CLEVELAND FIRE BRIGADE

ICT Strategy

2019 - 2022

Delivering modern ICT services that are flexible, resilient, efficient and effective

Appendix B

Policy Process	ICT Strategy
Authored by:	**Head of ICT**
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1 Contents

Protecting local communities

Page

1. Contents	2
2. Introduction	3
3. ICT Services	4
4. Principles	5
5. National and Local Drivers	6
6. ICT Strategy Themes	7
7. Building on Existing Work	8
8. Automation	9
9. Automation Outcomes 2022	10
10. Collaboration	11
11. Collaboration Outcomes 2022	12
12. Insight	13
13. Insight Outcomes 2022	14
14. Governance	15
15. Governance Outcomes 2022	16
16. Delivering Our Outcomes	17

2 Introduction

PURPOSE

This Information and Communications Technology (ICT) Strategy sets out how technology will, over the next three years up until 2022, support Cleveland Fire Brigade's mission to deliver an inclusive Fire & Rescue Service that ensures the safety and wellbeing of its communities.

STRATEGIC AIM

Our ICT Strategy links directly to our Community Integrated Risk Management Plan (CIRMP) 2018-22, using a set of themes and outcomes as a framework for the further development, innovation and improvement of all aspects of technology across our organisation.

APPROACH

We recognise that the role of the fire and rescue service is changing. At the same time we must plan to make the best of the opportunities, and respond to the risks, presented by changes in technology.

Technology is an enabler and only works effectively when designed to make the best use of information to support work processes and decision making. We will implement ICT business solutions to improve service delivery and community safety and to drive efficiencies – where our people can utilise the services that best fit their needs and the needs of the organisation.

We will deliver modern ICT services that are flexible, resilient, efficient and effective.

3 ICT Services

The Brigade's in-house ICT Department, based at the Queens Meadow Complex in Hartlepool, is responsible for all technology matters across the organisation.

The ICT services provided are wide ranging and varied, from Information Governance to traditional ICT functions and operational support for Command & Control mobilising systems and fire appliances, telephony, radios, CCTV and Access Control systems:

ICT Management

- ICT Strategy Development and ICT Project Management
- ICT Budget, Supplier and Contract Management
- Business Continuity for Technology and ICT Services

Information Governance

- Information Compliance (Freedom of Information, Data Protection, RIPA)
- Information Assurance (Records Management, Information Sharing)
- Information Security (Including the Protective Security Framework)

ICT Services

- ICT Service Desk
- Provision, installation, maintenance and support of all end-user equipment (Desktops, Laptops, Printers, Audio Visual, Software and Consumables)
- Information Systems analysis, design, development, maintenance and administration

Mobilising & Operational Systems

- Fire Control Mobilising Systems
- Station End Mobilising Equipment
- Retained Alerter Systems
- Incident Command Technology
- Main Scheme Radio (Airwave/ESN)
- Fireground Communications
- Fire Appliance ICT Systems (Communications, MDTs, Radio, CCTV)

Infrastructure

- Local and Wide Area Communications Networks
- Fixed and Mobile Telephony
- Mobile Data
- Server & Infrastructure Systems
- Technical ICT Security
- Physical Security Systems (Access Control, CCTV)

4 Principles

Protecting local communities

Our ICT Strategy takes into consideration a number of guiding principles:

- Align to our CIRMP 2018-22
- Create Efficiencies
- Innovation
- Digital Transformation
- Embrace Collaboration
- Legislative Compliance
- Ensure Sustainable Services
- Align to our Values
- Consider Views of our Workforce
- Align to Industry Best Practice

5 National and Local Drivers

LEGISLATION

The Fire and Rescue Services Act 2004 includes the statutory core functions of Fire Safety and Fire-Fighting. The use of technology is critical in enabling us to fulfil our obligations in the areas of fire prevention, risk information, emergency call handling and mobilising.

The Policing and Crime Act 2017 introduced a new duty on Emergency Services to keep collaboration opportunities under review and, where it is in the interests of efficiency or effectiveness, to put such opportunities into practice. Technology solutions will be a key enabler in supporting collaboration where and when opportunities arise. Also, collaborative procurement of technology wherever possible will help us to drive efficiencies.

The EU General Data Protection Regulation (GDPR) and subsequent Data Protection Act 2018 are now in force, along with the Freedom of Information Act and the Regulation of Investigatory Powers Act. We have taken steps to meet our obligations, but must continue to ensure ongoing compliance into the future.

NATIONAL PROJECTS

The Government's Emergency Services Mobile Communications Programme (ESMCP) will see a new Emergency Services Network replace Airwave radio communications. It will also provide secure and resilient mobile broadband data for routine and critical emergency service use.

The National Fire Chiefs Council's (NFCC) Digital and Data Programme will promote better use of data and take a national view of what a digitally transformed Fire and Rescue Service will look like ten years into the future.

OUR ASSET MANAGEMENT PLAN

Managing our assets is instrumental in our drive to secure service improvements whilst reducing costs through the adoption of new ways of working. Our Asset Management Plan 2018-26 contains the planned ICT asset investment requirements into the foreseeable future.

OUR STRATEGIC GOALS

Our vision is to make a positive difference to the safety and quality of life of every local citizen, with a mission of delivering an inclusive Fire & Rescue Service that ensures the safety and wellbeing of its communities. Three strategic goals support the achievement of our vision and guide our priorities and work. Our ICT Strategy will drive improvements aligned with the objectives and outcomes of the three goals which are:

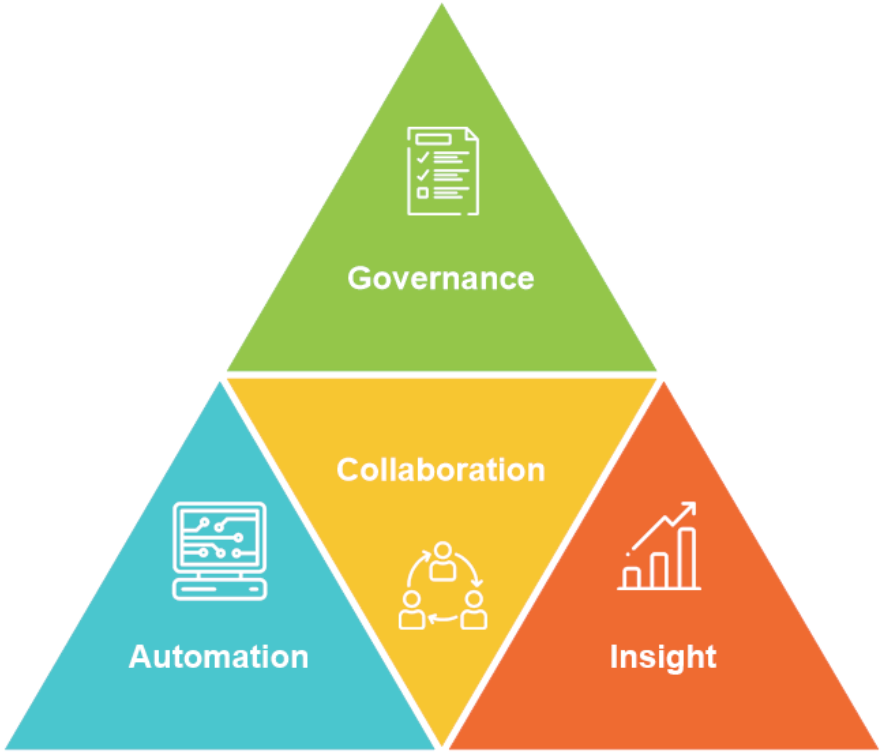
6 ICT Strategy Themes

Bringing together the guiding principles and the national and local drivers, alongside our three strategic goals, our ICT Strategy is set out into four key themes:

- **Automation;** Further reducing repetitive and manual processes, saving time and money and boosting efficiency.
- **Collaboration;** Utilising business applications and communication tools to further increase productivity and security.
- **Insight;** Further visualising data easily and in real-time to enhance organisational performance.
- **Governance;** Directing and controlling the current and future use of ICT within the organisation.

The four themes align with our strategic objectives and outcomes to produce a set of ICT outcomes.

Over the next three years, these themes and outcomes will provide a framework for the further development of all aspects of ICT across the organisation.



7 Building on Existing Work

A great deal has been achieved in recent years over the course of our previous ICT strategy. Better value for money in the use of technology has been achieved, modern and resilient information systems and technology have been introduced, robust governance arrangements have been put in place and a high-performing professional ICT service department has been established.

Highlights of recent work, listed against our four new themes, include:

AUTOMATION

- New resilient Data Centres at our Queens Meadow Complex.
- A new high-speed Wide Area Network across all our sites.
- Joined-up Wi-Fi access available across all our sites.
- Upgrade of all our technology assets to the latest operating systems.
- Automated physical Access Control at all our sites.
- Cyber Security improvements.
- Upgrades to our Fire Control Room technology, along with IT Health Checks and remedial actions, in preparation for the new Emergency Services Network.
- Modernisation of our Intranet and Document Management Systems.

COLLABORATION

- Delivery of the Queens Meadow workstyle strategy.
- Design and implementation of our new Fire Control Room.
- Design and Implementation of all technology requirements for all Fire Station rebuilds and refurbishments.

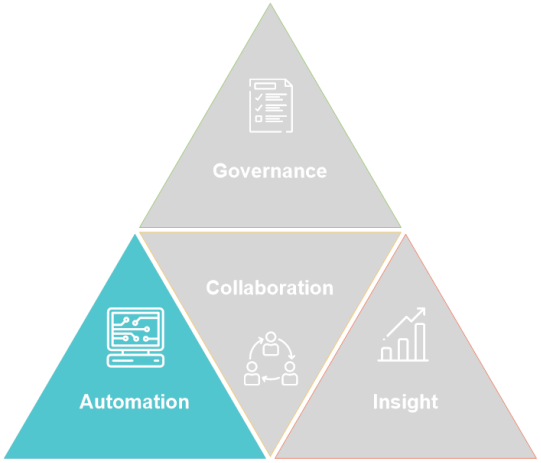
INSIGHT

- Dashboards for operational incident information analysis.
- Dashboards of real-time tracking of our Fire Engines.
- Comprehensive reporting of our Community Safety activities.

GOVERNANCE

- Implementation of a robust Information Governance Framework.
- Mobilising resilience arrangements agreed with Shropshire FRS and Hereford & Worcester FRS.

8 Automation



Strategic Objective:	• **We will provide efficient and effective use of resources**
Strategic Outcome:	• **Value for Money Assets** • **Optimum use of Human Resources**

As with any organisation, it is vital that our information systems and technology deliver fit for purpose solutions to address our business needs. To drive further efficiencies and effectiveness we must ensure that administrative processes are streamlined and workflows are automated as far as possible. An updated review of the systems and processes in use will identify opportunities resulting in focussed efforts to replace remaining manual and paper-based practices with efficient technology.

One particular area to benefit from automation will be our information collection activities. Our innovative Community Safety System will be enhanced to work on mobile devices. Early trials of using tablets during our Safer Homes Visits indicate that the start-to-end process is reduced by up to thirty minutes per visit.

To enable the further automation of our business processes, all our ICT services must continue to be underpinned by a fit for purpose technology infrastructure which meets the needs of a modern workforce. Significant investment in our technology infrastructure, with new Data Centres, was made during the development of our Queens Meadow Complex which opened in 2016. Since then, we have implemented a high-speed Wide Area Network and provided joined-up Wi-Fi access at all our fire stations. We will maintain a careful balance of maximising the use of our existing infrastructure investment whilst investigating the further utilisation of cloud-based technologies. We will also monitor industry developments in the field of Artificial Intelligence.

The Government's new Emergency Services Network will require upgrades to our Command & Control mobilising and communications systems to ensure compatibility. The Emergency Services Network also promises to provide a secure and resilient mobile broadband service. This will present opportunities to expand our use of technology for both routine and emergency response purposes whilst out working amongst our communities.

As the Fire & Rescue landscape changes, and our reliance on retained firefighters increases, there will be a need to modernise our traditional radio paging systems for mobilisation. New intelligent alerting applications, based upon mobile technology, can create significant added efficiencies through the rationalisation of current technology and reductions in unneccesary firefighter disturbance fees.

9 Automation Outcomes 2022

Over the next three years, up to 2022, as part of this ICT Strategy we will strive to achieve our Automation outcomes set out below, further reducing repetitive and manual processes, saving time and money and boosting efficiency.

BUSINESS SYSTEMS

ICT1: We will have reviewed all areas of our organisation to ensure ICT systems enhance and improve the efficiency of our business processes.

Our focus will be to:

- Embrace technology to support the efficiency and effectiveness of our inspection regimes and community safety activities, including hand-held mobile working devices for use in the field and new systems for the recording and monitoring of premises and inspections, along with on-line self-assessment tools for vulnerable members of our communities.
- Rationalise our asset management information systems.
- Review our paper-based requisitions processes.
- Further enhance our corporate Intranet and document management system.
- Review our Incident Recording System and ensure alignment with the forthcoming new national system.

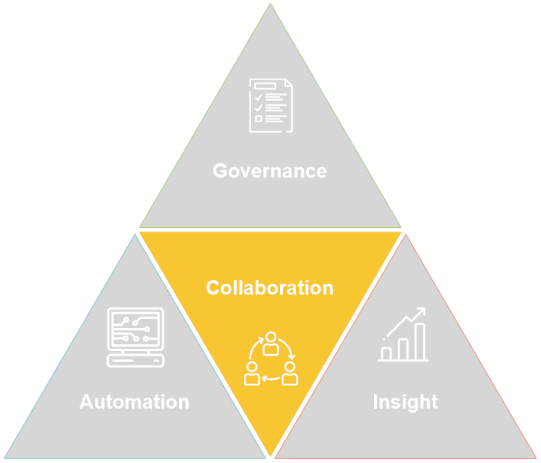
INFRASTRUCTURE

ICT2: We will have maintained a modern ICT infrastructure that meets our changing needs.

Our focus will be to:

- Ensure the configuration of our ICT infrastructure continues to provide appropriate and robust levels of Cyber Security.
- Investigate the further use of cloud-based technologies.
- Further enhance our Fire Control centre's resilience, call handling times and mobilising capabilities through hardware and software refreshes.
- Investigate the use of intelligent alerting applications for our retained firefighters.
- Implement new replacement Mobile Data Terminals on all fire engines.
- Rollout new digital fire-ground radio handsets and firefighter breathing apparatus communications.
- Transition Airwave radio communications across to the Government's new Emergency Services Network.
- Explore opportunities to use the new Emergency Services Network to improve data connectivity in the field.
- Utilise our new high-speed Wide Area Network for voice telecommunications and rationalise our traditional telephone landlines.
- Implement the technology requirements for our fire stations due to undergo refurbishment - Stockton, Guisborough and Loftus.
- Ensure all new technology assets are energy efficient and contribute to our sustainability strategy.

10 Collaboration



Strategic Objectives:	• **We will provide first class training and education to ensure the competence of all staff** • **We will support and promote health, safety and wellbeing across our workforce** • **We will support our partners by working collaboratively to improve health outcomes across our communities**
Strategic Outcomes:	• **A Competent and Trained Workforce** • **A Safe Workforce** • **Improved Health Outcomes**

Technology advances constantly and is changing the ways in which we can apply digital solutions to increase our productivity and effectiveness.

The established consumerism of ICT, with widespread public take-up of mobile devices, increases our workforce's familiarity and comfort with powerful technology. Building upon the digital transformation successes already achieved during our Estates rebuild programme, we want to deliver an attractive user-driven experience with our people having immediate and easy access to the collaborative business applications and communication tools they require to improve productivity, using flexible and agile solutions based upon need rather than location.

Our people need the right skills and capabilities to utilise such digital solutions. Traditional classroom-based learning activities can take up a lot of time and expense and so we must look to enhance our learning environment and increase the use of on-line, intuitive and innovative learning opportunities.

Improving our productivity and effectiveness has close links to our Health and Wellbeing Strategy. Collaborative digital solutions will underpin new initiatives supporting our people to be fit and well at work.

Our firefighters and other front-line staff sometimes have to work in difficult environments and attacks on firefighters have risen significantly. We will enhance our technology to protect our people and assist the Police in ensuring that perpetrators are identified and prosecuted

Technology is a key enabler to support collaborative working with our partners to enhance the services we provide. In particular, the sharing of health information with partners enhances data quality and streamlining of referrals, contributing towards improved health outcomes for members of our communities.

11 Collaboration Outcomes 2022

Over the next three years, up to 2022, as part of this ICT Strategy we will strive to achieve our technology Collaboration outcomes set out below, utilising business applications and communication tools to further increase productivity and security.

DIGITAL SOLUTIONS

ICT3: We will have engaged our people in emerging digital solutions to achieve increased productivity and effectiveness.

Our focus will be to:

- Expand our use of business collaboration tools and unified communications.
- Embrace mobile working, providing the necessary accessibility and connectivity to work anytime anywhere.
- Use technology to further facilitate staff and community engagement.
- Explore technological solutions for training and educating our people.
- Ensure that our people are effective in the use of technology and have the right skills at the right time.
- Implement technological solutions to create realistic and challenging training environments for our firefighters and incident commanders.
- Utilise digital solutions to support our employee health and wellbeing arrangements.

SAFETY FIRST

ICT4: We will have utilised the best available technology to enhance the Health & Safety of our people at all times.

Our focus will be to:

- Enhance the safety of our firefighters and other front-line staff through the trials of body-worn video cameras to drive down the number of attacks on our firefighters.
- Implement new high-definition CCTV cameras on all our fire engines to protect our people and our assets.
- Invest in technology to secure fit for purpose external training facilities and props which will strengthen the operational competence and safety of our staff.

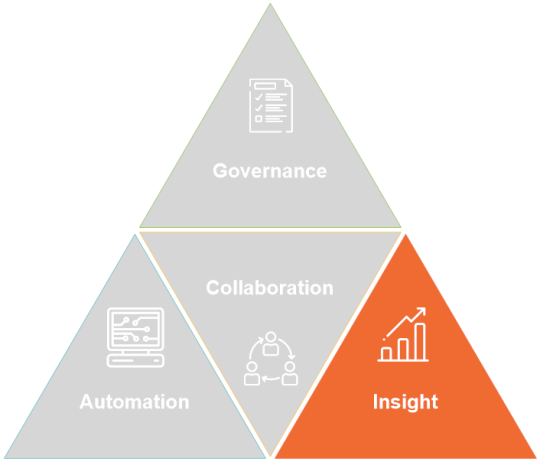
WORKING WITH PARTNERS

ICT5: We will have used technology as a key enabler to enhance our working with partners to deliver joined-up services to our communities.

Our focus will be to:

- Develop more effective and efficient ways of working and sharing health data and referrals with our local partner organisations.
- Facilitate expansion of our Integrated Community Safety Team model.

12 Insight



Strategic Objectives:	• **We will protect people, property and the environment from harm as a result of fires and other emergencies** • **We will have the right number of people, with the right skills, in the right place, at the right time to deliver our organisational objectives.** • **We will provide efficient and effective use of resources**
Strategic Outcomes:	• **Safer Homes, Buildings, Roads, High Hazard Industries, Neighbourhoods & Environment, and Supported National Resilience** • **A Sustainable Workforce** • **Optimum use of Human Resources** • **Value for Money Assets**

Information is a vital asset. Accurate, timely and relevant information is essential to deliver the highest quality services to our communities. As an organisation, we store and process large volumes of data in many different forms. To operate as effectively and efficiently as possible, enhancing organisational performance, we need to be able to find the information we are looking for, at the time when we most need it, and then be able to make sense of it at a glance.

We can support decision making, through business intelligence, by making the best use of our information assets. In terms of our balanced strategy of fire prevention, protection and emergency response services to our communities, we must use technology to ensure we have a clear understanding of our highest risks and to enhance the risk-based information available to our firefighters and incident commanders. Utilising the Government's 'Resilience Direct' secure online portal will allow us to maintain our awareness of the emergency plans of other emergency responders. There is a need across the Fire & Rescue sector to better measure the value of intervention activities and technology must play a key role in this challenge. Upgrading our solutions for personnel and rostering will enable us to undertake more informed workforce planning and in turn ensure the optimum use of our human resources.

Visualising data easily and in real-time enhances organisational performance. We have developed real-time management information dashboards relating to our incidents and mobilising systems. There is potential to improve the visualisation and presentation of much more of our data through the further integration of innovative intelligence dashboards. We will promote further data-driven business insight by removing silos and ensuring information is stored once and can be analysed across a range of channels.

13 Insight Outcomes 2022

Over the next three years, up to 2022, as part of this ICT Strategy we will strive to achieve our Insight outcomes set out below, further visualising data easily and in real-time to enhance organisational performance.

SAFER COMMUNITIES

ICT6: We will have further joined up our data to enhance our prevention, protection and emergency response services.

Our focus will be to:

- Implement a single source of addressing information for all of our community and risk-based systems.
- Enhance the risk-based information available to our firefighting crews at the scene of incidents.
- Implement a new information system for Incident Command.
- Capture new sources of real-time information at the scene of incidents, from both our partners and our communities.
- Introduce digital presentation of safety advice to our communities during Safer Homes Visits.
- Embrace both National and Local Resilience information sharing opportunities.

WORKFORCE PLANNING

ICT7: We will have implemented technology to enable the optimum use of our workforce resources.

Our focus will be to:

- Introduce a new HR system to provide and maintain quality information relating to all our employees.
- Implement new intelligent attendance and rostering systems to support a flexible workforce.
- Monitor the real-time availability of our firefighting crews and warn ahead in case of issues affecting service delivery.

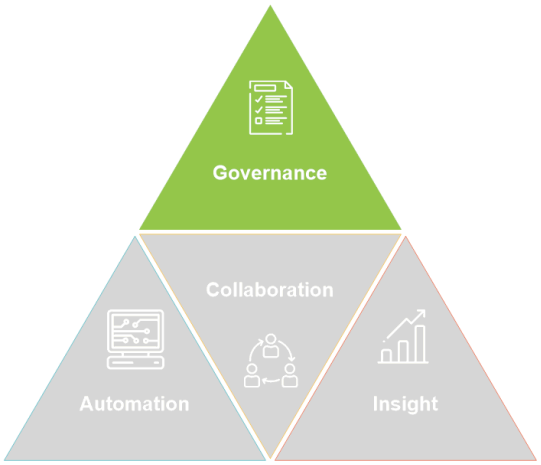
BUSINESS INTELLIGENCE

ICT8: We will have promoted data-driven intelligence with information stored once and analysed across a range of channels.

Our focus will be to:

- Review all of our datasets and remove duplication.
- Increase the availability of our data, including the use of open data standards.
- Improve data accuracy, clarity and insights across our entire business.
- Enhance the visualisation and presentation of our data through more business intelligence dashboards.

14 Governance



Strategic Objectives:	• **We will provide efficient and effective use of resources**
Strategic Outcomes:	• **Sound Financial, Procurement & Corporate Governance** • **Value for Money Assets** • **Efficiencies through Collaboration and Partnerships**

Information Governance is our framework of law and best practice that regulates the manner in which our information in all its forms is managed. It plays a key role in underpinning corporate governance, service planning and performance management, also serving to protect privacy and contribute to the maintenance of public trust. We are committed to ensuring that our information is managed to the highest standards and we meet our legislative responsibilities.

There are ever increasing technology risks associated with information security and cyber-attacks. We have amended our policies to ensure compliance with the National Cyber Security Centre's *'Ten Steps to Cyber Security'* and all our people have undertaken information security training. As an organisation, we aspire to gain formal information security accreditation.

Our ICT Service Governance ensures that our information and technology resources and assets are always used in the most efficient and effective manner, through the application of robust and accountable controls.

We have worked in collaboration with other Fire & Rescue Services to establish significant technology partnerships for Fire Control (with Shropshire and Hereford & Worcester FRS) and the Emergency Services Mobile Communications Programme (with Durham & Darlington, Tyne & Wear and Northumberland FRS). Technology has been utilised to facilitate co-location collaboration opportunities with partners, resulting in the Police, NHS, Coastguard and Local Authorities sharing space on a number of our Fire Stations. Collaborative procurement on technology projects in liaison with the National Fire Chiefs Council will deliver significant efficiencies and strengthen our ICT contract management arrangements. We will continue to explore other collaborative opportunities for ICT strategies and solutions where appropriate.

Technology is vital to fulfilling the statutory duties and day-to-day business of our organisation. We have a comprehensive ICT Business Continuity Plan which details our risk assessments and control measures and provides all the relevant information needed to allow us to recover quickly from any interruption, getting services back to normal operation as soon as possible and keeping disruption to a minimum.

15 Governance Outcomes 2022

Over the next three years, up to 2022, as part of this ICT Strategy we will strive to achieve our Governance outcomes set out below, directing and controlling the current and future use of ICT within the organisation.

INFORMATION GOVERNANCE

ICT9: We will have continued to meet our legislative responsibilities and ensured our information is managed to the highest standards.

Our focus will be to:

- Ensure continuing compliance with all relevant statutory legislation, including Data Protection (GDPR), Freedom of Information (FOI) and the Regulation of Investigatory Powers (RIPA).
- Preserve the security, confidentiality, integrity and availability of all our physical and electronic information assets.
- Undertake annual assessments of our Information Security arrangements and ensure that remedial action plans are developed to address any identified security risks.
- Aspire to gain formal Information Security accreditations where appropriate.
- Further strengthen our robust Information Assurance processes.
- Further promote the work and good practice of our organisation-wide Information Governance Working Group.

ICT SERVICE GOVERNANCE

ICT10: We will have ensured the effective, robust and accountable control of all aspects of our Information and Communications Technology.

Our focus will be to:

- Continue to deliver a highly effective and valued ICT service.
- Explore collaborative opportunities for ICT strategies and solutions.
- Ensure alignment with our CIRMP and other corporate strategies.
- Ensure value for money at all times and maximise our existing investments in technology.
- Review our suite of ICT performance measurement indicators.
- Enhance our ICT Service Management processes.

BUSINESS CONTINUITY

ICT11: We will have ensured resilient arrangements are in place to respond to events that threaten the provision of our technology services.

Our focus will be to:

- Ensure that all existing and emerging risks are fully mitigated.
- Ensure that Business Continuity arrangements are regularly tested.
- Regularly review and update all Business Continuity plans.

16 Delivering Our Outcomes

IMPLEMENTING THE ICT STRATEGY

Our ICT Strategy outlines a set of themes and outcomes as a framework for the further development, innovation and improvement of all aspects of technology across our organisation. The key focuses will be translated into detailed activities, with associated critical success factors, within the ICT Delivery Plan and annual Internal Operating Plans.

RESOURCE IMPLICATIONS

There are no Health & Safety implications associated with this strategy.

There is no additional financial burden (staffing, revenue or capital), above and beyond the resources either already in place now or else agreed within our Asset Management Plan 2018-26.

Our ICT strategy contains positive outcomes relating to the efficient use of resources and promoting a reduction in our carbon footprint.

EQUALITY IMPACT ASSESSMENT

There are no Equality and Fairness implications associated with this ICT strategy. An Equality Impact Assessment has been completed which demonstrates positive outcomes relating to equality and fairness through the use of technology.

MONITORING, AUDIT & REVIEW

Our ICT Internal Operating Plan is reviewed on a weekly basis to monitor implementation progress.

We work with appointed internal and external auditors to ensure the quality, compliance and resilience of our information, communications and technology.

Our ICT strategy will be reviewed on a regular basis, taking account of any changes in technology, risk or legislation, to ensure its effectiveness and continued relevance moving forward towards 2022.