



DORSET & WILTSHIRE
FIRE AND RESCUE

Dorset & Wiltshire

Fire and Rescue

Service

ICT Strategy

2019-2024

Document Originator	Head of ICT
Contact Details	fiona.kiernan-tatem@dwfire.org.uk
Version/Date	0.4

Version	Date of Change	Changed By (Initials)	Brief Description
0.1	14/12/18	CD	Document Started
0.2	Sept 2019	F K-T	Updated based on audit and current business needs
0.3	Dec 2019	F K-T	Final updates prior to submission
0.4	Jan 2019	F K-T	Sign off

UPDATED Jan 2020: Not Protectively Marked

Dorset & Wiltshire Fire and Rescue Service ICT Strategy 2019-24

The Community Safety Plan sets out a demanding agenda to improve the way the Service discharges its duty to improve community safety, and to move towards better and more flexible ways of working. Fundamental to modernising the Service is the need to ensure that we maximise the benefits of information and communications technology. The key outcomes that this ICT strategy seeks to achieve are:

- **Digital by default.**

Like most organisations, an increasing number of our internal and external services are available online. Where it is pragmatic and cost effective to do so, we wish to continue this trend and be digital by default. This will improve customer experience, support our smarter working programme and improve the administrative efficiency of the Service, directly contributing to the delivery of our Community Safety Plan and particularly our key priority around *Making every penny count*.

- **Improved information management and governance.**

Good data and information underpin effective strategic and operational decision making and joined-up service delivery. Data needs to be well maintained so it is accurate, up to date and accessible. It needs to flow through the organisation in a controlled and managed way to support good service delivery. Our increasingly automated business processes routinely collect information to support continuous process improvement and to help us manage our services more effectively. The disciplines of information management and information governance are being increasingly embedded in the organisation through procedures, training and good system design. Intelligent use of our data and search mechanisms has made it easier to find the information we are looking for in our electronic filing systems. The investments set out in this strategy support our wider approach to a secure and resilient information governance and management

- **Alignment of ICT to Service needs**

By ICT working hand in hand with managers, through change and transformation projects, business processes have been optimised to support continual improvement. We wish to continue this trend by further developing a shared understanding of new and existing business requirements and confidence in the potential for technology to transform practice. We wish to further strengthen and clarify our processes to ensure that ICT and other resources are directed towards projects that will deliver the greatest return on investment.

- **Strengthening our approach to working in partnership.**

We increasingly work with partner organisations, using common business processes and common systems. We share skills, knowledge and resources to deliver improved, joined up services at lower cost. Our ICT infrastructure and services directly support this, and we wish would continue and broaden this trend through the investments outlined in this strategy.

This strategy underpins the Government ICT Strategy, and supports both the Networked Fire Control Services Project (NFCSP) and the Emergency Services Mobile Communication Project (ESMCP)

The strategy is organised into four Key Themes:

Smarter Working
Information Management & Security
ICT Resilience
Technology Management

We will have an ICT infrastructure that:

Is fit for purpose, actively aligned and supporting the Community Safety Plan.

- Is reliable, stable and secure and compliant with security standards set out in ICT and Information Management procedures.
- Supports secure remote access and the smarter ways of working agenda.
- Is quick to recover, providing high levels of business continuity and resilience.
- Is affordable and offers value for money.

We will deliver an ICT Service that:

- Is well thought of and delivers high levels of customer care.
- Provides clear and consistent advice that is readily understood.
- Supports customers to understand technical possibilities and develops appropriate and affordable technical solutions.
- Is well planned and performance managed.
- Benchmarks itself and provides high levels of value for money.

Investments in our Information systems must meet the following rules.

- **Value for money.** All new investments shall reflect all software and hardware costs; reflect whole life costs and shall not lead to any unplanned revenue burden for the Service as a whole.
- **Maximising what we already have.** All future investments in ICT infrastructure and software systems shall maximise the effectiveness and efficiency of the existing systems, before turning to alternatives.
- **Business led.** All significant investments should support the Community Safety Plan and its associated strategies. The business case should clearly set out the current and future position; the benefits to be realised and the timetable for their delivery. Investments will be accompanied by a short or full business case presented by the lead officer and scrutinised by the Head of ICT, Head of Finance and approved by SLT. This will include an assessment of business continuity arrangements of any systems or providers.
- **Reducing administration.** All new or revised software systems shall reduce duplication of data entry and storage. They shall be compliant with the Information Strategy and support the desire to have as few data hubs as possible.
- **Interoperability.** All new or significantly revised software should be compliant with the Information Strategy and not inhibit future shared service provision. Any new commercial software will be purchased with the understanding that the external provider is willing to allow data to be exchanged between systems directly or through middleware and will support this data exchange.
- **Data security.** All future investments in hardware or software systems shall meet data security standards to ensure that our ICT infrastructure complies with our security standards as set out in ICT and Information Management procedures.

Smarter Working

Smarter working is a catch-all term that covers home, flexible and mobile working. It involves working at any time, in any place and using technology to find new ways to do things. With a much larger geographical area, we need to think differently about the way that we work. We need to ensure that Service users can access those systems that they require to fulfil their role, from whatever location they need to work from, at any time that they need to. Office 365 implementation and development is part of this theme. It includes the development of the Service WAN to support technologies such as video conferencing and remote working.

Where we are now

A Fully Managed MPLS network, with a mix of fibre connections and copper-based ADSL connections.

Direct remote access available for all users with Service Devices.

Guest WiFi access available at all Service locations.

1Gb bandwidth to the Internet

Implementation of VoIP at all Service locations.

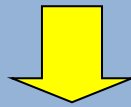
WiFi delivered to all Service locations, but no guaranteed full-site coverage.

All service users with access to Cloud Based calendars and mail (O365)

All service users with access to cloud-based file storage and sharing (O365)

Access to video conferencing at all Service locations with sufficient bandwidth

Over Five Years



Where we want to be

All Service locations to be connected by either direct fibre or fibre to the cabinet

Full Wifi coverage at all service locations.

Cloud based management of WiFi systems

All Service locations to have sufficient bandwidth to support video delivery as a minimum.

Secure login to our systems that is easier for the end user to manage.

Single Sign-On to as many systems as possible.

Wide use of the systems and services available from Office 365

UPDATE

Smarter Working

Overview – The Service has adopted the Pulse Secure Gateway as it's Remote Access option. To ensure the requirements of flexible working are met in the future, this needs to be reviewed within the contract period.

Sponsoring Client –ICT

Objectives:

- Review existing Remote Access/VPN provision.
- Replace or renew contracts as required.

What does the Service gain from this investment?

Locally	<ul style="list-style-type: none"> • An opportunity to review device functionality and change/upgrade if there are better options. • A means of enabling remote connectivity for all Service Devices and Service Users. • Improved Service efficiency through the support of the smarter working agenda.
Collaboratively	<ul style="list-style-type: none"> • None at this time, however shared ways of working and joint approach to knowledge and learning from others will continually be reviewed
Nationally	<ul style="list-style-type: none"> • An assurance that we can continue to support any National Initiatives around remote working

Actions	2019/20	2020/21	2021/22	2022/23	2023/24
Review alternative options	█				
Undertake procurement process if required	█				
Implement replacement if required	█				
Costs					
Capital – in base	£30,000	£0	£0	£0	£0
Capital - new					
Revenue – in base	£0	£0	£0	£0	£0
Revenue - new					

Assumptions

- Remote Access will be required to support the smarter ways of working agenda.
- Security requirements will require a similar connectivity method.
- There will be advances and changes in technologies that will offer benefits.

Risks carried if this work does not go forward

- Flexible, remote working will not be supported by the best technologies.
- Future security accreditations (i.e. PSN/ESN) may not be possible.

Smarter Working

Overview – The current 1Gbg bandwidth provision is adequate at this time. However, a move to cloud services, or greater use of web-based systems and video conferencing will have an impact upon this. As the Internet connectivity is not provided by our WAN provider, this can be reviewed more frequently and upgraded as required.

Sponsoring Client – ICT

Objectives:

- Monitor bandwidth usage on the internet line(s).
- Provide costed options to resolve bandwidth issues.
- Upgrade as required.

What does the Service gain from this investment?

Locally	<ul style="list-style-type: none"> • Improved user experience when using cloud-based services. • Continued support for the smarter working agenda.
Collaboratively	<ul style="list-style-type: none"> • Continued support for future partnership working.
Nationally	<ul style="list-style-type: none"> • Aligned to modern technologies which will support increased ability to share information longer term across services.

Actions	2019/20	2020/21	2021/22	2022/23	2023/24
Review bandwidth usage	█	█	█	█	█
Provide costed options	█	█	█	█	█
Procure if required	█	█	█	█	█
Costs					
Capital – in base	£0	£0	£0	£0	£0
Capital - new					
Revenue – in base	£0	£0	£0	£0	£0
Revenue - new					

Assumptions

- There will be an uptake of video services.
- Flexible working will continue.
- More services (Cloud Based Services) will be delivered via the internet.
- Internet connectivity speeds will increase, and costs/Mb will fall.
- The current provision is 1Gb into the main PoP at Dorchester with a back-up of 200Mb into Potterne. This is currently seen as sufficient and resilient.

Risks carried if this work does not go forward

- Access to Cloud based services will be slow and customer dissatisfaction with these systems will increase.
- Remote working/flexible working will become compromised and ineffective.
- Video services will be ineffective and under used, travelling costs will remain high and staff will be less productive.

Smarter Working

Overview – With a move of Active Directory to Azure (O365), we will be able to support API's to allow single sign-on to any application (AD Proxy), without support from the third-party applications. We will move to single sign-on where possible, simplifying access to our applications, unifying the usernames and passwords used and improving security.

Sponsoring Client – ICT

Objectives:

- Single Sign-on to as many applications as possible.
- A reduction in usernames and passwords, increasing security.
- Seamless technology driving a greater usage of systems.

What does the Service gain from this investment?

Locally	<ul style="list-style-type: none"> • More efficient working • Increased security • Improved accessibility
Collaboratively	<ul style="list-style-type: none"> • By improving access to ICT, existing systems become easier to use.
Nationally	

Actions	2019/20	2020/21	2021/22	2022/23	2023/24
Integrate system log-ons					
Costs					
Capital – in base	£0	£0	£0	£0	£0
Capital - new					
Revenue – in base	£0	£0	£0	£0	£0
Revenue - new					

Assumptions

- The Service wants to increasingly utilise technology to achieve smarter working
- Multiple Usernames & Passwords for multiple systems continues to be a barrier to access ICT

Risks carried if this work does not go forward

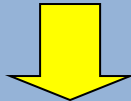
Information Management & Security

Information Management deals with the management of the Service's information – developing means of storing and accessing the information and ways of sharing that information within the Service as well as with external partners. This includes maintaining the security of the Service's Information.

Where we are now

Regularly reviewed Software Development Plan
Mobile Device Management in Place
A log monitoring system in place that supports Information Security.
Two-factor authentication in place for non-managed devices
Document Collaboration system in use in an ad-hoc manner.
On-premise anti-spam and anti-virus for mail systems.
Manual patch management processes.
End point protection in place.
Maintaining levels of security that meet the needs of relevant codes of connection.
Annual health check undertaken, and action plan developed.
High levels of Information Security in place.

Over Five Years



Where we want to be

Assurance that all 3rd party systems meet our integration requirements.
Log monitoring used to support Service Improvements.
Document collaboration the norm – sharing, not giving away.
Making full use of the security options within Office 365.
Replacement of end-point protection with Windows Defender
Development of automated patching procedures.
Implementation of Office 365 mail protection

UPDATED

Information Management & Security

Overview - In House Software Development and Support

Sponsoring Client – All departments

Objectives:

- Develop fit-for-purpose software systems that meet the business needs of the Service.
- Assist in developing departmental specifications for both internal and external 3rd party systems.
- Assist in departmental evaluations of third-party systems.
- Ensure integration, where possible, between in-house systems and 3rd party systems.

What does the Service gain from this investment?

Locally	<ul style="list-style-type: none"> • Ensuring that business as usual can continue. • Ensuring that legislative and statutory obligations are met. • Ensuring that critical information is available. • Ensuring that systems represent value for money.
Collaboratively	<ul style="list-style-type: none"> • Joint approach to sharing of information, single version of the truth • Potential reduction in costs through joint development ventures and/or sharing learning from other service developments
Nationally	<ul style="list-style-type: none"> • Alignment and consistency in the way we manage our data and keep it secure

Actions	2019/20	2020/21	2021/22	2022/23	2023/24
Produce the Software Development Plan.					
Develop and deliver in-house systems					
Costs					
Capital – in base	£0	£0	£0	£0	£0
Capital - new					
Revenue – in base	£0	£0	£0	£0	£0
Revenue - new					

Assumptions

- Departmental managers specify and resource departmental improvements.
- Departments make resources available to develop specifications, test applications, and train end-users.
- Departments involve the Developers in the evaluation of 3rd party systems.
- Software developers are able to maintain competence to integrate systems.

Risks carried if this work does not go forward

- Software projects will be under-resourced.
- Systems may be procured that do not interface with other critical systems.
- The Service may not achieve value for money.
- Efficient working will not occur, affecting morale and RDS retention
- ICT skills for Notes limited to 2 individuals – market to replace does not exist

Information Management & Security

Overview – The Service has in place a Mobile Device Management (MDM) system to manage the connection of mobile devices to the Service network and to ensure compliance with security requirements. The move to Office 365 provides other options, and the approaching date of contract renewal is an opportunity to re-evaluate the current product.

Sponsoring Client –ICT

Objectives:

- Evaluate and compare the current MDM provision against Office 365, Airwatch purchase to meet ESN requirements.
- Replace or renew contracts as required based on best sustainable option that meets overall business requirements.

What does the Service gain from this investment?

Locally	<ul style="list-style-type: none"> • Improved resilience and security. • An opportunity to benefit from new technologies and services.
Collaboratively	<ul style="list-style-type: none"> • ESN support for ways of working
Nationally	<ul style="list-style-type: none"> • Assurance that we will be able to meet the requirements of the ESN/PSN code of connection.

Actions	2018/19	2019/20	2020/21	2021/22	2022/23
Review alternative options	■		■		
Undertake procurement process	■		■		
Implement replacement if required	■		■		
Costs					
Capital – in base	£50,000	£0	£0	£0	£0
Capital - new					
Revenue – in base	£0	£0	£0	£0	£0
Revenue - new					

Assumptions

- Mobile devices will be in use which are not managed by the ESN provision.
- There will still be a requirement for MDM.
- PSN/ESN accreditation will require some form of MDM.

Risks carried if this work does not go forward

- We will be unable to securely connect mobile devices to our network.
- We will not be taking advantage of latest technologies and practices.
- We may fail PSN/ESN accreditation.

Information Management & Security

Overview – A Log Monitoring Solution is in place as part of the Service Security requirements. This is an opportune time to review the system in place and renew or replace as required.

Sponsoring Client – Cyber Security Manager/ICT Joint project

Objectives:

- Review current solution/s.
- Evaluate options.
- Procure/Renew as required.
- Implement solution as required.

What does the Service gain from this investment?

Locally	<ul style="list-style-type: none"> • Improves resilience and enables Availability and Capacity Management. • Improves and supports internal Security Management.
Collaboratively	<ul style="list-style-type: none"> • Assurance that we meet the security requirements of partnerships such as NFSP.
Nationally	<ul style="list-style-type: none"> • Assurance that we can meet the code of connection for PSN/ESN.

Actions	2019/20	2020/21	2021/22	2022/23	2023/24
Review Current Solution					
Evaluate options					
Procure/renew					
Implement Solution if required					
Costs					
Capital – in base	£0	£20,000	£0	£0	£0
Capital - new					
Revenue – in base	£0	£0	£0	£0	£0
Revenue - new					

Assumptions

- We wish to maintain best-practice ICT security arrangements.
- Technology and security changes require an update to the existing solution.

Risks carried if this work does not go forward

- Failure to meet PSN requirements.
- Failure to meet ESN accreditation requirements.
- Unable to deliver Availability and Capacity Management.
- Remote Access by unmanaged devices may not be possible.

Information Management & Security

Overview – Replacement of internet Firewalls – existing firewalls will go end of life 2021. Current usage will be evaluated, and suitable replacements procured and installed.

Sponsoring Client – ICT

Objectives:

- Identify requirements.
- Procure new Firewalls.

What does the Service gain from this investment?

Locally	<ul style="list-style-type: none"> • An assurance that our firewalls are fit-for-purpose and support our Information Management Strategy and our Security Policies.
Collaboratively	<ul style="list-style-type: none"> • An assurance to partners that our firewalls are fit-for-purpose and will support collaborative working.
Nationally	<ul style="list-style-type: none"> • An assurance that we can meet the requirements of the ESN code of Connection. • An assurance that we can move with the current Government intention to replace the PSN with connections through the Internet.

Actions	2019/20	2020/21	2021/22	2022/23	2023/24
Identify requirements					
Procure new Firewalls					
Costs					
Capital – in base	£0	£20,000	£0	£0	£0
Capital - new		£10,000			
Revenue – in base	£0	£0	£0	£0	£0
Revenue - new					

Assumptions

- Secure internet connectivity is required.
- Resilient connections are required.
- The new direction or partner connectivity and delivery of services through the Internet continues.

Risks carried if this work does not go forward

- Inability to connect to the internet.
- Loss of connectivity to cloud-based services.
- Significant business disruption and loss of business continuity

Information Management & Security

Overview – Each year, password complexity is growing, while hacker methods of bypassing password is increasing. To simplify password management, while still maintaining a high level of security, we wish to move from “something you know” to “something you own”. This may be a physical token, or a biometric function. However, market direction is still unclear.

Sponsoring Client – ICT

Objectives:

- Review other factors to replace passwords. Monitor current developments
- Make login an easier process. Link to SSO activity.
- Review a possible interim process of password managers whilst tech is investigated.
- Use the RITS as a proof of concept exercise.
- Move towards a single means of providing secure log-on, printer access control, building access, mobile device access etc.

What does the Service gain from this investment?

Locally	<ul style="list-style-type: none"> • Improved access to ICT systems. • Less barriers for accessing ICT. • A higher grade of security. • Remove 'Forgotten Password' issue.
Collaboratively	<ul style="list-style-type: none"> •
Nationally	<ul style="list-style-type: none"> • Greater assurance on information security.

Actions	2018/19	2019/20	2020/21	2021/22	2022/23
Review password alternatives					
DO POC with RITS					
Costs					
Capital – in base	£0	£0	£0	£0	£0
Capital – new			£50,000		
Revenue – in base	£0	£0	£0	£0	£0
Revenue – new					

Assumptions

- Removal of passwords is desired
- Passwords will continue to become more complicated, and therefore a bigger problem.
- The need for stronger security will continue.
- This work can be joined up with the work on unifying door access systems.

Risks carried if this work does not go forward

- Passwords will become a bigger burden, not only for ICT to manage, but for all DWFRS staff as lockouts become more frequent.
- Reduction in the use of ICT due to increasing difficulty of access.

Information Management & Security

- Multiple means of authentication, 2-factor authentication etc. will be required.

UPDATED Jan 2020: Not Protectively Marked

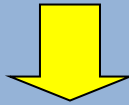
ICT Resilience

ICT Resilience deals with maintaining the availability of the ICT Services. It's about ensuring that the services are available during the times when they are required, that they have sufficient capacity to cope with current demands and that trends and demands are predicted to ensure continued capacity in the future. Alongside this is the work of ensuring that, in the event of a major disaster, services and data can be recovered in a planned and timely manner

Where we are now

A pair of highly resilient, geographically separated data centres.
High-speed (10Gb) link between data centres.
Disk-based backup with geographically dispersed storage.
Reliable and resilient connectivity to Partner sites to support Networked Fire Control.
All servers virtualised.
System Monitoring in place.
Highly resilient connectivity to the Internet with automatic fail-over.

Over Five Years



Where we want to be

Server hardware reviewed and updated.
Storage reviewed and updated to match Service requirements.
Systems in place to assist in Availability and Capacity planning.
Backup system that can be re-sized for the changes that will take place as more data moves into Cloud Services.

UPDATED Jan 2020

UPDATED Jan 2020: Not Protectively Marked

ICT Resilience

Overview – In the 2020/21 financial year, the distributed Server Farm will be 5 years old and coming to the end of its support contract. A review and potential procurement will be required to replace this equipment. This review should include investigating the benefits of cloud delivery of the server farm.

Sponsoring Client – ICT

Objectives: Review Provision of Servers

- Review server farm.
- Determine any changes required.
- Procure replacements.
- Install and implement.

What does the Service gain from this investment?

Locally	<ul style="list-style-type: none"> • Improved resilience. • Benefits from new technologies. • Potential cost savings.
Collaboratively	<ul style="list-style-type: none"> •
Nationally	<ul style="list-style-type: none"> • We will be satisfying the central directives for the adoption of cloud-based technologies.

Actions	2019/20	2020/21	2021/22	2022/23	2023/24
Review					
Evaluate options, such as using Azure for storage and resilience					
Procure					
Install and Implement					
Costs					
Capital – in base	£0	£0	£150,000	£0	£0
Capital - new					
Revenue – in base	£0	£0	£0	£0	£0
Revenue - new					

Assumptions

- Server services will be required.
- Funding will be available.
- Cloud technologies have matured to a point where this is a feasible option.
- There are no insurmountable security issues.
- Resilience at the data centre is required.
- Changes from capital procurement to revenue subscriptions can be accommodated

Risks carried if this work does not go forward

- Server services will fail to be delivered.
- Failure to benefit from new technologies.
- Loss of data and significant business disruption.

ICT Resilience

Overview –The current server OS (Microsoft Data Centre 2012) is supported and fit-for purpose until 2021/22. However, the sensible time to review these products will be at the same time that the servers are replaced/upgraded.

Sponsoring Client – ICT

Objectives:

- Evaluate and cost the options.
- Consider open-source platforms or any other technologies that may have emerged alongside the traditional options.
- Implement any changes alongside the server replacements/upgrades.

What does the Service gain from this investment?

Locally	<ul style="list-style-type: none"> • Assurance that our systems are fit-for-purpose. • Benefits from new technologies. • Potential cost savings.
Collaboratively	<ul style="list-style-type: none"> •
Nationally	<ul style="list-style-type: none"> •

Actions	2019/20	2020/21	2021/22	2022/23	2023/24
Evaluate the options					
Procure licences					
Install					
Costs					
Capital – in base	£0	£100,000	£0	£0	£0
Capital - new					
Revenue – in base	£0	£0	£0	£0	£0
Revenue - new					

Assumptions

- The server farm is renewed and maintained in-house.
- We continue to use Microsoft operating systems
- Some of these costs may move to a subscription base rather than a capital procurement.

Risks carried if this work does not go forward

- Failure to benefit from new technologies.
- Risk of O/S products going end of life and out of support.
- Risk of security breaches.
- Risk of increased costs.

ICT Resilience

Overview – In the 2020/21 financial year, the distributed data storage system will be 5 years old and coming to the end of its support contract (linked to distributed server farm activity above) A review and potential procurement will be required to replace this equipment. Additionally, there is a need to review on-going storage requirements to ensure that the current Service needs are met.

Sponsoring Client – ICT

Objectives:

- Provide a regular review and upgrade of storage.
- Review the suitability of Storage Controllers.
- Evaluate options and procure replacements if required.

What does the Service gain from this investment?

Locally	<ul style="list-style-type: none"> • Improved resilience. • Benefits from new technologies. • Potential cost savings. • Assurance that our on-premises storage requirements are met.
Collaboratively	<ul style="list-style-type: none"> •
Nationally	<ul style="list-style-type: none"> • We will be satisfying the central directives for the adoption of cloud-based technologies.

Actions	2019/20	2020/21	2021/22	2022/23	2023/24
Review storage					
Procure additional drives if required					
Review storage controllers					
Procure replacements if required					
Costs					
Capital – in base	£10,000	£150,000	£0	£0	£0
Capital - new					
Revenue – in base	£0	£0	£0	£0	£0
Revenue - new					

Assumptions

- On-site storage is required.
- Storage requirements will increase with the emergence of new business processes such as document scanning, body-worn camera's etc.
- Better and faster storage technologies will emerge.
- Two data centres are still in use.

Risks carried if this work does not go forward

- Potential loss of data through failure of old hardware.
- Insufficient storage to meet business needs.
- Unable to adopt new technologies that require high volumes of mass storage.

ICT Resilience

Overview – The current system monitoring application (Mutiny) was purchased on a 3-year agreement. This represents an appropriate time to review the suitability of the product and procure a replacement if required. To be linked to other monitoring systems in place to ensure no overlap and or duplication.

Sponsoring Client – ICT and Cyber Security Manager

Objectives:

- Review the current product for on-going suitability.
- Evaluate alternatives if required.
- Procure replacement if required.

What does the Service gain from this investment?

Locally	<ul style="list-style-type: none"> • Assurance that the product used to monitor the Service network and devices is fit-for-purpose and cost-effective.
Collaboratively	<ul style="list-style-type: none"> •
Nationally	<ul style="list-style-type: none"> •

Actions	2019/20	2020/21	2021/22	2022/23	2023/24
Review and evaluate options			■		
Tender and procure if required			■		
Install new product if required			■		
Costs					
Capital – in base	£0	£0	£0	£0	£0
Capital - new			£15,000		
Revenue – in base	£0	£0	£0	£0	£0
Revenue - new					

Assumptions

- System monitoring is still required.
- System monitoring will be a requirement of any ESN accreditation.
- The Service wishes to proactively monitor the ICT Service.
- There is a requirement to monitor the Fire Control Network.

Risks carried if this work does not go forward

- ESN accreditation may be compromised.
- Diagnosing the cause of a number of types of ICT incident will be difficult if not impossible.

ICT Resilience

Overview – The Service currently utilises the Dell Appsure backup system. This system will need to be reviewed to ensure it's still meeting our needs with the move to cloud services, and new threats from ransomware. Backup software and VMware upgrade to provide assurances.

Sponsoring Client – ICT

Objectives:

- Review backup system to ensure it still meets our requirements with Cloud services, and new threats from ransomware.
- Replace with a new system if required
- Ensure system is adequately sized for our current and future data needs.

What does the Service gain from this investment?

Locally	<ul style="list-style-type: none"> • Protection of our data. • Fast restore times (Minimising the impact of damaging software such as ransomware).
Collaboratively	
Nationally	<ul style="list-style-type: none"> • Protecting our data. • Ensuring high up time of our services.

Actions	2018/19	2019/20	2020/21	2021/22	2022/23
Review current system against requirements					
Review Market & Tender					
Implementation.					
Costs					
Capital – in base	£0	£0	£0	£0	£0
Capital - new		£80,000			
Revenue – in base	£0	£0	£0	£0	£0
Revenue - new					

Assumptions

- We still need to protect our data.
- We are still hosting services or use cloud services which require us to back-up the data.
- We still need to retain data for set periods of time.

Risks carried if this work does not go forward

- Current system will age, and require replacement, but at a slightly later date.
- Data growth could become greater than current capacity.

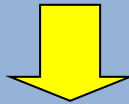
ICT Technology Management

Technology Management deals with the management of the Service's Technology – developing replacement programs to ensure that the Service ICT equipment is fit for purpose and well maintained, research into new technologies and the support of projects that require the purchase and integration of hardware (and software) to enable these projects to succeed.

Where we are now

Fully networked and managed printer environment with all printing costs understood and accounted for.
Realistic cost-effective replacement programs based on historical data.
VoIP installed in all Service locations and VoIP services implemented.
Video Conferencing services integrated with VoIP services within the Service WAN.
Alerter base stations that support phased alerting.
Airwave radio system installed.
Fireground and BA Radios with managed replacement programs.
Mobile data devices in use for data collection.
MDT's installed in appliances.
Low bandwidth to the fireground which prevent the usage of MDT's at incidents.
Skype for business installed as part of Office 365, but mainly used for meetings

Over 5 years



Where we want to be

End-user devices that match the requirement of a role.
Integration of software systems.
Clear path for infrastructure upgrades.
Clear path for the provision of secure corporate mobile devices.
Implementation of the ESMCP Project.
High-speed data connectivity to the fireground.
MDT's utilised to collect data at incident.
Move to a single communications device for Officers.
Implementation of Skype for business as the main voice and video communication tool both internally and externally

ICT Technology Management

Overview – Hardware replacement program. All service hardware is replaced within a scheduled replacement program, dependent upon the category of hardware. This is mainly desktop hardware, but there are a small number of distributed servers also included. Review to take place of business requirements and the kit being provided due to increased dependence on use of ICT for all staff, which will inform future sustainability and budget requirements.

Sponsoring Client – ICT

Objectives:

- Review the Replacement program annually in line with the smarter ways of working agenda to ensure that users have the right mobile devices to meet the needs of their role.
- Procure and replace equipment in accordance with the replacement schedule.
- Develop a role-based link to hardware replacements.

What does the Service gain from this investment?

Locally	<ul style="list-style-type: none"> • Assurance that all ICT equipment is fit-for-purpose and meets the current and future needs of the Service. • Improved user experience. • Value for money. • Support for the smarter working agenda.
Collaboratively	<ul style="list-style-type: none"> • Opportunities for joint procurement processes
Nationally	<ul style="list-style-type: none"> •

Actions	2018/19	2019/20	2020/21	2021/22	2022/23
Review the replacement program	█	█	█	█	█
Costs					
Capital – in base	£100,000	£100,000	£100,000	£100,000	£100,000
Capital - new			£28,729	£49,732	
Revenue – in base	£0	£0	£0	£0	£0
Revenue - new					

Assumptions

- The Service wishes to use a scheduled replacement program.
- There will be a gradual move to laptops to support mobility and the smarter ways of working agenda.
- There will still be a number of fixed desktops in use (i.e. stations).
- The use of thin-client technology and thin-client terminals will be reviewed.
- This only covers the replacement of existing equipment, not the purchase of new equipment for new roles.

Risks carried if this work does not go forward

- Equipment failures which will lead to a loss of productivity
- Inability to carry out roles without appropriate hardware to match increased software development and use across the service
- Unpredictable costs due to ad hoc approach

ICT Technology Management

- Equipment replacements will continue to be like for like and not linked to role requirements.

UPDATED Jan 2020: Not Protectively Marked

ICT Technology Management

Overview –The contract for the provision of networked printers comes to an end in September 2019. A new procurement process is required to ensure that there is no loss of print services.

ACTIVITY COMPLETED in 2019/20

Sponsoring Client – ICT

Objectives:

- Create savings by removing unused printers (an outcome of combination)
- Create savings by ensuring that usage matches printer throughput
- Ensure that the correct print services are available at each location
- Ensure that print services support smarter working.

What does the Service gain from this investment?

Locally	<ul style="list-style-type: none"> • Resilient print services • Savings on printer leasing and usage • Support for Smarter Working
Collaboratively	•
Nationally	•

Actions	2018/19	2019/20	2020/21	2021/22	2022/23
Develop Specification					
Procurement Process					
Installation of printers and Management Software.					
Costs					
Capital – in base	£0	£0	£0	£0	£0
Capital - new					
Revenue – in base	£0	£0	£0	£0	£0
Revenue - new					

Assumptions

- Service wishes to continue with networked printers.
- Service wishes there to be at least one printer at every Service site.
- Service wishes to continue to use card reader log-on for access to printers.
- The usage information gathered by the system will be used to determine printer sizing.

Risks carried if this work does not go forward

- Existing contract will require extending, or there will be no print services available
- Savings will not be realised

ICT Technology Management

Overview – The current MDT’s are now end of life. There is a requirement to replace these with new, more flexible devices, and to identify devices which can be used in smaller vehicles, or within Officer vehicles.

Sponsoring Client – Strategic Planning and Knowledge Management, Mobile Tech team, ICT Comms.

Objectives:

- Evaluate suitable hardware.
- Ensure that hardware is ESN Compliant.
- Ensure that the equipment meets the needs of the end users.
- Procure.
- Install.

What does the Service gain from this investment?

Locally	<ul style="list-style-type: none"> • Improved user experience. • Improved Service efficiency. • Access to greater software functionality on mobile devices.
Collaboratively	<ul style="list-style-type: none"> • Continued ability to use data to mobilise appliances across the NFSP.
Nationally	<ul style="list-style-type: none"> • An ESN ready device.

Actions	2019/20	2020/21	2021/22	2022/23	2023/24
Hardware evaluations					
Procurement Exercise					
Installation Program					
Planned Replacement					
Costs					
Capital – in base	£0	£0	£0	£0	£0
Capital - new				£431,000	
Revenue – in base	£0	£0	£0	£0	£0
Revenue - new					

Assumptions

- End user involvement can be obtained.
- End user agreement can be reached.
- Compliant devices can be identified.
- Resources can be scheduled to fit new devices.

Risks carried if this work does not go forward

- Significant disruption to service delivery.
- Loss of functionality provided by the current devices.

ICT Technology Management

Overview – The Airbus MDT software has been in use by the NFSP for some time now. The overall cost of the software for individual members as well as for the partnership as a whole requires that we conduct a full procurement exercise to renew or replace that software by April 2020.

Sponsoring Client – NFSP

Objectives:

- Evaluate alternatives
- Procure solution
- If this is a new solution:
 - Integrate new solution with the Capita Mobilising System
 - Install the new solution
 - Deliver training

What does the Service gain from this investment?

Locally	<ul style="list-style-type: none"> • Assurance that we are meeting Service procurement rules. • Assurance that the software is fit-for-purpose.
Collaboratively	<ul style="list-style-type: none"> • A software system that is in use across the NFSP and integrates with the NFSP mobilising system.
Nationally	<ul style="list-style-type: none"> • Assurance that we are meeting national procurement rules.

Actions	2018/19	2019/20	2020/21	2021/22	2022/23
Software Specification Development					
Procurement Exercise					
Software installation					
Costs					
Capital – in base	£0	£0	£0	£0	£0
Capital - new					
Revenue – in base	£0	£0	£0	£0	£0
Revenue - new					

Assumptions

- We wish to continue to mobilise using software on the MDT.
- We continue with the NFSP.
- We procure jointly (or at least, the same software).
- Procurement rules are not going to change.
- There will be no further extension to the contract.
- Resources will be available to assist in the specification and procurement, and to deliver training.
- Funding for the replacement software (unknown until procurement) will be available.
- Funding for CAPIT integration work (unknown until procurement) will be available.

Risks carried if this work does not go forward

- We will be in breach of procurement regulations.
- We will not have software to run on the MDT's.
- Significant disruption to service delivery.

ICT Technology Management

Overview – Station UPS Replacements need to be undertaken based upon age and battery life predictions. The UPS's in the stations located in Dorset will require replacement in 2020. The UPS's in the stations located in Wiltshire will require battery upgrades in 2022 and a full replacement in 2025.

Sponsoring Client – ICT

Objectives:

- Move to a consistent make and model across all Stations to ensure ease of maintenance.
- Replace end-of-life systems.
- Establish a staggered replacement program.

What does the Service gain from this investment?

Locally	<ul style="list-style-type: none"> • Availability of mobilising system hardware on stations in the event of local power failure.
Collaboratively	<ul style="list-style-type: none"> • Availability of Dorset and Wiltshire stations for the NFSP.
Nationally	<ul style="list-style-type: none"> •

Actions	2019/20	2020/21	2021/22	2022/23	2023/24
Procure replacements for Dorset based Stations					
Install replacements on station					
Procure battery pack replacements for Wiltshire based Stations					
Costs					
Capital – in base	£0	£30,000	£0	£9,000	
Capital - new					
Revenue – in base	£0	£0	£0		
Revenue - new					

Assumptions

- There is a desire to protect the mobilising equipment at stations against power failures.
- There are no plans to develop the provision and maintenance of UPS's into the fabric of all service premises.

Risks carried if this work does not go forward

- Local loss of power will result in failure to mobilise staff and equipment to incidents.
- Reduced business continuity.

ICT Technology Management

Overview – The current fire ground Radios will be 10 years old in 2020 and will require replacement. This would be an opportunity to review the use, requirement and specification of fire ground radios. While it is unlikely that the ESN project will provide an affordable alternative, this will be considered as part of the review. There would be an opportunity to consider this as a collaborative procurement.

Sponsoring Client – Operations/Operational Comms

Objectives:

- Review the Service Requirements with stakeholders
- Develop a procurement specification
- Identify opportunities for joint procurement
- Procure new radios
- Roll-out to staff

What does the Service gain from this investment?

Locally	<ul style="list-style-type: none"> • Ensures that fire ground radios are fit for purpose • Gains benefits from new technologies • Identifies potential streamlining by fully understanding the Service requirements
Collaboratively	<ul style="list-style-type: none"> • Potential for joint procurement across the NFSP • Opportunity to establish a consistency of equipment across the NFSP
Nationally	<ul style="list-style-type: none"> • If no current framework exists at that time, then there is an opportunity to create a new framework

Actions	2019/20	2020/21	2021/22	2022/23	2023/24
Review	■				
Develop Specification		■			
Procure new Radios		■ ■			
Roll-out replacements		■ ■ ■ ■			
Costs					
Capital – in base	£0	£0	£0	£0	£0
Capital - new		£450,000			
Revenue – in base	£0	£0	£0	£0	£0
Revenue - new					

Assumptions

- Fire ground radios are a requirement going forward.
- ESMCP is unlikely to provide a cost-effective alternative within our timescale, if at all.
- The replacement is based upon the same number of radios as are currently owned by the Service.
- Stakeholders outside of the ICT department engage in the project to develop Service requirement for the next 10 years

ICT Technology Management

Risks carried if this work does not go forward

- Failure to meet the expectations of HMICFRS
- Failure to meet the expectations of H&S
- Loss of or poor communications on the fire ground
- Failure to gain the benefits of new technologies which could support other Service initiatives (i.e. BA Telemetry monitoring)

UPDATED Jan 2020: Not Protectively Marked

ICT Technology Management

Overview – Current Multitone station end equipment uses Embedded Windows 7 as its operating system. Windows 7 goes end of life in October of 2021, so the operating system must be replaced to maintain security.

Sponsoring Client – Operational Comms

Objectives:

- Upgrade the operating system of the Station End equipment
- If possible, do this without the replacement of any hardware.
- Avoid the Station End equipment being highlighted as a risk within the 2021 Health check, or as a risk to ESMCP

What does the Service gain from this investment?

Locally	<ul style="list-style-type: none"> • Assurance that stations can be mobilised • Protection against Security breaches
Collaboratively	<ul style="list-style-type: none"> • Maintenance of functionality within NFSP • May be done as a collaborative purchase/project through NFSP
Nationally	<ul style="list-style-type: none"> • Reduction in risk

Actions	2019/20	2020/21	2021/22	2022/23	2023/24
Investigate options with Multitone	■				
Purchase upgraded drives		■			
Install on stations		■	■		
Costs					
Capital – in base	£0	£0	£0	£0	£0
Capital - new		£165,000			
Revenue – in base	£0	£0	£0	£0	£0
Revenue - new					

Assumptions

- We will continue to use the Multitone Station End equipment
- Microsoft do not extend the end-of-life date for Windows 7
- Costs shown are worst-case based on Firecoder replacement. It is estimated that if an upgrade is possible this would be £14,000

Risks carried if this work does not go forward

- Station end equipment will be highlighted as a risk in ICT Health Checks.
- There will be no support for the operating system on Station End equipment.
- This may represent an obstacle to achieving the code of connection for ESMCP

ICT Technology Management

Overview – Review use of Station End Printers that will be 10 years old in 2021 in stations located in Wiltshire and in 2024 in stations located in Dorset. Develop processes and tech to manage business requirements alongside other technology available, and investigate new ways of working as necessary.

Sponsoring Client – Operational Comms

Objectives:

- **Develop a solution based on business requirements that provides information to stations.**

What does the Service gain from this investment?

Locally	<ul style="list-style-type: none"> • Provide a back-up for turn-out instructions in the event of an MDT failure. • Provide a means of sending urgent information to Stations.
Collaboratively	<ul style="list-style-type: none"> • Provide a back-up for turn-out instructions in the event of an MDT failure. • May be done as a collaborative procurement through NFSP
Nationally	<ul style="list-style-type: none"> •

Actions	2019/20	2020/21	2021/22	2022/23	2023/24
Procure new printers for Wiltshire based Stations					
Install printers at Wiltshire based Stations					
Begin procurement for Dorset based Stations					
Costs					
Capital – in base	£0	£0	£0	£0	£0
Capital - new			£7,000		
Revenue – in base	£0	£0	£0	£0	£0
Revenue - new					

Assumptions

- Hard copy printout is not the only solution available to meet the business requirements.
- Support for development of new processes and business change.

Risks carried if this work does not go forward

- Unable to send printer messages to stations.
- No fall-back in the event of MDT failure.

ICT Technology Management

Overview - The existing Airwave provision is planned to be replaced through the ESMCP project.

Information in this section is currently limited due to reliance on National Programme Plan through ESMCP

Sponsoring Client – Operations

Objectives:

- Deliver up to date technology aligned to National Programmes

What does the Service gain from this investment?

Locally	• Up to date technology to aid communications
Collaboratively	• Joined up approach across partners
Nationally	• Joint approach through ESMCP

Actions	2019/20	2020/21	2021/22	2022/23	2023/24
Review national developments and approach					
Review ESN and local needs					
Develop project as necessary					
Deliver changes aligned to national programmes (dates TBC)					
Costs					
Capital – in base	£0	£0	£0	£0	£0
Capital - new					
Revenue – in base	£0	£0	£0	£0	£0
Revenue - new					

Assumptions

- Funding will be available

Risks carried if this work does not go forward

- Communications technology becomes out of date

ICT Technology Management

Overview – All stations currently have some means of delivering presentations etc. mainly to support training delivery although many stations are also used to support service meetings. The current provision is through projectors, some of which are ceiling mounted, with fitted screens and some are not. Traditionally these were neither supplied or supported by ICT, and now are failing with no department taking responsibility for their maintenance.

ACTIVITY COMPLETED in 2019/20

Sponsoring Client – ICT

Objectives:

- **Replace projectors on station with a more sustainable alternative (monitors).**
 - Audit current installations
 - Determine best options on a station-by-station basis
 - Procure hardware and install
 - Place the equipment onto the hardware replacement plan

What does the Service gain from this investment?

Locally	<ul style="list-style-type: none"> • Better facilities for presentation on stations • Better facilities for meetings on station • Equipment that is on a managed replacement plan
Collaboratively	<ul style="list-style-type: none"> •
Nationally	<ul style="list-style-type: none"> •

Actions	2018/19	2019/20	2020/21	2021/22	2022/23
Review/audit station usage					
Procure equipment					
Property installation work					
Deliver new equipment					
Costs					
Capital – in base	£50000	£0	£0	£0	£0
Capital - new					
Revenue – in base	£0	£0	£0	£0	£0
Revenue - new					

Assumptions

- There is a requirement to replace existing projectors.
- Station facilities will be used for other Service meetings.
- Additional funding may be found if required.

Risks carried if this work does not go forward

- Delivery of local training at stations may suffer and training efficiencies not realised.
- Flexible use of stations would become unreliable.

ICT Technology Management

Overview – Training Hubs. No current ICT training facilities are available across the service. There is also a requirement to create gold room facilities. Review the business requirements across both areas and establish a multi-use area which achieves best possible use of estates and technology as well as other training hubs as required.

Sponsoring Client – Operations/Training, SLT

Objectives:

- Review business requirements across Training and Gold Room requirements.
- Deliver a multifunctional facility on a current site kitted out to meet those needs.

What does the Service gain from this investment?

Locally	<ul style="list-style-type: none"> • Classroom based location for ICT training programme to be embedded alongside practical training. • Multipurpose area which can also be used as a gold control • Wired in kit more reliable
Collaboratively	<ul style="list-style-type: none"> • Facility could be used by partners in the event of a major incident
Nationally	<ul style="list-style-type: none"> • Gold control facility for use on local and national event levels

Actions	2019/20	2020/21	2021/22	2022/23	2023/24
Review business requirements and scope					
Develop business case					
Deliver facilities					
Costs					
Capital – in base	£0	£0	£0	£0	£0
Capital - new					
Revenue – in base	£0	£0	£0	£0	£0
Revenue - new					

Assumptions

- Business requirements are defined
- Budgets will be made available

Risks carried if this work does not go forward

- Limited gold control facilities
- Limited ICT training facilities when ICT use is increasing for end users

ICT Technology Management

Overview – The existing Call Manager system does not integrate with the direction we are taking with Office 365 as well as Skype for Business (Teams Communication). A move to Skype cloud PBX will enable greater flexibility.

Sponsoring Client – ICT

Objectives:

- Identify the cost /upgrade options.
- The solution should remain within the existing telephony budget, or any cost increase should provide additional benefits to the Service that justify the increase.
- The solution should enable the re-use of existing station handsets.
- The solution must be able to integrate with Fire Control's needs.
- Implement and roll out the solution.

What does the Service gain from this investment?

Locally	<ul style="list-style-type: none"> • Improved functionality and management • Increased mobility • Better usage of the available products • Complements Smarter Working
Collaboratively	<ul style="list-style-type: none"> • Potential connectivity improvements for NFSP
Nationally	<ul style="list-style-type: none"> • None

Actions	2018/19	2019/20	2020/21	2021/22	2022/23
Evaluation of options					
Purchase licences					
Roll out system					
Costs					
Capital – in base	£0	£0	£0	£0	£0
Capital - new					
Revenue – in base	£0	£0	£0	£0	£0
Revenue - new					

Assumptions

- The Service has a need for PBX functionality and issuing mobiles to all staff is therefore not an option.
- Cisco Call Manager will not provide the Office 365 integration.
- The implementation will be delivered within existing budgets

Risks carried if this work does not go forward

- Costs increase year on year both with standard revenue and additional costs to bring in external support for upgrade.
- Cisco will be a discontinued product – end of life

ICT Technology Management

Overview – The Service has adopted Office365 as its administration communication and data storage provision. It is currently only using a limited amount of functionality. The system can provide solutions for reduction in reliance on Notes which will be progressed.

Sponsoring Client –ICT

Objectives:

- Review existing Notes systems
- Replace with o365 functionality where appropriate

What does the Service gain from this investment?

Locally	<ul style="list-style-type: none"> • Up to date technology to increase access to information from a single source already invested in. • Ability to review processes and create systems that work with new business requirements • Joining up of data – consistency in information, reduced duplication of effort • Improved Service efficiency through the support of the smarter working agenda
Collaboratively	<ul style="list-style-type: none"> • Shared ways of working and joint approach to knowledge and learning from others will continually be reviewed
Nationally	<ul style="list-style-type: none"> • An assurance that we can continue to support any National Initiatives around remote working

Actions	2019/20	2020/21	2021/22	2022/23	2023/24
Review Notes systems and identify benefits of moving to o365					
Develop rolling programme of changes					
Implement new ways of working					
Costs					
Capital – in base	£0	£0	£0	£0	£0
Capital - new		£50,000	Tbc	Tbc	tbc
Revenue – in base	£0	£0	£0	£0	£0
Revenue - new					

Assumptions

- Service wide drive to increase use of o365 and gain return on investment
- There will be advances and changes in technologies that will offer benefits which may not be o365

ICT Technology Management

Risks carried if this work does not go forward

- Flexible, remote working and access to information will not be supported by the best technologies.
- Skills to manage and administer Notes within ICT are very limited. If current skills in house are lost through staff leaving, the market to replace is very limited.
- Restricted ability to progress sharing of information across services and partners, requiring additional resource to build bridges between old tech systems, which in turn increases security risks.

UPDATED Jan 2020: Not Protectively Marked

Monitoring of this strategy

This plan will be monitored and reviewed by

- ICT department on a monthly basis through the delivery of the strategy and departmental plan of detailed activity.
- Director for Support Services through the monitoring of the departmental plan.
- By SLT on a quarterly basis or as required.
- By the Authority as required.

UPDATED Jan 2020: Not Protectively Marked

END

- GLOSSARY

Acronym	In full	What this means
ADSL	Asynchronous Digital Subscriber Line	Digital Broadband Network line
ESMCP	Emergency Services Mobile Communications Project	Airwave replacement project
ESN	Emergency Services Network	The network that will be used to deliver the ESMCP
ITIL	Information Technology Information Library	A collection of Functions and Processes that help define an ICT Service
MDM	Mobile Device Management	A means of ensuring the security of mobile devices (i.e. smartphones)
MDT	Mobile Data Terminal	A mobile device installed in a Service vehicle
MPLS	Multiprotocol Label Switching	A wide-area-network protocol
NFSP	Networked Fire Services Project	The Fire Control partnership
PSN	Public Sector Network	A secure network used by central and local government agencies
SIM	Subscriber identity module	Used to identify and authenticate subscribers on mobile devices
SLA	Service Level Agreement	An agreement on levels of service
UPS	Uninterruptible Power Supply	A battery backed system used to provide short term power in the event of a mains power failure.
WAN	Wide Area Network	The network used to connect service premises.

END

UPDATED Jan 2020: Not Protectively Marked