NOTTINGHAMSHIRE
Fire & Rescue Service
Creating Safer Communities

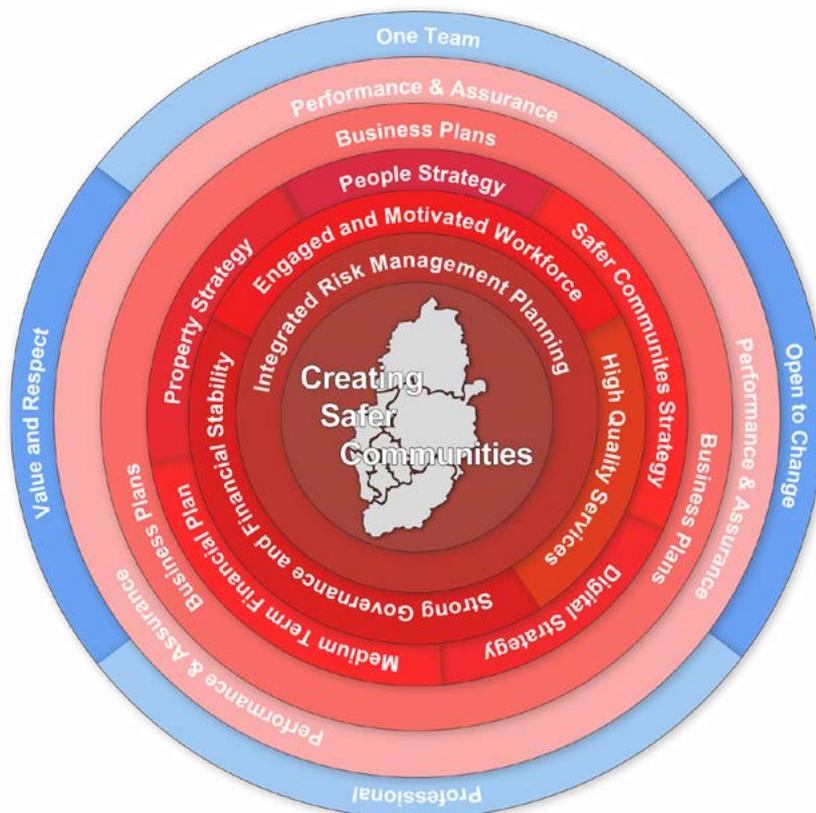# Digital Strategy

2019-2022

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Introduction

Nottinghamshire Fire and Rescue Service (NFRS) uses digital technology, or information and communication technology (ICT), in a huge variety of ways to support its mission of Creating Safer Communities. Whether it's mobilising resources to operational incidents and making sure that our front-line staff have all the data and intelligence they need or using business systems to manage and control our resources, technology touches every part of our Service.

Simply, without digital technology our Service could not work effectively or do the job it does for communities across Nottinghamshire. For example, each day the members of the ICT Department will:

The term digital technology is used to describe the use of digital resources to effectively find, analyse, create, communicate and use information in a digital context including the use of web tools, digital media tools, programming tools and software applications.

Any system is said to be using digital technology if it uses parts which contain or make use of binary or digital logic. This can be in hardware or software. What was always known as computer systems, IT or ICT, is now encompassed by the description 'digital technology'.

The ICT industry is a fast-moving, ever-changing environment - the pace of change in technology has accelerated significantly in recent years leading to a widespread increase in the use of personal devices to access data, information and services in the workplace. NFRS needs to embrace and exploit this technical revolution which has evolved - and will continue to evolve - to ensure our Service makes best use of available data and information to improve our services to the public and to aid our joint working with public sector partners.

This strategy will paint a vision of how the Service aims to use technology in the future. It will describe a set of principles that will be worked to in order to ensure that the vision becomes reality, it will detail the activities the ICT teams will undertake to work towards the vision, and it will outline how the Service can use digital technology to help the service achieve the aims of its Strategic Plan.

- Look after and manage IT equipment across all Service locations.
- Develop and implement the systems that enable the Service to operate.
- Ensure that the ICT network is secure and resilient, enabling efficient communications across the Service.
- Work with the Derbyshire FRS and Leicestershire FRS IT teams to maintain critical operational communications via Fire Control and the Airwave radio system.

The Challenge

In April 2019, NFRS launched its latest Strategic Plan, highlighting how it intends to meet the Fire and Rescue National Framework for England, which sets out the Government's expectations and responsibilities for fire and rescue services.

The Plan is underpinned by three strategic aims that underpin everything that the Service does for the people of Nottinghamshire. They are: -

1. **High quality services;**
2. **An engaged and motivated workforce;**
3. **Strong governance and financial sustainability.**

The ICT Department contributes to these aims by reducing organisational risk through the creation of standardised, resilient and integrated systems with simplified processes; delivered by cost-effective ICT services and solutions that are focussed on the needs and objectives of the Service.

The first ICT Strategy 2013-2015 was focussed on modernising the ICT infrastructure. In short, NFRS had an ageing, unsuitable and insecure IT architecture, with inconsistent support mechanisms that would not support the future needs of the Service.

The ICT Strategy 2016 aimed to implement evolving digital technologies to allow staff to embrace new ways of working whilst maintaining strong cyber security activities. To achieve this, four connected work streams were delivered:

1. Unified collaboration;
2. Unified communications;
3. Connected workforce;
4. Emergency Services Network (ESN).

The two previous strategies have laid the groundwork to ensure that NFRS has a solid foundation of modern, fit for purpose systems and technologies that would be up to the task of delivering against the strategic aims of the NFRS Strategic Plan 2019-2022.

The challenge for the ICT Department is to ensure that the digital solutions provided to the

Service continue to be appropriate, reliable and useful, to enable all staff to reduce risk to the communities of Nottinghamshire.

In order to meet this challenge, the ICT Department will ensure that the people who use technology are at the heart of the digital transformation of the Service. Our staff should be digitally literate and be equipped to embrace new ways of working. NFRS internal processes should evolve to adopt digital best practice and the Service should be prepared to change them radically to foster efficiency.

The forward plans that are outlined in this Digital Strategy have been developed in collaboration with all departments of the Service to support the overall objectives of the NFRS Strategic Plan 2019-2022 and deliver against the goals of the annual action plan and various departmental business plans.

Our Vision - Digitization

The process of Digital Transformation (or *digitization*) is defined as: -

"The reworking of the products, processes and strategies within an organisation by leveraging current technologies."

The ICT Department will embrace this definition and work collaboratively with all areas of the Service and our partners to deliver an efficient digitally enabled workforce.

The NFRS Digital Strategy 2019-2022 aims to deliver an adaptable working environment that will facilitate a connected workforce, that can be characterised as:

- **Agile** – our staff can work securely across multiple devices and locations;
- **Flexible** – collaboration between colleagues, other emergency services and partner agencies is effortless;
- **User-centric** – our people have appropriate digital tools and data to enable them to deliver within their role.

The new digital landscape within NFRS aims to reduce organisational risk by creating a foundation of ***user-centric solutions*** that are ***standardised***, ***secure***, ***resilient*** and ***integrated*** to support simplified and efficient business processes.

To deliver this, the ICT Department has a clear, simple and focused vision:

We want our people to have access to the right *information*, on the right *device*, at the right *time* and have the right *skills* to use them *effectively*.

The workforce needs access to useful data to do their jobs. From there, they can turn that data into information which helps develop the knowledge to deliver our services and contribute towards better outcomes for the people of Nottinghamshire.

The ICT teams will work across every department within NFRS to ensure that staff have access to the right data in a secure manner. We will develop and implement digital solutions to ensure that data and information is accurate, comprehensive and easy to access

Our Vision - Digital Culture

The ICT Department will strive to use mobile technology to its maximum potential to ensure that information is available through resilient and secure means to our people on the ground and to those who need to work flexibly. This will help to reduce organisational risk and enable more efficient risk prevention for the people of Nottinghamshire.

The working world has changed, and staff are no longer reliant on a desk to do their work. Many roles within the Service are already performed on the go, but station-based staff are not necessarily fully benefiting from digital technologies.

NFRS Service Delivery staff need data to help remain safe at incidents and be able to capture information to aid in learning valuable lessons. Key risk data needs to be fed directly into systems which can be accessed remotely, without the need to be at a NFRS location.

The rise of mobile technology has seen a shift in user expectations, which increases with every generation of this technology.

Generally, people want to access the applications and data that they need to fulfil their role, from any location.

They also want to use efficient processes that are not reliant on lengthy paper forms, or paperwork that has been converted into *Microsoft Word* forms (this is not *digitization* in its truest form).

The ICT Department will work in partnership with the organisation to develop efficient business processes using electronic forms and applications that can be used from any location, on any device.

This vision will establish a truly '*digital culture*' where work is delivered in an efficient manner, in a '*paperless*' format.
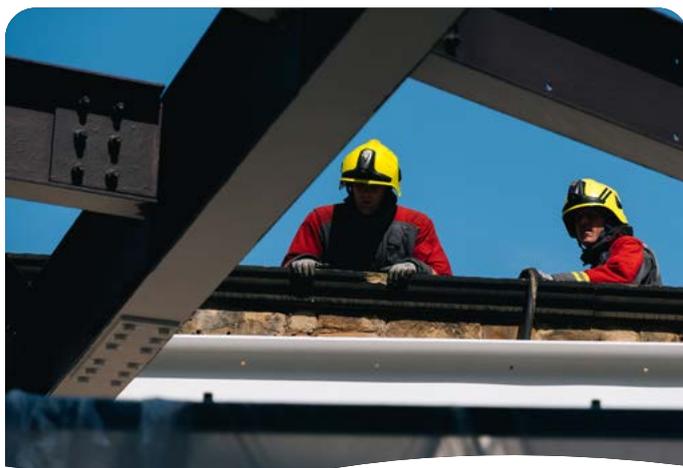
Benefits of Digitization

Delivering this strategy will lead to several benefits being realised for NFRS. Having access to _accurate_, _timely_ and _relevant_ data from any location will further improve decision making in the Service as all staff will have better information at their fingertips.

Successful delivery of this strategy can also have an impact as NFRS works to improve community safety. With access to key systems remotely staff engaged in prevention activities will be able to collect valuable risk information about businesses and properties within the communities of Nottinghamshire.

Operational crews will be able to conduct Safe & Well visits efficiently and gather valuable data from incidents whilst returning to their station. Furthermore, processes improved by automation and a reduction in duplication will help NFRS deliver a more efficient service and reduce the time wasted on the completion of manual tasks and lengthy paper-based forms.

Key benefits:

- Improved _communication_ across the organisation and with external partners.
- Enhanced _collaboration_, team working and information governance, both internally and externally.
- _Integrated_ systems, facilitating enhanced productivity, reduced task duplication and enabling mandatory processes.
- Projects and Programmes are delivered to the required _quality_, on _time_ and in _budget_ across the Service.
- Strong ICT _Governance_ that will encourage planning and enable a service-oriented management culture.
- _Standardised_ technology reducing duplication, complexity and failures.
- Management information and data analysis that _drives informed decision making_.
- Cost effective digitized infrastructure, that is a _platform for innovation_.
- _Microsoft based_, maintainable and supportable systems, with established, low effort upgrade paths.

Our Digital Principles

The priorities of the Service may change during the life-span of this strategy, but the principles that will guide the work done by the ICT Department will allow ICT staff to address the technical and organisational challenges they will face going forward as NFRS develops and changes in the future.

Access from anywhere with any device

The ICT Department will ensure that all digital solutions and systems are device independent. Regardless of whether staff are sitting at a desk in an office, using a tablet while working from home or on a smartphone while out and about, systems should work for them.

Innovation and responsiveness built in

The ICT Department will look to challenge the status quo when delivering digital solutions. All corporate processes across NFRS will be examined from start to finish to determine how they can be simplified, and the duplication of data can be prevented. Mobile applications will be responsive and effortless to use, to ensure that staff can complete their tasks efficiently.

Digital-first

'Digital first' or 'Digital by default' is a commitment from the UK government to provide as many public services as possible through electronic means. NFRS will enable the Nottinghamshire public to access our services online. Internally, the ICT Department will work to transform all business processes so that they can be completed digitally and phase out paper-based systems.

User-centric solutions

Digital solutions will aspire to be intuitive, straightforward and require minimal training. Users will be consulted when designing solutions to ensure that the finished product meets their needs. Agile techniques will be employed to embed continuous improvement of all systems.

Digital skills development

The ICT Department will work with the NFRS Learning & Development team to narrow any skills gaps identified by users and provide up-to-date support via the ICT Service Desk and MyNet. All ICT training will be user-led and delivered in plain English, not technical jargon.

Microsoft-first

NFRS will utilise Microsoft technology for as many digital solutions as possible. Other software vendors will be used if their offering is considered to more suited to the needs of the Service, but only after all Microsoft solutions are eliminated.

Cyber Security is essential

The ICT Department will ensure that the ICT infrastructure remains safe and secure from hackers and other cyber criminals and compliant with Emergency Services Network (ESN) security standards and processes.

Our Strategy 2019-20

The next section outlines the general activities which the NFRS ICT Department will undertake to deliver the digital strategy between 2019-2020.

More specific detail will be documented in the ICT Departmental Business Plan in each year.

Objectives

- Implement collaboration 'Team sites' for all NFRS departments and teams.
- Deploy a new electronic document management system.
- Deliver a digital 'Project & Programme Management System' to improve project delivery across NFRS.
- Ensure that all ICT systems are secure and licenced appropriately.
- Review the structure and resources deployed within the ICT Department to ensure they are fit for purpose.
- Implement a Management Information reporting solution across the Service.
- Develop a print strategy to achieve best value and delivering savings for printing services and maintenance for NFRS.
- Facilitate a secure 'Bring Your Own Device' solution for the Service, to help staff work remotely and improve business continuity.
- Improve the support of ICT tools used by front-line staff, such as MDTs, Pagers etc.

Expected Outcomes

- Internal communication and collaboration across NFRS has improved using Microsoft SharePoint.
- All corporate documentation has been migrated from the legacy Windows file servers on to Microsoft SharePoint.
- The management of all NFRS projects is conducted using Microsoft SharePoint.
- The Sophos anti-virus solution and firewalls have hardened cyber-security.
- National Cyber Security Centre (NCSC) Cyber Essentials Plus certification has been retained.
- An ICT Business Analysis and an ICT Security Manager are recruited into the ICT Department.
- Microsoft PowerBI Server is implemented, and management reports are distributed.
- Modern 'follow-me' printers are deployed across the Service at a reduced cost.
- NFRS staff can securely access their email, contacts and calendar from any device.
- The ICT Service Desk provides first-line triage support for all Systel devices.

Our Strategy 2020-21

The next section outlines the general activities which the NFRS ICT Department will undertake to deliver the digital strategy between 2020-2021.

More specific detail will be documented in the ICT Departmental Business Plan in each year.

Objectives

- Deliver projects that will rationalise and integrate NFRS applications.
- Enable electronic protective marking of all email and documentation.
- Ensure that the Service has appropriate licences for all software.
- Re-architect the ICT infrastructure to facilitate the move of HQ site to the new Joint Headquarters site.
- Improve end user experience of technology through better training.
- Embed the use of Management Information and Business Intelligence across NFRS.
- Service Delivery staff are provided with appropriate digital tools.
- Rationalise the NFRS telephone network to increase resilience.
- Migrate the Joint Fire Control Integrated Command & Control System (ICCS) to Airwave DCS (Despatch Communications Server) with our Tri-Service partners.
- Decommission the legacy Tri-Service Control infrastructure at Bestwood Lodge.

Expected Outcomes

- The Service shift scheduling system and competency management solution will have been reviewed and upgraded.
- Implement Microsoft Azure Information Protection to enable protective marking of all email and documentation.
- The NFRS *Microsoft* Agreement is renewed on 31 March 2020.
- NFRS staff can work effectively and efficiently from the Joint HQ site.
- All staff are confident in using technology and are aware of their responsibilities for its appropriate use.
- *Microsoft PowerBI* is used by all staff.
- Front-line staff can work more effectively when away from their base
- NFRS telephony is delivered via modern internet-enabled technology to increase resilience (replacing analogue telephony).
- The Tri-Service ICCS utilises DCS for all critical operational communications.
- All *Systel* ICT equipment is removed from NFRS HQ with no negative impacts on the Tri-Service Control system.
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Our Strategy 2021-22

The next section outlines the general activities which the NFRS ICT Department will undertake to deliver the digital strategy between 2021-2022.

More specific detail will be documented in the ICT Departmental Business Plan in each year.

Objectives

- The NFRS ICT infrastructure will be further developed to enhance core services using 'cloud' solutions and Software as a Service.
- Maintain an ICT asset upgrade and replacement programme, taking into account changes within the Service.
- NFRS will transition from the Airwave communications network to the Emergency Services Network (ESN), in line with the East Midlands regional programme plan.
- The ICT Department will establish the mechanisms and resources needed to manage the support of all NFRS telecommunications systems (fixed and mobile telephony, ESN devices, radios and mobile data terminals).
- Continue to develop ICT projects that enhance and renew NFRS business applications, in line with Service priorities.
- The NFRS ICT Department will positively collaborate with the Nottinghamshire Police Information Services Department.
- Ensure that ICT provision continues to support the strategic plans of the Service.

Expected Outcomes

- All NFRS applications, systems and data will be delivered by appropriate *Microsoft* 'cloud' solutions, such as *Office* 365, *Azure*, *PowerBI*, and other vendor SaaS solutions.
- All NFRS ICT endpoints, server and network infrastructure will be replaced for modern equipment, as appropriate.
- NFRS critical mobile communications and operational data will be delivered using ESN compatible mobile devices over the Emergency Services Network.
- The support of all NFRS critical communications devices and systems are managed by the ICT Department.
- NFRS business applications are provided using the most modern and secure technology, preferably using the 'cloud'.
- NFRS and Notts Police technical teams work in collaboration to deliver an efficient, effective and economical ICT infrastructure.
- The ICT Department and technical infrastructure is an enabler for organisational efficiency and is fully consulted during the development of the NFRS Strategic Plan 2023-26.

Our Key Enablers

This strategy cannot be delivered in isolation and it will require a whole range of activities to support the successful implementation of the plans herein. The previous ICT Strategies have laid the groundwork to enable this plan and deliver the digital vision for the Service.

ICT Department

The structure of the ICT Department has developed since 2013 and the restructure of 2019 has further enhanced the skills and resources of the technical teams. As digital technology evolves, the skills and resources required to support it will need to match the pace of change. It is therefore inevitable that the department will change over time to meet the needs of the Service, and this strategy will guide any changes that take place.

The ICT department has worked hard to ensure that the right supplier partnerships are in place to make sure the ICT department can deliver. Strategic suppliers and collaborative partners, are aware of the digital strategy and will work with the ICT Department to make the digital vision a reality.

Project Methodology

With so much change taking place in the Service we have implemented a robust ICT project management methodology based on Prince2 and are using a development methodology known as Agile. The Agile development approach involves users at every stage of the development process and delivers small pieces of the system at a time to get feedback from users and to make sure the system is meeting their needs. The ICT department will apply Agile project management principles to our software development projects to make sure that they are delivered on time, on budget and meeting user requirements effectively.

Organisational Engagement

The ICT Service Transformation team will work closely with the organisation and key stakeholders to make sure that ICT is meeting service requirements. Customer service mechanisms, including service levels and standards, will enable continuous improvement in the ICT services and this will help the ICT Department to deliver the exact services that NFRS needs.

Quality and Standards

Quality should be at the heart of everything that happens in NFRS and ICT embraces that approach. ICT will use the principles of continuous improvement to ensure NFRS digital developments will always be fit-for-purpose and compliant with the appropriate cyber-security standards. The mandating of specific industry open standards will make our ICT solutions fully interoperable and able to be shared and scaled across organisational boundaries. Using industry standards will allow NFRS systems to more effectively interface with other systems and technologies.

Building upon the success of other standards-based initiatives the ICT department will seek to adopt the principles of the International Standard for Information Security (ISO27001) as a means to ensuring that the confidentiality, integrity and availability of services and systems we commission are managed, maintained and assured to the highest possible level.

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