



SCOTTISH

FIRE AND RESCUE SERVICE

Working together for a safer Scotland

Scottish Fire and Rescue Service

Digital Strategy 2022-2025



CONTENTS

1.	INTRODUCTION – ACO PAUL STEWART	1
2.	OUR DIGITAL STRATEGY VISION	3
3.	OUR DIGITAL JOURNEY SO FAR...	4
4.	OUR DIGITAL STRATEGY IN CONTEXT	5
5.	BUILDING THE STRATEGY	7
6.	DIGITAL STRATEGY THEMES	9
7.	IMPACTS OF OUR DIGITAL STRATEGY	15

1. INTRODUCTION – ACO PAUL STEWART

Having successfully built a solid foundation, this 2022 – 2025 Digital Strategy will build on earlier strategies by promoting an ethos of continuous improvement whilst seeking to utilise digital technology in a variety of ways. The COVID-19 pandemic has introduced challenges from a digital and technological perspective. However, it has also presented significant opportunities for the Scottish Fire and Rescue Service (SFRS) to innovate and move forward at pace. This strategy will seek to embrace these opportunities and add further value to the SFRS by promoting a positive digital culture.

It is widely acknowledged the global digital environment is fast-moving and continually developing. This will require the SFRS to remain agile and evolve in the digital space in a way that supports geographical differences across the communities of Scotland.

Early systems work has resulted in significant progress on singular solutions such as our payroll, staff development (training) and Retained and Volunteer mobilising systems however, there is more to do in this area.

“Change is the law of life and those who look only to the past or present are certain to miss the future.” — John F. Kennedy

Notwithstanding the early progress made, this strategy aims to ensure the SFRS is fit to face the digital challenges of the future.

This includes developing additional resilience arrangements associated with cybersecurity and investing in digital technologies that support a forward direction of travel in other areas such as the management of organisational data, and in the better use of business intelligence, whilst we also consider what steps can be taken to support the environmental agenda. In addition, we will focus on the user experience of staff from an individual perspective and will seek to ensure our digital arrangements meet both organisational and individual needs.

Overall, this strategy aims to ensure the SFRS is fit and ready for the digital challenge of the future. A key objective is to continue the SFRS digital journey whilst seeking to make the journey travelled a positive and rewarding one. We aim to build on early significant investments in digital technology by being ambitious in improving our current and planned solutions. We aim to help our staff to exploit the benefits of the wide range of technologies available. By exploring new technologies, we will further improve the service to our staff and the communities of Scotland.



Paul Stewart



Overall, this strategy aims to ensure the SFRS is fit and ready for the digital challenge of the future.

2. OUR DIGITAL STRATEGY VISION



Our ambition as an organisation extends to embedding a digital culture in a way that supports a digital first mindset negating the need for future mainstream digital strategies.

The vision of this strategy for 2022-2025 is to continue the post-pandemic evolution of our digital services and environment, building on existing successes and working towards embedding a digital first culture within SFRS, adding value to our staff and the communities we serve.

The strategy will build on the significant investments made in digital technology by the Service over the last nine years and changes it has already made in relation to new ways of working. We will include delivery of the innovation we know our staff are enthusiastic about, through research and development and agile implementation of solutions. We will ensure solutions are robust and secure and their benefits can be fully exploited by our staff.

The strategy is sub-divided into several themes to achieve the overall vision which builds on the significant consultation carried out our stakeholders, and reflects their concerns, requirements and ambitions for the digital future of the Service.

3. OUR DIGITAL JOURNEY SO FAR...

Since the inception of the Service, our technology solutions have dramatically improved and extended. Initially through amalgamation and standardisation in areas like the network and email systems, and in single business solutions like Finance, HR, Payroll, Operational Intelligence and shortly with the implementation of a new command and control system.

Some solutions have gone through second iterations e.g. single email and office tools from Exchange and Office to Office 365, and the conferencing and collaboration tool Skype to Teams.

We have implemented a corporate data integration tool that is currently in use supporting Finance and Asset Management Integration, and RDS Payroll. This will allow us to continue to address the issue of duplication and multiple logins for users.

The implementation of the modern desktop across the Service in 2018/19, including direct access for home working, put the Service in an excellent position to move numbers of staff to work from home quickly and seamlessly when the COVID-19 lockdown commenced in 2020.

Complementing all of these solutions, a robust cybersecurity regime has been developed to protect the integrity of the Service's systems and infrastructure.

All of the technology and solutions implemented have supported the visions of the previous two digital strategies; 'we want our people to have access to the right information on the right device at the right time' and 'to put SFRS people at the heart of a digital community delivering a safer Scotland'.

Many of the solutions we have implemented have been ground breaking in working towards the goals of previous digital strategies. A number have been recognised externally and awarded for innovation and good practice.

Our approach, to a great extent, has been evolutionary. However, due to the excellent foundations we have in place, and the commitment of the service to be a digital first organisation, we can evolve more quickly. This will help us in demonstrating innovation and continuous improvement in our digital solutions, enhancing the services we provide to our communities. This strategy will build on the significant progress already made and further enhance the use of digital technology across the service.

4. OUR DIGITAL STRATEGY IN CONTEXT

In developing the strategy we have taken into consideration the external environment in which our digital future is being developed. This includes the impact of the COVID pandemic and the ensuing global recession alongside the impact of the worldwide microchip shortage. Furthermore, it includes the impact of the green agenda and the future development of new technologies, specifically in relation to Microsoft, whose technologies are embedded across our strategic environment. Lastly, we will continue to consider the constantly developing and ever present cyber security threat to our digital solutions and corporate data.

We also carried out a review of UK and Scottish Government digital strategies to ensure our strategy is developed in line with their principles and priorities.

The UK Government strategy is very focused on the concept of cloud-enabled 'digital first' services for the public to allow access to public body services from anywhere on any digital device.

The Scottish Government strategy, 'A changing nation: how Scotland will thrive in a digital world' has a strong focus on the opportunities afforded to Scotland from digital technologies with the expectation that organisations like ours will reinvent ourselves to make us more personal, accountable, adaptable, efficient, secure, sustainable and worthy of public trust. We will transform ourselves into truly digital organisations with digital skills, cultures and operating models. Our strategy aligns clearly with those aims and the 'principles for a digital nation' as shown below.



From the Scottish Government's Digital Strategy: A changing nation: how Scotland will thrive in a digital world – <https://www.gov.scot/publications/a-changing-nation-how-scotland-will-thrive-in-a-digital-world/>

We reviewed a wide range of digital strategies of emergency services from far and wide across the world, from London Fire Brigade, and South Yorkshire Fire and Rescue Service to Los Angeles Fire Department and New Zealand Fire Service. We also considered developments like smart cities across the globe where digital technologies are being used to deliver community-enhancing benefits related to road and water safety.

We gathered good practice and forward-looking ideas from these but also confirmed our view that SFRS already has a well-developed digital foundation for future development.

Importantly, we considered our internal and external guiding documents in developing the strategy including the soon to be published Fire Framework, the Long-Term Vision and the SFRS Strategic Plan. In addition, we have taken cognisance of the digital first principles adopted by the Service.

The strategy will support the delivery of the Strategic Plan through contribution to its outcomes and objectives. We will do this by exploring new and innovative ways to use digital technology to realise efficiencies and to ensure our people have access to the right information at the right time to do their jobs well.

The inclusion of a specific innovation and modernisation priority in the Fire Framework is welcome and gives a direct connection between the framework and the strategy, which will encourage innovation and support the modernisation of the Service.



5. BUILDING THE STRATEGY

This strategy has been developed with significant input from, and consultation with staff and managers, from all parts of the Service through several mechanisms including;

- A subgroup of the Digital Board was set up as a working group with representation from across the service to assist in the development of the strategy ensuring that it reflects a corporate view. This group designed the strategy survey, developed the vision and themes, developed the outline content and supported the strategy development generally, and with specific input from areas like the People, Training, Finance and Asset Systems project, Operations Strategy development and Business Intelligence.
- Senior Information and Communication Technology (ICT) staff meeting with management teams and functions across the country, to gather their requirements and ambitions for future use of technology while understanding their concerns about the provision of digital services.

- Review of customer satisfaction surveys from the ICT Service Desk to identify common issues, understand users' views of the standard of digital services provided, and where improvement can be made.
- Analysis and review of ICT incidents and requests to capture recurring problems and requests for services that are not provided or available currently.
- A survey of staff to gather a range of information about how they use technology currently, what technologies they might use in the future and what the strategy could provide over its lifetime, to improve their working life and help staff achieve their work objectives. The survey was well responded to and a summary of the survey results can be found in Appendix 1.
- Analysis of the input across all methods highlighted three main areas to be addressed by the strategy;
 - Significant interest and enthusiasm for new technologies like drones and video streaming. Enhanced mobile working that our staff and managers envisage would improve efficiency, effectiveness, enhance and potentially extend our services to the public. Joint research and

development between operational staff and technical teams will allow us to understand how the Service can exploit these and other technologies.

- Issues with existing technology solutions were also highlighted through the information gathering. Some were related to the performance of our infrastructure and equipment. More significantly, areas like lack of integration between systems, causing duplication of effort, were recognised as being a barrier to achieving digital ways of working. There are several projects within the People, Training, Finance and Asset Systems project, and the Command and Control Futures project, which are supported by existing and planned systems infrastructure improvements, which will help to address these areas.
- Feedback from all areas suggested a lack of awareness across the service about what is currently in place and how it can be exploited to improve efficiency and improvement. For example, the use of Office 365 and Teams for collaboration. These are very powerful tools that we have at our disposal, and we must ensure that they can be used to their full potential by our staff.

- The strategy has been developed to address all of the findings of our research and takes a thematic approach to address the various challenges posed to the organisation in achieving its ambition of being a digital first organisation. Our vision is 'to continue the post-pandemic evolution of our digital services and environment, building on existing successes and working towards embedding a digital first culture within SFRS, adding value to our staff and the communities we serve.'



6. DIGITAL STRATEGY THEMES

DIGITAL CULTURE

This is the major and primary theme of the strategy that aims to enable the service to exploit existing technologies and explore new technologies. The Service has a great opportunity to harness advancing technologies in our everyday business and developing a digital first culture is key to achieving the vision of the strategy. To achieve the vision, we must socialise the strategy and its benefits to all of our staff and partners, provide digital solutions that meet their needs and contribute to improving their processes and performance. By delivering those solutions we will enable effective adoption of the digital way of life.

- Digital first; establishing new ways of working reflecting how we live our lives now, making use of the tools we currently have and will have in the future to enable our staff to work in a digital first manner.
- Evolving and expanding our digital culture; setting examples and leading by example, ensuring the tools and techniques to support digital working are in place and are reliable, robust and secure to increase staff members confidence.
- Socialising digital strategy; communication is critical to the success of creating a digital culture, focused on benefits to individual users, teams and the service as a whole.

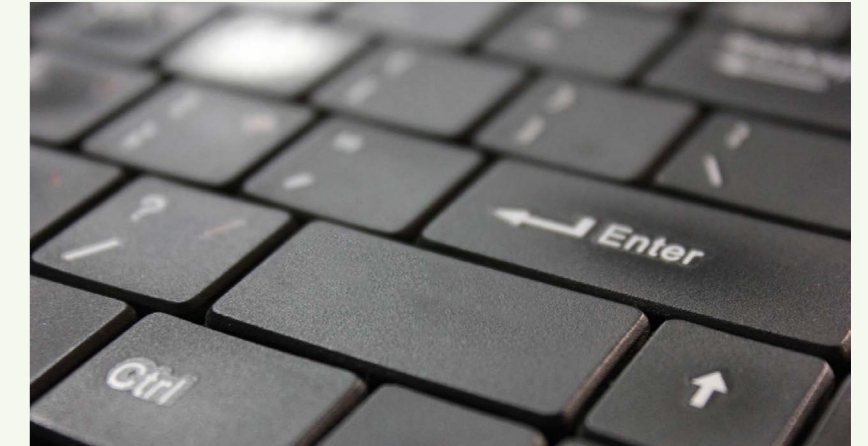
- End to end digital processes; implementing integrated and automated solutions with minimal manual intervention required, minimising mundane tasks and maximising user expertise.
- The journey; our digital future won't happen overnight, although there are building blocks in place and more to come e.g. Emergency Services Network will enable a range of functionality we couldn't have before, People, Training, Finance and Asset Systems project, will join up processes across the service and improve their efficiency and effectiveness.
- Staff engagement and involvement; actively communicating the principles of digital culture.
- Creating/sustaining innovation spaces – digital technologies underpin innovation and are critical to its success, we will provide opportunities and tools for staff to contribute to innovation and the technology that supports it.
- Supporting our users anytime, anywhere; using digital tools to support users e.g. chatbots, self-service.

Enablers; The achievement of this theme will be enabled by actions and processes as well as technology. We will enhance our research and development capability, develop solutions in cross-functional teams, make use of pilots to deliver innovative digital solutions, share good practice across the Service and with partners, develop competition to encourage innovation like the Conservation Station Competition.

CYBER CONFIDENCE

This theme is not just about cybersecurity, although it is critically important to our success, but also about the robustness and resilience of the solutions we implement. Staff must be confident that any technical solution they use, from a mobile phone to a Finance system, will be available and performant where and when they need to use it. These solutions must also have involved the users of those solutions in their development to ensure that they truly meet their needs.

- **Cybersecurity;** effective cybersecurity is critical to achieving success in a number of our themes, ensuring confidence in our systems and infrastructure. We must strive to apply appropriate cybersecurity measures without constraining usability and continue to manage risks associated with adopting new technology and ways of working.
- **Robust and resilient;** users need confidence that the tools they use will be available when they need them, as we have evidence from our consultation that improvement is required in some areas, particularly around the network and some systems performance which will be addressed through upcoming projects like People, Training, Finance and Asset Systems project, new Wide Area Network (WAN) etc.



- **Meeting standards;** we're obliged to ensure we operate to specific security standards and need to adapt to support innovation whilst maintaining those standards.
- **Keeping pace;** we need to keep pace with trends in technology and thinking to continuously improve our digital environment.

Enablers: How we develop and deliver digital solutions, ensuring appropriate levels of security, robustness and resilience will be critical to gaining user and management confidence in those solutions, accelerating user adoption. We will encourage user-led research and development into options, and the creation of solutions including the design, development and implementation of the solution with appropriate training and awareness. We will continue to develop cloud-based solutions to achieve high levels of resilience and availability.



COLLABORATION

Technology allows us to collaborate more easily and effectively in a wide range of areas, for example, the development of policy or design processes by allowing those involved to share ideas, design, documents and other data seamlessly, and across functional, regional, organisational and even international borders. We have many technical solutions already in place which give us a head start in enabling collaboration, and we need to ensure our staff have confidence in those tools and their use.

- **‘Do it together’;** we need to do more at pace but ensure everyone can keep up, improving processes end to end, and across boundaries, reducing duplication and levels of authorisation.
- **Partnership approach;** move away from silo working to improve processes and efficiency through more generic solutions in departments e.g. case management.
- **Messaging and communication;** this is key to the success of the strategy, ensuring the strategy is understood, along with the benefits to individuals, their team, and the service, which should come from sharing success stories.
- **Exploiting the tools;** we’ve got great technology, far better than many organisations, but we need to drive the benefit out of it, pushing the boundaries of how we use it and share good practice.

Enablers: We have established collaboration tools, including Teams and SharePoint, being used to great benefit in many areas of the Service. We will encourage the adoption of collaboration tools to deliver local process improvement and share solutions developed locally with teams across the Service.

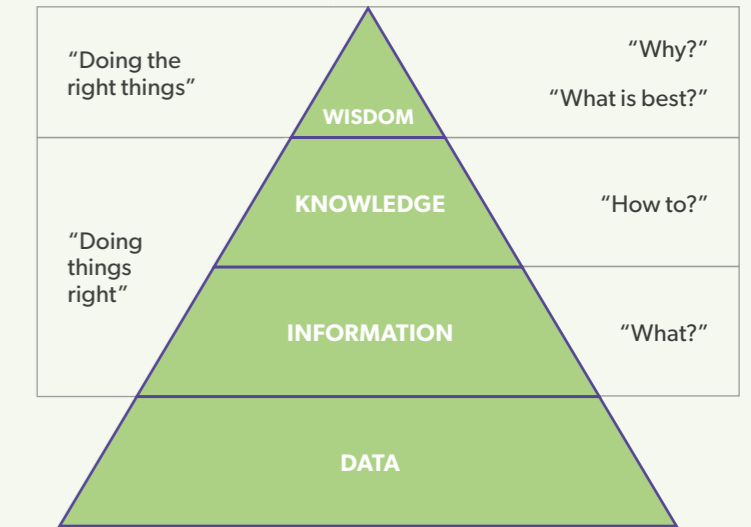
DATA

The data we hold in our organisation is, with our staff, our most critical asset. Our staff need access to a wide range of data to do their jobs and make decisions. We need to be able to transform that data into information that helps develop the wisdom to deliver our services and contribute towards better outcomes for the people of Scotland. We need to work towards ensuring data is accurate, comprehensive and accessible to make the best use of it.

- **We should adopt the data pyramid as shown below;** transforming data to information, knowledge and ultimately wisdom to enhance strategic, operational and tactical decision-making.
- **Our data should be available from any location, from any device;** drive towards the consistent provision of live data and applications on any device e.g. PC/laptop/tablet/mobile phone.
- **Our data should be fully managed;** with appropriate standards and controls, retention, security, access and publishing.
- **We should exploit business intelligence;** using data analytics effectively to enhance the inherent intelligence of the organisation. Our Business Intelligence Strategy has set out our objectives for improving the service use of data and intelligence for the years ahead.
- **Geographical information systems (GIS);** exploit geographic presentation of data analysis to get messages across.
- **Community Risk Index Model (CRIM);** this is a critical example of how we bring internal and external data together, manipulate and analyse it to enhance our ability to make decisions that are evidence-based, robust and stand up to challenge.

- **Data sharing;** the ability to share data within and outwith the service securely and efficiently to further enhance our decision making.
- We will look to measure ourselves against recognised maturity models, frameworks and standards for data quality, maturity and governance.

Enablers: We will develop an enterprise search facility to allow easy and speedy access to information located in multiple and various locations and systems. We will provide appropriate access to corporate tools like CRIM, deliver the business intelligence strategy and develop the use of data analytic tools at user, team and organisational levels.



ENVIRONMENTAL

As a Service we have committed to reduce our carbon emissions by approximately 6% per annum until 2030 and support the Scottish Government's 'Let's do Net Zero' campaign. Many key projects are being implemented such as low carbon heating, smart controls, low emission vehicles and solar panels that digital technology can contribute to the commitment

- **Digital can support sustainability;** implementing digital solutions that deliver real environmental impacts to the Service and the communities it serves, and supporting the current and future projects like improving heating controls and management.
- **The digital first approach;** reduction in travel and environmental impact, reducing the carbon footprint of our infrastructure by moving to cloud-based solutions as we have been doing over the last few years, sharing power-hungry infrastructure with other organisations.
- **Opportunities;** the need to understand opportunities that technology brings to the workplace from an environmental point of view and exploit them.
- **Environmental;** digital first will bring environmental benefits including using technology to manage our use of resources e.g. building management systems, reduction in travel.



Enablers: the continuing shift to cloud-based solutions and sharing infrastructure with partners allows us to minimise our energy consumption, taking advantage of specialist multi-user facilities while continuing to develop technology to support flexible working, and flexible conferencing facilities to reduce travel and fuel consumption.

USER EXPERIENCE

The positive experience of our staff using technology is paramount to the success of the strategy and will deliver more benefit than the technology alone. To ensure all staff have positive experiences when they use solutions, they must understand the technology and be involved in its design and development.

- **New 'work';** some transactional work will disappear with automation, artificial intelligence, machine learning etc. However, there will be new and more interesting work for people to do, ensuring the transition is seamless and painless for staff.
- **Work your way;** focus on the benefit to individual roles and teams, meeting specific needs.
- **Understanding geographic 'capability';** potential ability to deliver some solutions in specific geographic areas and roll out later, for example some solutions may only be required in remote and rural areas.
- **Personally owned, corporately enabled (POCE);** this facility is available and the survey response to this was around 65/35% willing to use their own devices for business purposes such as claiming mileage or booking leave.



- **Customer-focused and business-aligned;** our provision needs to get close to the business and the business must trust supporting departments such as ICT and Data Services to guide and advise them in line with the strategy.
- **Build confidence;** if users don't have confidence in the technology they won't use it to its full benefit and potential investment is therefore wasted, provide clarity about how tools can support the user.
- **Do it once;** single sign-on, credentials carried through, will enhance and make solutions easier to use and better performing

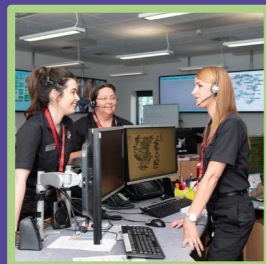
We will continue to work with colleagues and departments to support the design of effective business intelligence solutions that meet user requirements.

7. IMPACTS OF THE STRATEGY

This aims to show the impact and benefits of the strategy on a range of roles in the Service by imagining the route of a 999 call through the Service. From the systems used to prepare and train, to conclusion of the incident and actions that follow.

1 Pre-Incident

- Training is completed in person and online using online training recording systems.
- Retained and Volunteer firefighters use pagers and Gartan to ensure availability in rural areas.
- Online systems allow the gathering of operational intelligence to help crews at future incidents.



2 Initial Call to Operations Control

- A Control Operator, from one of three control rooms, takes a 999 call through the command and control system. Mobilising resources quickly and effectively with information at their fingertips about the availability as the system is integrated with other back-office systems.
- Our three control rooms are interlinked and interoperable therefore negating the need for standby control rooms or workarounds.



3 Mobilising Appliances and Officers

- The Control Operator uses the system to alert crews and officers to the incident, this includes in station end kits and pagers to promptly respond to the incident.



4 Resources Mobilised

- In vehicle sat nav, safety cameras and main scheme radios help crews and officers navigate the roads to the incident quickly, avoiding road closures and ensuring the safety of colleagues and the public.
- Operational tablets in appliances gives crews location/property risks, hydrant information and chemdata about where they are attending.

5 In Attendance

- Main scheme radios and hand-held radios ensure support and communication on the incident ground. This is also integrated into breathing apparatus and body-worn health monitoring equipment, enhancing person and team safety. This also allows crews to react quickly to instructions given.
- Video streaming and drone footage can be used remotely by senior officers to provide support.
- Officers in attendance or working remotely can access ongoing data using systems and applications on connected devices.



6 Post Incident

- Reporting systems including operational assurance, health and safety, post incident debrief and general incident reporting takes place to debrief and inform crews, and officers, for future incidents.

Supporting Roles

- **Retained firefighters'** timesheets will be generated automatically using the Operations Control systems which are linked to payroll systems, requiring no manual intervention – making the end-to-end process more efficient. This allows more time for payroll colleagues to delve into analysis and provide meaningful and insightful information for decision making.
- **Community Safety Engagement teams** access the post incident data to focus their future activities. They can share this information across devices and with partner organisations to enhance community safety.
- **Communications colleagues** use technology to document incidents, provide updates for staff and media, as well as collaborating with operational colleagues and partners. Mobile technology allows them to respond effectively from any location.
- **In Stores**, paperwork will be reduced and simpler transactions can be made by automatic re-provisioning of equipment used by crews. Self-service requisitions can also be made easily by firefighter and officers for uniform and other key items.

APPENDIX 1 – SUMMARY OF SURVEY RESULTS

[Click here to see the Digital Strategy Survey Questions and Responses](#)

This will be available internally to SFRS staff.
A summary will be prepared for external readers.



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[**www.firescotland.gov.uk**](http://www.firescotland.gov.uk)

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