	Significant Change	High
Facebook	Very often	Minor Change	High
Youtube	Never	Significant Change	Neither High nor Low
Flickr	Never	Significant Change	Neither High nor Low
Instagram	Often	Significant Change	High
Snapchat	Never	Significant Change	High

The Use of Social Media: Communication within the organisation	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level

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Enterprise networking sites (e.g. Yammer)	Often	Transform	High
Instant messaging (e.g. Chat, Whatsapp)	Very often	Transform	Neither High nor Low
File Sharing (e.g. Dropbox)	Occasionally	Transform	High
Wiki	Never	Don't Know	Low
Collaborative Document Sharing (e.g. Google Docs)	Occasionally	Transform	Very High
Micro-blogging (e.g. Twitter)	Occasionally	Significant Change	Low
Video conferencing (e.g. Skype, Facetime)	Occasionally	Significant Change	Neither High nor Low
Email	Very often	Significant Change	Low

Delivery of systems: IT Outsourcing	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Business Process Outsourcing (Technology and Process)	Neither High nor Low	High
Outsourcing (services and support)	Neither High nor Low	High
Outsourcing (Infrastructure)	High	High
Outsourcing (Temporary on project by project basis)	High	High
Outsourcing (Total IT)	Low	High
Insourcing	High	Neither High nor Low

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

Delivery of systems: Cloud	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Cloud (Software)	Neither High nor Low	High
Cloud (Platform)	Low	High
Cloud (Infrastructure)	Neither High nor Low	High

Development of Systems	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
In-house systems development	Very low	Very low
Collaboration in systems development with other fire services	High	High
Collaboration with other public sector bodies	Neither High nor Low	High

Survey Results 35: Surrey Fire and Rescue Service

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
GPS for locating firefighters on the fire ground (Location Services)	Don't use it	Significant Change	High	Minor change
GPS for locating firefighters on call (Location Services)	Don't use it	Significant Change	High	No change
Automatic vehicle location (for management of resources)	Up to date	Significant Change	Neither High nor Low	Significant change
Automatic vehicle location (Predictive analytics)	Up to date	Significant Change	Neither High nor Low	Significant change
Quality monitoring of call handling	Up to date	No Change	Low	Minor change
Workforce management systems (Control)	Up to date	Minor Change	High	No change
Workforce management systems (Corporate)	Up to date	Minor Change	High	No change
Shared Control Centre (with more than one FRS or with other emergency services)	Don't use it	Significant Change	High	Transform
Exchange of Information across Emergency Services (e.g. MAIT)	Don't use it	Significant Change	High	Minor change
Shared Control Systems (e.g. shared data centres driving multiple Emergency Service Control Centres)	Don't use it	Significant Change	High	Significant change
Virtual call centres (e.g. call centres with a cloud based infrastructure)	Don't use it	Significant Change	Low	Minor change
Automatic call distribution	Up to date		High	

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Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Call Line Identification (e.g. EISEC)	Up to date	Minor Change	Low	Minor change
Advanced Mobile Location (AML- Caller location information service for smartphones)	Up to date	Minor Change	Neither High nor Low	No change
Service Access Node H (SANH), or similar	Don't use it	Significant Change	Low	Transform
Computer aided dispatch	Up to date	Significant Change	High	Significant change

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Data Storage	Old but serviceable	Significant Change	High	No change
Data Capture (e.g Video, pictures and updating critical systems)	Old but serviceable	Significant Change	High	No change
Data Integration	Old but serviceable	Significant Change	High	No change
Mobile Office (e.g Laptop, mobile device)	Up to date	Significant Change	High	No change
Internal Customer Service and help desk	Old but serviceable	Transform	Very High	No change
Remote access to service systems (e.g. intelligence reports, briefings)	Up to date	Significant Change	Neither High nor Low	No change
Laptop with access to personal information management systems & data processing	Up to date	Significant Change	Neither High nor Low	No change

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

In-Vehicle Mobile Data Terminal	Up to date	Significant Change	High	Significant change
Smartphone/PDA - Access to fire service systems	Up to date	Significant Change	High	Significant change
Augmented Reality (heads up displays)	Don't know	Significant Change	Neither High nor Low	No change

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Incident Messaging	Up to date	Significant Change	High	Minor change
Status Messaging	Up to date	Significant Change	High	Minor change
Command Support Unit	Old but serviceable	Transform	Very High	Significant change
Communication with partners through voice (e.g. Police, Public Health)	Up to date	Minor Change	Neither High nor Low	Significant change
Communication with partners through data (e.g. Police, Public Health)	Up to date	Minor Change	Neither High nor Low	Significant change
Partnering with automatic systems failover	Up to date	Significant Change	Neither High nor Low	Significant change
IP Communications (text, audio, video) for emergency calls from citizens	Don't use it	Minor Change	Neither High nor Low	Significant change
Routing of IP Communications (text, audio, video) to first responders	Don't use it	Significant Change	High	Significant change
Routing of IP Communications (text, audio, video) from first	Don't use it	Transform	High	Significant change

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales**.**

responders to control or peer to peer				
Location information visualisation	Don't use it	Significant Change	High	Significant change
Sensor data transmission (e.g. Breathing Apparatus telemetry)	Up to date	Significant Change	High	No change

Station End Equipment	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Printers	Old but serviceable	Significant Change	Neither High nor Low	No change
Visual Display Unit (VDU)	Up to date	Minor Change	Neither High nor Low	No change

Records Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated databases with partners	Old but serviceable	Significant Change	High	No change
Broadband wireless access in vehicles (e.g. LAN, MDT, mobile)	Don't use it	Significant Change	High	Significant change
Image management software (e.g. video, CCTV, pictures, person mounted cameras)	Old but serviceable	Significant Change	High	Minor change
Integrated GIS	Up to date	Significant Change	High	Minor change
Shared Gazetteer	Up to date	Significant Change	High	Minor change

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales**.**

Video Surveillance	Up to date	Significant Change	High	No change
In-vehicle cameras (cameras facing outwards)	Up to date	Significant Change	High	Minor change
Person mounted cameras	Don't use it	Significant Change	High	Minor change
Aerial surveillance (e.g. drones)	Up to date	Significant Change	Neither High nor Low	Minor change

Securing Fire Service Systems	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Encryption	Up to date	Significant Change	High	Minor change
Data Governance	Up to date	Significant Change	High	Minor change
Identification and Access Management (e.g. Single-Sign on)	Up to date	Significant Change	High	Minor change
PSN Compliance	Up to date	Significant Change	High	Minor change

Analysis and Mapping	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated Management of Business Processes (e.g. Enterprise resources planning tools such as SAP, Oracle, Microsoft Dynamics)	Old but serviceable	Significant Change	High	No change

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

Remote recording of data (Home Fire Safety Checks, Fire Hydrant Data)	Old but serviceable	Significant Change	High	No change
Tools to extract and clean data	Old but serviceable	Significant Change	High	No change
Tools to visualise data	Up to date	Significant Change	High	No change
Analytic software (displaying information on mobile device)	Don't use it	Significant Change	High	No change
Predictive modelling	Up to date	Significant Change	High	No change
Use of 3rd party analytic services	Up to date	Minor Change	Neither High nor Low	Minor change
Investigative software - fire	Up to date	Minor Change	High	Minor change
Collection and analysis of data from private data sources (e.g. insurance data)	Up to date	Significant Change	High	Transform

The Use of Social Media: Communication with the public	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Twitter	Very often	Significant Change	Neither High nor Low
Facebook	Very often	Significant Change	Neither High nor Low
Youtube	Occasionally	Significant Change	Neither High nor Low
Flickr	Never	Significant Change	Very Low
Instagram	Never	Significant Change	Very Low
Snapchat	Never	Significant Change	Very Low

The Use of Social Media: Communication within the organisation	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Enterprise networking sites (e.g. Yammer)	Very often	Significant Change	High

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Instant messaging (e.g. Chat, Whatsapp)	Very often	Significant Change	High
File Sharing (e.g. Dropbox)	Never	Significant Change	Very Low
Wiki	Never	Significant Change	Very Low
Collaborative Document Sharing (e.g. Google Docs)	Never	Significant Change	Very Low
Micro-blogging (e.g. Twitter)	Never	Significant Change	Very Low
Video conferencing (e.g. Skype, Facetime)	Very often	Significant Change	High
Email	Very often	Significant Change	Very High

Delivery of systems: IT Outsourcing	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Business Process Outsourcing (Technology and Process)	Low	Neither High nor Low
Outsourcing (services and support)	Low	Neither High nor Low
Outsourcing (Infrastructure)	Low	Neither High nor Low
Outsourcing (Temporary on project by project basis)	Low	Neither High nor Low
Outsourcing (Total IT)	Low	Low
Insourcing	High	High

Delivery of systems: Cloud	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level

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Cloud (Software)	Neither High nor Low	High
Cloud (Platform)	Neither High nor Low	High
Cloud (Infrastructure)	Neither High nor Low	High

Development of Systems	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
In-house systems development	Low	High
Collaboration in systems development with other fire services	High	High
Collaboration with other public sector bodies	High	High

Survey Results 36: Suffolk Fire and Rescue Service

Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
GPS for locating firefighters on the fire ground (Location Services)	Don't use it	Significant Change	Neither High nor Low	Minor change
GPS for locating firefighters on call (Location Services)	Don't use it	Don't Know	Very Low	Don't know
Automatic vehicle location (for management of resources)	Up to date	Significant Change	High	Significant change
Automatic vehicle location (Predictive analytics)	Don't use it	Transform	Neither High nor Low	Significant change
Quality monitoring of call handling	Don't know	Minor Change	High	No change
Workforce management systems (Control)	Don't know	Don't Know	Low	Don't know
Workforce management systems (Corporate)	Up to date	Significant Change	High	Minor change
Shared Control Centre (with more than one FRS or with other emergency services)	Old but serviceable	Significant Change	Very High	Transform
Exchange of Information across Emergency Services (e.g. MAIT)	Don't use it	Significant Change	Neither High nor Low	Minor change
Shared Control Systems (e.g. shared data centres driving multiple Emergency Service Control Centres)	Up to date	Significant Change	Very Low	Significant change
Virtual call centres (e.g. call centres with a cloud based infrastructure)	Don't use it	Significant Change	Very Low	Significant change
Automatic call distribution	Up to date		High	

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales**.**

Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Call Line Identification (e.g. EISEC)	Up to date	Significant Change	High	Minor change
Advanced Mobile Location (AML- Caller location information service for smartphones)	Don't know	Significant Change	High	Minor change
Service Access Node H (SANH), or similar	Up to date	Significant Change	Very High	Significant change
Computer aided dispatch	Old but serviceable	Significant Change	High	Significant change

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Data Storage	Up to date	Significant Change	Neither High nor Low	No change
Data Capture (e.g Video, pictures and updating critical systems)	Up to date	Significant Change	Neither High nor Low	Minor change
Data Integration	Up to date	Transform	High	Minor change
Mobile Office (e.g Laptop, mobile device)	Up to date	Transform	Neither High nor Low	No change
Internal Customer Service and help desk	Up to date	Significant Change	Neither High nor Low	No change
Remote access to service systems (e.g. intelligence reports, briefings)	Up to date	Significant Change	Neither High nor Low	Minor change
Laptop with access to personal information management systems & data processing	Up to date	Significant Change	Neither High nor Low	Minor change

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales**.**

In-Vehicle Mobile Data Terminal	Up to date	Minor Change	High	Significant change
Smartphone/PDA - Access to fire service systems	Up to date	Significant Change	High	Significant change
Augmented Reality (heads up displays)	Don't use it	Significant Change	Very Low	Significant change

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Incident Messaging	Don't use it	Significant Change	High	Minor change
Status Messaging	Up to date	Minor Change	High	Minor change
Command Support Unit	Up to date	Significant Change	High	Significant change
Communication with partners through voice (e.g. Police, Public Health)	Up to date	Minor Change	High	Significant change
Communication with partners through data (e.g. Police, Public Health)	Old but serviceable	Significant Change	High	Significant change
Partnering with automatic systems failover	Don't use it	Significant Change	Neither High nor Low	No change
IP Communications (text, audio, video) for emergency calls from citizens	Don't use it	Transform	Neither High nor Low	Transform
Routing of IP Communications (text, audio, video) to first responders	Old but serviceable	Transform	Neither High nor Low	Transform
Routing of IP Communications (text, audio, video) from first	Don't use it	Transform	Neither High nor Low	Transform

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

responders to control or peer to peer				
Location information visualisation	Don't use it	Significant Change	Low	Significant change
Sensor data transmission (e.g. Breathing Apparatus telemetry)	Don't use it	Significant Change	Neither High nor Low	Significant change

Station End Equipment	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Printers	Up to date	Significant Change	Neither High nor Low	No change
Visual Display Unit (VDU)	Old but serviceable	Significant Change	Neither High nor Low	No change

Records Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated databases with partners	Up to date	Minor Change	Neither High nor Low	Don't know
Broadband wireless access in vehicles (e.g. LAN, MDT, mobile)	Up to date	Significant Change	High	Minor change
Image management software (e.g. video, CCTV, pictures, person mounted cameras)	Don't use it	Significant Change	Neither High nor Low	Don't know
Integrated GIS	Up to date	Significant Change	High	Minor change

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Shared Gazetteer	Don't use it	Minor Change	Low	No change
Video Surveillance	Don't use it	Significant Change	Low	Significant change
In-vehicle cameras (cameras facing outwards)	Don't use it	Significant Change	Low	Significant change
Person mounted cameras	Don't use it	Significant Change	Low	Significant change
Aerial surveillance (e.g. drones)	Up to date	Significant Change	Neither High nor Low	Significant change

Securing Fire Service Systems	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Encryption	Up to date	Significant Change	High	Significant change
Data Governance	Don't know	Significant Change	Very High	Significant change
Identification and Access Management (e.g. Single-Sign on)	Up to date	Significant Change	High	Significant change
PSN Compliance	Up to date	Transform	High	Significant change

Analysis and Mapping	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated Management of Business Processes (e.g. Enterprise resources planning tools such as SAP, Oracle, Microsoft Dynamics)	Don't use it	Minor Change	Low	No change

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales**.**

Remote recording of data (Home Fire Safety Checks, Fire Hydrant Data)	Up to date	Minor Change	High	Significant change
Tools to extract and clean data	Up to date	Significant Change	High	No change
Tools to visualise data	Up to date	Significant Change	Neither High nor Low	Minor change
Analytic software (displaying information on mobile device)	Up to date	Significant Change	High	Minor change
Predictive modelling	Don't use it	Significant Change	High	No change
Use of 3rd party analytic services	Don't use it	Significant Change	Very Low	No change
Investigative software - fire	Old but serviceable	Minor Change	Low	No change
Collection and analysis of data from private data sources (e.g. insurance data)	Up to date	Significant Change	Neither High nor Low	No change

The Use of Social Media: Communication with the public	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Twitter	Very often	Significant Change	High
Facebook	Very often	Significant Change	High
Youtube	Occasionally	Significant Change	Neither High nor Low
Flickr	Never	Significant Change	Very Low
Instagram	Occasionally	Significant Change	Neither High nor Low
Snapchat	Never	Significant Change	Very Low

The Use of Social Media: Communication within the organisation	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

Enterprise networking sites (e.g. Yammer)	Often	Significant Change	Neither High nor Low
Instant messaging (e.g. Chat, Whatsapp)	Often	Significant Change	Neither High nor Low
File Sharing (e.g. Dropbox)	Occasionally	Significant Change	Low
Wiki	Occasionally	Significant Change	Low
Collaborative Document Sharing (e.g. Google Docs)	Very often	Significant Change	High
Micro-blogging (e.g. Twitter)	Often	Significant Change	Neither High nor Low
Video conferencing (e.g. Skype, Facetime)	Very often	Significant Change	High
Email	Very often	Significant Change	High

Delivery of systems: IT Outsourcing	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Business Process Outsourcing (Technology and Process)	Very low	Very low
Outsourcing (services and support)	Very High	High
Outsourcing (Infrastructure)	Very High	High
Outsourcing (Temporary on project by project basis)	High	High
Outsourcing (Total IT)	Very low	Very low
Insourcing	Very High	Very High

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

Delivery of systems: Cloud	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Cloud (Software)	Very High	Neither High nor Low
Cloud (Platform)	Very High	Neither High nor Low
Cloud (Infrastructure)	Very High	Neither High nor Low

Development of Systems	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
In-house systems development	Very High	Very High
Collaboration in systems development with other fire services	High	High
Collaboration with other public sector bodies	High	High

Survey Results 37: Tyne and Wear Fire and Rescue Service

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
GPS for locating firefighters on the fire ground (Location Services)	Don't use it	No Change	Neither High nor Low	No change
GPS for locating firefighters on call (Location Services)	Don't use it	No Change	Neither High nor Low	No change
Automatic vehicle location (for management of resources)	Up to date	No Change	Very High	Significant change
Automatic vehicle location (Predictive analytics)	Don't use it	Significant Change	Very High	Significant change
Quality monitoring of call handling	Up to date	Minor Change	High	No change
Workforce management systems (Control)	Don't use it	No Change	Neither High nor Low	No change
Workforce management systems (Corporate)	Up to date	Significant Change	Very High	No change
Shared Control Centre (with more than one FRS or with other emergency services)	Don't use it	Don't Know	Neither High nor Low	No change
Exchange of Information across Emergency Services (e.g. MAIT)	Don't use it	Don't Know	Neither High nor Low	No change
Shared Control Systems (e.g. shared data centres driving multiple Emergency Service Control Centres)	Up to date	No Change	High	Significant change
Virtual call centres (e.g. call centres with a cloud based infrastructure)	Don't use it	Don't Know	Neither High nor Low	No change
Automatic call distribution	Up to date		High	

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales**.**

Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Call Line Identification (e.g. EISEC)	Up to date	No Change	High	No change
Advanced Mobile Location (AML- Caller location information service for smartphones)	Don't use it	Don't Know	Neither High nor Low	No change
Service Access Node H (SANH), or similar	Up to date	Significant Change	High	Significant change
Computer aided dispatch	Up to date	No Change	High	Significant change

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Data Storage	Old but serviceable	Significant Change	High	Minor change
Data Capture (e.g Video, pictures and updating critical systems)	Up to date	Significant Change	High	Don't know
Data Integration	Old but serviceable	Significant Change	High	Minor change
Mobile Office (e.g Laptop, mobile device)	Up to date	Minor Change	Neither High nor Low	No change
Internal Customer Service and help desk	Old but serviceable	Significant Change	Neither High nor Low	No change
Remote access to service systems (e.g. intelligence reports, briefings)	Up to date	Significant Change	Neither High nor Low	No change
Laptop with access to personal information management systems & data processing	Up to date	No Change	Neither High nor Low	No change

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

In-Vehicle Mobile Data Terminal	Old but serviceable	Significant Change	Very High	Significant change
Smartphone/PDA - Access to fire service systems	Up to date	No Change	Neither High nor Low	Don't know
Augmented Reality (heads up displays)	Don't use it	Don't Know	Low	No change

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Incident Messaging	Up to date	Minor Change	Very High	Significant change
Status Messaging	Up to date	Minor Change	Very High	Significant change
Command Support Unit	Up to date	No Change	High	Minor change
Communication with partners through voice (e.g. Police, Public Health)	Up to date	Significant Change	Very High	Significant change
Communication with partners through data (e.g. Police, Public Health)	Old but serviceable	Significant Change	Neither High nor Low	Don't know
Partnering with automatic systems failover	Up to date	No Change	Very High	Significant change
IP Communications (text, audio, video) for emergency calls from citizens	Don't use it	Don't Know	Neither High nor Low	Don't know
Routing of IP Communications (text, audio, video) to first responders	Don't use it	Don't Know	Neither High nor Low	Don't know
Routing of IP Communications (text, audio, video) from first responders to control or peer to peer	Don't use it	Don't Know	Neither High nor Low	Don't know

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

| Location information visualisation | Up to date | No Change | Very High | No change |
| Sensor data transmission (e.g. Breathing Apparatus telemetry) | Up to date | Don't Know | Neither High nor Low | Don't know |

Station End Equipment	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Printers	Old but serviceable	No Change	Neither High nor Low	No change
Visual Display Unit (VDU)	Don't use it	No Change	Neither High nor Low	No change

Records Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated databases with partners	Old but serviceable	Minor Change	Very High	Minor change
Broadband wireless access in vehicles (e.g. LAN, MDT, mobile)	Up to date	Significant Change	Very High	Significant change
Image management software (e.g. video, CCTV, pictures, person mounted cameras)	Up to date	Don't Know	High	Don't know
Integrated GIS	Up to date	Minor Change	Very High	Minor change
Shared Gazetteer	Up to date	Minor Change	Very High	Minor change
Video Surveillance	Up to date	Minor Change	High	Don't know
In-vehicle cameras (cameras facing outwards)	Up to date	Minor Change	High	Don't know

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

| Person mounted cameras | Don't use it | Significant Change | High | Don't know |
| Aerial surveillance (e.g. drones) | Up to date | Minor Change | High | Minor change |

Securing Fire Service Systems	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Encryption	Up to date	Minor Change	Very High	Minor change
Data Governance	Up to date	Minor Change	Very High	Minor change
Identification and Access Management (e.g. Single-Sign on)	Old but serviceable	Minor Change	High	Minor change
PSN Compliance	Old but serviceable	Significant Change	Very High	Significant change

Analysis and Mapping	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated Management of Business Processes (e.g. Enterprise resources planning tools such as SAP, Oracle, Microsoft Dynamics)	Up to date	Minor Change	High	No change
Remote recording of data (Home Fire Safety Checks, Fire Hydrant Data)	Don't use it	Significant Change	Neither High nor Low	No change
Tools to extract and clean data	Don't use it	Don't Know	Neither High nor Low	No change

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

Tools to visualise data	Old but serviceable	Minor Change	Neither High nor Low	No change
Analytic software (displaying information on mobile device)	Old but serviceable	Minor Change	Neither High nor Low	No change
Predictive modelling	Up to date	Minor Change	Neither High nor Low	No change
Use of 3rd party analytic services	Up to date	Minor Change	Neither High nor Low	No change
Investigative software - fire	Old but serviceable	Significant Change	High	No change
Collection and analysis of data from private data sources (e.g. insurance data)	Don't use it	Don't Know	Neither High nor Low	No change

The Use of Social Media: Communication with the public	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Twitter	Very often	Don't Know	High
Facebook	Very often	Don't Know	High
Youtube	Very often	Don't Know	High
Flickr	Never	Don't Know	Neither High nor Low
Instagram	Very often	Don't Know	High
Snapchat	Never	Don't Know	Neither High nor Low

The Use of Social Media: Communication within the organisation	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Enterprise networking sites (e.g. Yammer)	Never	No Change	Neither High nor Low
Instant messaging (e.g. Chat, Whatsapp)	Occasionally	Minor Change	High
File Sharing (e.g. Dropbox)	Often	Significant Change	High
Wiki	Never	Minor Change	Neither High nor Low

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

Collaborative Document Sharing (e.g. Google Docs)	Occasionally	Significant Change	High
Micro-blogging (e.g. Twitter)	Very often	Minor Change	High
Video conferencing (e.g. Skype, Facetime)	Occasionally	Minor Change	Neither High nor Low
Email	Very often	Minor Change	High

Delivery of systems: IT Outsourcing	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Business Process Outsourcing (Technology and Process)	Neither High nor Low	Neither High nor Low
Outsourcing (services and support)	High	Neither High nor Low
Outsourcing (Infrastructure)	High	Neither High nor Low
Outsourcing (Temporary on project by project basis)	Neither High nor Low	Neither High nor Low
Outsourcing (Total IT)	Neither High nor Low	Neither High nor Low
Insourcing	Neither High nor Low	Neither High nor Low

Delivery of systems: Cloud	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Cloud (Software)	Neither High nor Low	Neither High nor Low
Cloud (Platform)	High	High
Cloud (Infrastructure)	Neither High nor Low	Neither High nor Low

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

Development of Systems	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
In-house systems development	High	High
Collaboration in systems development with other fire services	High	High
Collaboration with other public sector bodies	High	High

Survey Results 38: Warwickshire Fire and Rescue Service

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
GPS for locating firefighters on the fire ground (Location Services)	Don't use it	Don't Know	Neither High nor Low	Minor change
GPS for locating firefighters on call (Location Services)	Don't use it	Don't Know	Very Low	No change
Automatic vehicle location (for management of resources)	Don't use it	Significant Change	Very High	Significant change
Automatic vehicle location (Predictive analytics)	Don't use it	Don't Know	Neither High nor Low	Don't know
Quality monitoring of call handling	Up to date	Don't Know	High	Minor change
Workforce management systems (Control)	Don't know	Don't Know	Low	No change
Workforce management systems (Corporate)	Don't know	Don't Know	Low	No change
Shared Control Centre (with more than one FRS or with other emergency services)	Don't use it	Transform	Very High	Significant change
Exchange of Information across Emergency Services (e.g. MAIT)	Old but serviceable	Minor Change	High	Significant change
Shared Control Systems (e.g. shared data centres driving multiple Emergency Service Control Centres)	Don't use it	Don't Know	Low	Don't know
Virtual call centres (e.g. call centres with a cloud based infrastructure)	Don't use it	No Change	Very Low	No change
Automatic call distribution	Up to date		High	

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales**.**

Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Call Line Identification (e.g. EISEC)	Up to date	Significant Change	Neither High nor Low	Minor change
Advanced Mobile Location (AML- Caller location information service for smartphones)	Don't use it	Significant Change	High	Don't know
Service Access Node H (SANH), or similar	Up to date	Don't Know	Neither High nor Low	Significant change
Computer aided dispatch	Don't use it	No Change	Very Low	No change

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Data Storage	Old but serviceable	Significant Change	High	Don't know
Data Capture (e.g Video, pictures and updating critical systems)	Don't use it	Significant Change	High	Don't know
Data Integration	Old but serviceable	Significant Change	High	Significant change
Mobile Office (e.g Laptop, mobile device)	Up to date	Minor Change	High	Minor change
Internal Customer Service and help desk	Old but serviceable	Minor Change	Very Low	No change
Remote access to service systems (e.g. intelligence reports, briefings)	Old but serviceable	Significant Change	Neither High nor Low	No change
Laptop with access to personal information management systems & data processing	Up to date	Minor Change	Neither High nor Low	No change

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

In-Vehicle Mobile Data Terminal	Up to date	Significant Change	High	Significant change
Smartphone/PDA - Access to fire service systems	Up to date	Minor Change	High	Significant change
Augmented Reality (heads up displays)	Don't use it	Significant Change	Low	Don't know

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Incident Messaging	Up to date	Don't Know	Neither High nor Low	Minor change
Status Messaging	Don't use it	Significant Change	High	Significant change
Command Support Unit	Up to date	Minor Change	Neither High nor Low	Minor change
Communication with partners through voice (e.g. Police, Public Health)	Old but serviceable	Significant Change	Neither High nor Low	Minor change
Communication with partners through data (e.g. Police, Public Health)	Old but serviceable	Significant Change	Low	Significant change
Partnering with automatic systems failover	Don't know	Don't Know	Neither High nor Low	Don't know
IP Communications (text, audio, video) for emergency calls from citizens	Don't use it	Significant Change	Neither High nor Low	Don't know
Routing of IP Communications (text, audio, video) to first responders	Don't use it	Significant Change	High	Don't know
Routing of IP Communications (text, audio, video) from first	Don't use it	Significant Change	High	Don't know

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales**.**

responders to control or peer to peer				
Location information visualisation	Don't use it	Significant Change	Neither High nor Low	Don't know
Sensor data transmission (e.g. Breathing Apparatus telemetry)	Up to date	Minor Change	Neither High nor Low	No change

Station End Equipment	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Printers	Up to date	Minor Change	High	Significant change
Visual Display Unit (VDU)	Up to date	Minor Change	High	Significant change

Records Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated databases with partners	Don't use it	Significant Change	High	Don't know
Broadband wireless access in vehicles (e.g. LAN, MDT, mobile)	Old but serviceable	Minor Change	Neither High nor Low	Don't know
Image management software (e.g. video, CCTV, pictures, person mounted cameras)	Don't use it	Significant Change	High	Don't know
Integrated GIS	Don't know	Don't Know	Neither High nor Low	Don't know
Shared Gazetteer	Up to date	Minor Change	Neither High nor Low	Don't know
Video Surveillance	Don't use it	Don't Know	Low	Don't know

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

In-vehicle cameras (cameras facing outwards)	Up to date	Don't Know	Neither High nor Low	Don't know
Person mounted cameras	Don't use it	Significant Change	Neither High nor Low	Don't know
Aerial surveillance (e.g. drones)	Don't use it	Significant Change	High	Don't know

Securing Fire Service Systems	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Encryption	Up to date	Minor Change	Neither High nor Low	Don't know
Data Governance	Up to date	Minor Change	Neither High nor Low	Don't know
Identification and Access Management (e.g. Single-Sign on)	Up to date	Minor Change	Neither High nor Low	Don't know
PSN Compliance	Up to date	Minor Change	Neither High nor Low	Significant change

Analysis and Mapping	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated Management of Business Processes (e.g. Enterprise resources planning tools such as SAP, Oracle, Microsoft Dynamics)	Old but serviceable	Minor Change	Neither High nor Low	No change

The Emergency Services Network and ICT in Fire and Rescue Services in England and Wales.

Remote recording of data (Home Fire Safety Checks, Fire Hydrant Data)	Old but serviceable	Significant Change	High	No change
Tools to extract and clean data	Up to date	Minor Change	Neither High nor Low	No change
Tools to visualise data	Up to date	Minor Change	Neither High nor Low	No change
Analytic software (displaying information on mobile device)	Old but serviceable	Minor Change	Neither High nor Low	Significant change
Predictive modelling	Don't use it	Minor Change	High	No change
Use of 3rd party analytic services	Old but serviceable	Minor Change	Neither High nor Low	No change
Investigative software - fire	Don't know	Don't Know	Very High	Don't know
Collection and analysis of data from private data sources (e.g. insurance data)	Don't know	Don't Know	Neither High nor Low	No change

The Use of Social Media: Communication with the public	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Twitter	Very often	Don't Know	High
Facebook	Very often	Don't Know	High
Youtube	Occasionally	Don't Know	Neither High nor Low
Flickr	Never	Don't Know	Very Low
Instagram	Never	Don't Know	Very Low
Snapchat	Never	Don't Know	Very Low

The Use of Social Media: Communication within the organisation	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Enterprise networking sites (e.g. Yammer)	Occasionally	Don't Know	Low

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Instant messaging (e.g. Chat, Whatsapp)	Very often	Significant Change	High
File Sharing (e.g. Dropbox)	Occasionally	Don't Know	Neither High nor Low
Wiki	Never	Don't Know	Very Low
Collaborative Document Sharing (e.g. Google Docs)	Very often	Significant Change	High
Micro-blogging (e.g. Twitter)	Don't Know	Don't Know	Very Low
Video conferencing (e.g. Skype, Facetime)	Occasionally	Significant Change	High
Email	Very often	Minor Change	High

Delivery of systems: IT Outsourcing	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Business Process Outsourcing (Technology and Process)	Neither High nor Low	Neither High nor Low
Outsourcing (services and support)	Neither High nor Low	Neither High nor Low
Outsourcing (Infrastructure)	Neither High nor Low	Neither High nor Low
Outsourcing (Temporary on project by project basis)	Neither High nor Low	Neither High nor Low
Outsourcing (Total IT)	Neither High nor Low	Neither High nor Low
Insourcing	Neither High nor Low	Neither High nor Low

Delivery of systems: Cloud	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level

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Cloud (Software)	High	High
Cloud (Platform)	High	High
Cloud (Infrastructure)	High	High

Development of Systems	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
In-house systems development	High	High
Collaboration in systems development with other fire services	Neither High nor Low	High
Collaboration with other public sector bodies	Neither High nor Low	High

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Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
GPS for locating firefighters on the fire ground (Location Services)	Don't use it	No Change	Low	No change
GPS for locating firefighters on call (Location Services)	Don't use it	No Change	Low	No change
Automatic vehicle location (for management of resources)	Up to date	Significant Change	Very High	Minor change
Automatic vehicle location (Predictive analytics)	Don't use it	Minor Change	Very High	Significant change
Quality monitoring of call handling	Up to date	Significant Change	Neither High nor Low	Significant change
Workforce management systems (Control)	Up to date	Significant Change	Neither High nor Low	Transform
Workforce management systems (Corporate)	Up to date	Significant Change	Neither High nor Low	Transform
Shared Control Centre (with more than one FRS or with other emergency services)	Up to date	Significant Change	Low	Minor change
Exchange of Information across Emergency Services (e.g. MAIT)	Don't use it	Significant Change	High	Significant change
Shared Control Systems (e.g. shared data centres driving multiple Emergency Service Control Centres)	Don't use it	Minor Change	High	Significant change
Virtual call centres (e.g. call centres with a cloud based infrastructure)	Don't use it	Don't Know	Very Low	No change
Automatic call distribution	Up to date		High	

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Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Call Line Identification (e.g. EISEC)	Don't know	Don't Know	Neither High nor Low	Significant change
Advanced Mobile Location (AML- Caller location information service for smartphones)	Don't use it	Transform	High	Transform
Service Access Node H (SANH), or similar	Up to date	Significant Change	High	Significant change
Computer aided dispatch	Don't use it	Significant Change	High	Transform

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Data Storage	Old but serviceable	Significant Change	Neither High nor Low	Minor change
Data Capture (e.g Video, pictures and updating critical systems)	Old but serviceable	Significant Change	Neither High nor Low	Minor change
Data Integration	Old but serviceable	Significant Change	Neither High nor Low	Minor change
Mobile Office (e.g Laptop, mobile device)	Up to date	Significant Change	Neither High nor Low	Minor change
Internal Customer Service and help desk	Up to date	Minor Change	Low	No change
Remote access to service systems (e.g. intelligence reports, briefings)	Up to date	Minor Change	High	Minor change
Laptop with access to personal information management systems & data processing	Up to date	Minor Change	High	Minor change

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In-Vehicle Mobile Data Terminal	Up to date	Significant Change	Very High	Significant change
Smartphone/PDA - Access to fire service systems	Old but serviceable	Significant Change	High	Significant change
Augmented Reality (heads up displays)	Don't use it	No Change	Very Low	No change

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Incident Messaging	Old but serviceable	Minor Change	Very High	Significant change
Status Messaging	Up to date	Significant Change	Very High	Significant change
Command Support Unit	Old but serviceable	Minor Change	Very High	Minor change
Communication with partners through voice (e.g. Police, Public Health)	Up to date	Significant Change	Very High	Significant change
Communication with partners through data (e.g. Police, Public Health)	Up to date	Significant Change	Very High	Significant change
Partnering with automatic systems failover	Old but serviceable	Significant Change	Very High	Significant change
IP Communications (text, audio, video) for emergency calls from citizens	Don't use it	Significant Change	Very High	Significant change
Routing of IP Communications (text, audio, video) to first responders	Don't use it	Significant Change	Very High	Significant change
Routing of IP Communications (text, audio, video) from first	Don't use it	Significant Change	Very High	Significant change

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responders to control or peer to peer				
Location information visualisation	Don't use it	Significant Change	Very High	Significant change
Sensor data transmission (e.g. Breathing Apparatus telemetry)	Don't use it	Significant Change	Very Low	Significant change

Station End Equipment	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Printers	Old but serviceable	Minor Change	Very High	Minor change
Visual Display Unit (VDU)	Up to date	Significant Change	Very High	Significant change

Records Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated databases with partners	Old but serviceable	Significant Change	High	Minor change
Broadband wireless access in vehicles (e.g. LAN, MDT, mobile)	Up to date	Significant Change	Neither High nor Low	Minor change
Image management software (e.g. video, CCTV, pictures, person mounted cameras)	Don't use it	Minor Change	Neither High nor Low	No change
Integrated GIS	Don't know	Don't Know	High	Significant change
Shared Gazetteer	Old but serviceable	Significant Change	High	Significant change

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Video Surveillance	Don't know	Don't Know	Neither High nor Low	Minor change
In-vehicle cameras (cameras facing outwards)	Up to date	Minor Change	High	Significant change
Person mounted cameras	Up to date	Minor Change	High	Minor change
Aerial surveillance (e.g. drones)	Up to date	Minor Change	High	Minor change

Securing Fire Service Systems	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Encryption	Up to date	Significant Change	High	Significant change
Data Governance	Up to date	Significant Change	High	Significant change
Identification and Access Management (e.g. Single-Sign on)	Up to date	Significant Change	High	Significant change
PSN Compliance	Up to date	Significant Change	High	Significant change

Analysis and Mapping	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated Management of Business Processes (e.g. Enterprise resources planning tools such as SAP, Oracle, Microsoft Dynamics)	Old but serviceable	Significant Change	High	Significant change

Remote recording of data (Home Fire Safety Checks, Fire Hydrant Data)	Old but serviceable	Transform	Very High	Significant change
Tools to extract and clean data	Old but serviceable	Transform	Very High	Significant change
Tools to visualise data	Old but serviceable	Transform	Very High	Significant change
Analytic software (displaying information on mobile device)	Old but serviceable	Transform	High	Significant change
Predictive modelling	Old but serviceable	Transform	High	Minor change
Use of 3rd party analytic services	Old but serviceable	Transform	High	Significant change
Investigative software - fire	Old but serviceable	Transform	Neither High nor Low	Minor change
Collection and analysis of data from private data sources (e.g. insurance data)	Old but serviceable	Transform	Neither High nor Low	Significant change

The Use of Social Media: Communication with the public	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Twitter	Very often	Don't Know	High
Facebook	Often	Don't Know	High
Youtube	Very often	Don't Know	High
Flickr	Occasionally	Don't Know	Low
Instagram	Never	Don't Know	Low
Snapchat	Never	Don't Know	Low

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The Use of Social Media: Communication within the organisation	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Enterprise networking sites (e.g. Yammer)	Don't Know	Don't Know	High
Instant messaging (e.g. Chat, Whatsapp)	Very often	Don't Know	High
File Sharing (e.g. Dropbox)	Occasionally	Minor Change	Neither High nor Low
Wiki	Don't Know	Don't Know	Very Low
Collaborative Document Sharing (e.g. Google Docs)	Never	No Change	Very Low
Micro-blogging (e.g. Twitter)	Never	No Change	Very Low
Video conferencing (e.g. Skype, Facetime)	Occasionally	Minor Change	Neither High nor Low
Email	Don't Know	Minor Change	Very High

Delivery of systems: IT Outsourcing	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Business Process Outsourcing (Technology and Process)	Neither High nor Low	Neither High nor Low
Outsourcing (services and support)	Neither High nor Low	Neither High nor Low
Outsourcing (Infrastructure)	Neither High nor Low	Neither High nor Low
Outsourcing (Temporary on project by project basis)	Neither High nor Low	Neither High nor Low
Outsourcing (Total IT)	Neither High nor Low	Neither High nor Low

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Insourcing	Neither High nor Low	Neither High nor Low

Delivery of systems: Cloud	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Cloud (Software)	Low	High
Cloud (Platform)	Low	High
Cloud (Infrastructure)	Low	High

Development of Systems	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
In-house systems development	High	Very High
Collaboration in systems development with other fire services	Very High	Very High
Collaboration with other public sector bodies	Neither High nor Low	Low

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Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
GPS for locating firefighters on the fire ground (Location Services)	Don't use it	Minor Change	Low	No change
GPS for locating firefighters on call (Location Services)	Don't use it	No Change	Low	No change
Automatic vehicle location (for management of resources)	Up to date	Minor Change	High	No change
Automatic vehicle location (Predictive analytics)	Don't use it	No Change	Very Low	No change
Quality monitoring of call handling	Old but serviceable	Minor Change	High	Significant change
Workforce management systems (Control)	Up to date	Significant Change	High	Significant change
Workforce management systems (Corporate)	Up to date	Significant Change	Low	Significant change
Shared Control Centre (with more than one FRS or with other emergency services)	Don't use it	No Change	Very Low	No change
Exchange of Information across Emergency Services (e.g. MAIT)	Don't use it	Minor Change	Low	Minor change
Shared Control Systems (e.g. shared data centres driving multiple Emergency Service Control Centres)	Don't use it	No Change	Low	Minor change
Virtual call centres (e.g. call centres with a cloud based infrastructure)	Don't use it	Minor Change	Low	Minor change
Automatic call distribution	Up to date		High	

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Control Infrastructure	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Call Line Identification (e.g. EISEC)	Up to date	No Change	High	No change
Advanced Mobile Location (AML- Caller location information service for smartphones)	Don't use it	Significant Change	High	Significant change
Service Access Node H (SANH), or similar	Up to date	Transform	Very High	Transform
Computer aided dispatch	Up to date	Minor Change	High	Minor change

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Data Storage	Up to date	Significant Change	High	Significant change
Data Capture (e.g Video, pictures and updating critical systems)	Old but serviceable	Transform	Low	Significant change
Data Integration	Old but serviceable	Minor Change	Low	Minor change
Mobile Office (e.g Laptop, mobile device)	Up to date	Minor Change	Very Low	No change
Internal Customer Service and help desk	Up to date	Minor Change	Very Low	No change
Remote access to service systems (e.g. intelligence reports, briefings)	Up to date	Minor Change	Very Low	Minor change
Laptop with access to personal information management systems & data processing	Up to date	Minor Change	Very Low	No change

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In-Vehicle Mobile Data Terminal	Old but serviceable	Significant Change	High	Significant change
Smartphone/PDA - Access to fire service systems	Old but serviceable	Significant Change	High	Significant change
Augmented Reality (heads up displays)	Don't use it	Don't Know	Neither High nor Low	Don't know

Fire ground Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Incident Messaging	Up to date	Minor Change	Low	Significant change
Status Messaging	Up to date	Minor Change	Low	Minor change
Command Support Unit	Up to date	Minor Change	Low	Minor change
Communication with partners through voice (e.g. Police, Public Health)	Up to date	Minor Change	Low	Minor change
Communication with partners through data (e.g. Police, Public Health)	Don't use it	Significant Change	Low	Significant change
Partnering with automatic systems failover	Up to date	Minor Change	Very Low	Minor change
IP Communications (text, audio, video) for emergency calls from citizens	Up to date	Significant Change	Low	Significant change
Routing of IP Communications (text, audio, video) to first responders	Up to date	Significant Change	Very Low	Minor change
Routing of IP Communications (text, audio, video) from first responders to control or peer to peer	Up to date	Significant Change	Very Low	Minor change

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| Location information visualisation | Old but serviceable | Significant Change | Very Low | Minor change |
| Sensor data transmission (e.g. Breathing Apparatus telemetry) | Don't know | Don't Know | Neither High nor Low | Don't know |

Station End Equipment	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Printers	Up to date	Minor Change	Low	No change
Visual Display Unit (VDU)	Old but serviceable	Minor Change	Very Low	No change

Records Management	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated databases with partners	Don't use it	Minor Change	Very Low	No change
Broadband wireless access in vehicles (e.g. LAN, MDT, mobile)	Don't use it	Minor Change	Very Low	Minor change
Image management software (e.g. video, CCTV, pictures, person mounted cameras)	Old but serviceable	Minor Change	Very Low	No change
Integrated GIS	Up to date	No Change	Low	No change
Shared Gazetteer	Up to date	No Change	Low	No change
Video Surveillance	Old but serviceable	Minor Change	Very Low	Minor change
In-vehicle cameras (cameras facing outwards)	Old but serviceable	Significant Change	Low	No change

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Person mounted cameras	Don't use it	Significant Change	Very Low	No change
Aerial surveillance (e.g. drones)	Up to date	Significant Change	Low	Minor change

Securing Fire Service Systems	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Encryption	Up to date	Minor Change	High	Significant change
Data Governance	Up to date	Significant Change	High	Minor change
Identification and Access Management (e.g. Single-Sign on)	Old but serviceable	Transform	High	Minor change
PSN Compliance	Don't use it	Transform	High	Transform

Analysis and Mapping	Condition of Technology	Expected Change 3-5 Year Period	Priority Level	Expected Changes due to ESN
Integrated Management of Business Processes (e.g. Enterprise resources planning tools such as SAP, Oracle, Microsoft Dynamics)	Old but serviceable	Transform	High	No change
Remote recording of data (Home Fire Safety Checks, Fire Hydrant Data)	Up to date	Minor Change	High	Minor change
Tools to extract and clean data	Don't know	No Change	Neither High nor Low	Don't know

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Tools to visualise data	Old but serviceable	Minor Change	High	Minor change
Analytic software (displaying information on mobile device)	Old but serviceable	Significant Change	Very Low	Minor change
Predictive modelling	Don't know	Don't Know	Low	Minor change
Use of 3rd party analytic services	Don't know	Don't Know	Neither High nor Low	Don't know
Investigative software - fire	Don't know	Don't Know	Neither High nor Low	Don't know
Collection and analysis of data from private data sources (e.g. insurance data)	Don't know	Don't Know	Neither High nor Low	Don't know

The Use of Social Media: Communication with the public	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Twitter	Very often	Significant Change	High
Facebook	Very often	Significant Change	High
Youtube	Very often	Significant Change	Low
Flickr	Never	Significant Change	Very Low
Instagram	Very often	Significant Change	High
Snapchat	Never	Significant Change	Very Low

The Use of Social Media: Communication within the organisation	How often do you use the following social media platforms?	Expected Change 3-5 Year Period	Priority Level
Enterprise networking sites (e.g. Yammer)	Often	Minor Change	Low
Instant messaging (e.g. Chat, Whatsapp)	Very often	Significant Change	Low
File Sharing (e.g. Dropbox)	Occasionally	Minor Change	Low
Wiki	Never	No Change	Very Low

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Collaborative Document Sharing (e.g. Google Docs)	Never	No Change	Very Low
Micro-blogging (e.g. Twitter)	Never	Don't Know	Very Low
Video conferencing (e.g. Skype, Facetime)	Very often	Transform	High
Email	Very often	Minor Change	High

Delivery of systems: IT Outsourcing	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Business Process Outsourcing (Technology and Process)	Very low	Very low
Outsourcing (services and support)	Very low	Very low
Outsourcing (Infrastructure)	Very low	Very low
Outsourcing (Temporary on project by project basis)	Very low	Very low
Outsourcing (Total IT)	Very low	Very low
Insourcing	High	High

Delivery of systems: Cloud	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
Cloud (Software)	Very low	High
Cloud (Platform)	Very low	High
Cloud (Infrastructure)	Very low	High

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Development of Systems	To what extent do you rely upon the following approaches to deliver information systems within your organisation?	Priority Level
In-house systems development	High	High
Collaboration in systems development with other fire services	Low	Low
Collaboration with other public sector bodies	Low	Low

10.   Appendix 4: Comparative Data Fire and Rescue Service & Police

Control Infrastructure	Condition	Expected Change	Priority Level	Expected Changes due to ESN	Condition (Police Survey) Up-to-date	Expected Change (Police Survey) Change/Transform	Priority (Police Survey) High/Very High
GPS for locating firefighters on the fire ground (Location Services)	5%	6%	18%	2%	67%	70%	61%
Automatic vehicle location (for	92%	15%	64%	26%	49%	58%	56%

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management of resources)							
Quality monitoring of call handling	74%	21%	57%	10%	37%	56%	48%
Workforce management systems (Control)	59%	44%	69%	13%	53%	50%	57%
Virtual call centres (e.g. call centres with a cloud-based infrastructure)	8%	46%	23%	28%	22%	68%	49%

Incident Ground	Condition	Expected Change	Priority Level	Expected Changes due to ESN	Condition (Police Survey) Up-to-date	Expected Change (Police Survey) Change/Transform	Priority (Police Survey) High/Very High
Data Storage	67%	64%	54%	39%	87%	90%	44%
Data Capture (e.g Video, pictures and updating critical systems)	36%	80%	57%	62%	66%	93%	60%
Data Integration	56%	69%	67%	41%	55%	95%	71%
Mobile Office (e.g Laptop, mobile device)	87%	54%	46%	36%	71%	67%	67%
Internal Customer Service and help desk	59%	33%	31%	21%	54%	91%	26%
Remote access to service systems (e.g. intelligence reports, briefings)	64%	56%	54%	36%	71%	100%	81%
Laptop with access to personal information management systems & data processing	80%	39%	44%	23%	79%	30%	51%

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In-Vehicle Mobile Data Terminal	59%	74%	85%	62%	23%	77%	59%
Smartphone/PDA Access to service systems	67%	69%	67%	54%	59%	100%	93%

Securing Systems	Condition	Expected Change	Priority Level	Expected Changes due to ESN	Condition (Police Survey) Up-to-date	Expected Change (Police Survey) Change/Transform	Priority (Police Survey) High/Very High
Encryption	87%	53%	87%	26%	93%	5%	50%
Data Governance	83%	53%	83%	26%	73%	19%	60%
Identification and Access Management (e.g. Single-Sign on)	70%	53%	70%	22%	70%	5%	45%

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The Use of Social Media: Communication with the public	Frequency of Social Media Use Often/Very Often	Expected Change Significant Change/ Transform	Priority High/Very High	Frequency of Social Media Use (Police Survey) Often/Very Often	Expected Change (Police Survey) Change/Transform	Priority (Police Survey) High/Very High
Twitter	83%	40%	65%	95%	63%	64%
Facebook	78%	40%	57%	95%	63%	61%
Youtube	43%	44%	26%	58%	51%	42%
Flickr	9%	35%	9%	21%	48%	17%
Instagram	35%	44%	26%	36%	55%	37%
Snapchat	4%	35%	39%	8%	58%	22%

The Use of Social Media: Communication within the organisation	Frequency of Social Media Use Often/Very Often	Expected Change Significant Change/ Transform	Priority High/Very High	Frequency of Social Media Use (Police Survey) Often/Very Often	Expected Change (Police Survey) Change/Transform	Priority (Police Survey) High/Very High
Enterprise networking sites (e.g. Yammer)	39%	56%	26%	22%	61%	33%
Instant messaging (e.g. Chat, Whatsapp)	78%	65%	35%	64%	66%	41%

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File Sharing (e.g. Dropbox)	35%	52%	39%	12%	47%	24%
Wiki	13%	26%	35%	18%	34%	10%
Collaborative Document Sharing (e.g. Google Docs)	44%	78%	39%	33%	59%	29%
Micro-blogging (e.g. Twitter)	26%	39%	13%	24%	35%	26%
Video conferencing (e.g. Skype, Facetime)	48%	22%	48%	73%	73%	70%
Email	92%	39%	52%	98%	28%	46%

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