HEREFORD & WORCESTER HWFR FIRE AND RESCUE SERVICE

Digital and Data Strategy

2024-30

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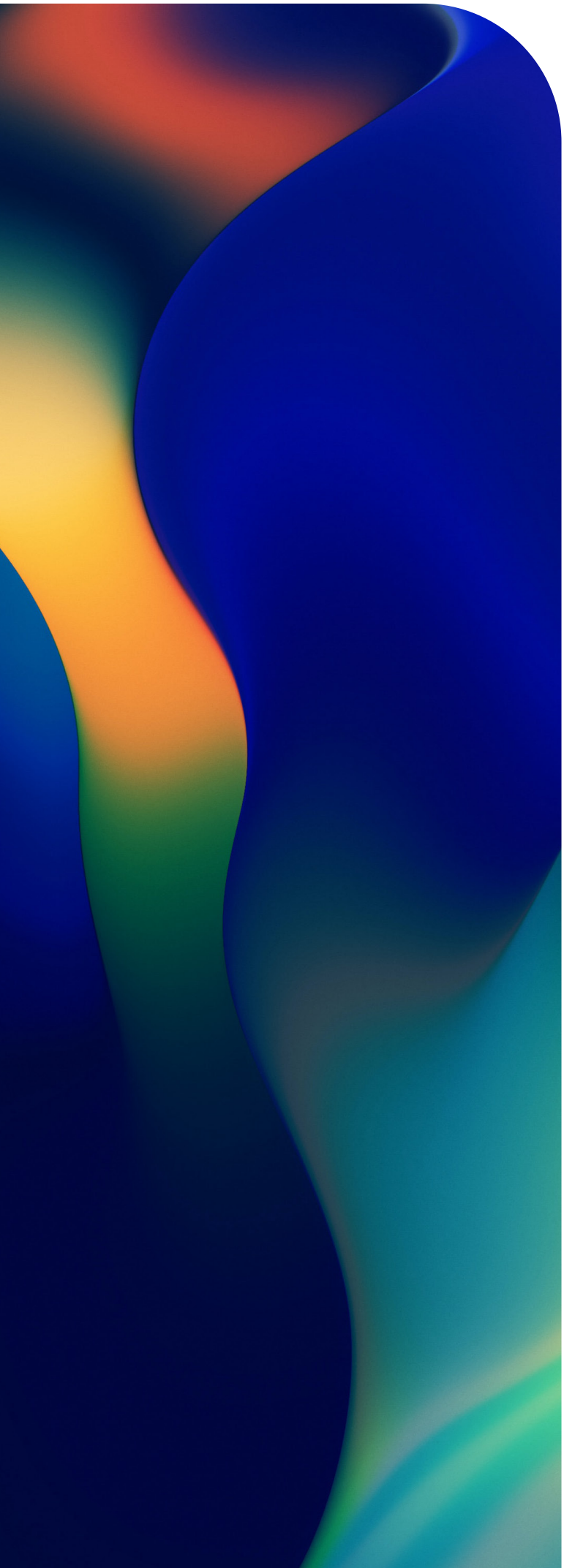

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Foreword

This document sets out the headline objectives of our Digital and Data Strategy. The strategy is one of the Enabling Strategies designed to support the Service's three Core Strategies that outline how the strategic aims of our Community Risk Management Plan (CRMP) will be delivered through our Response, Protection and Prevention Services. Alongside the CRMP, the Core Strategies drive everything that we do, and underpin our mission of delivering high quality and sustainable services to our communities.

Every part of the business of keeping communities safe requires good data and technology that is fit for purpose. This is not a strategy for our I.T. department, it is for everybody that works for and with our organisation. To be excellent in the modern world you need good data, evidence-based approaches and have technology that reflects the modern world. The Digital and Data Strategy outlines our ambition to enhance end user experience, staff welfare and further improve community safety by actively utilising digital solutions and sophisticated data analysis to deliver Organisational excellence in the service of our communities.

The Digital and Data Strategy will be a key driver for investment in digital solutions. This includes infrastructure, data management systems, applications to simplify processes as well as the training of staff to deliver the vision of this strategy and identified benefits. Any investment will consider the underpinning principles of this strategy.

HWFRS is required to operate as a network and that is why we have aligned with the expectations of the National Fire Chiefs Council (NFCC) technological blueprint. This will standardise national digital and data approaches to ensure best practice to the communities we serve. We also work in partnership with other agencies and this strategy sets out principles of how we can share information effectively to ensure we keep our communities safe.

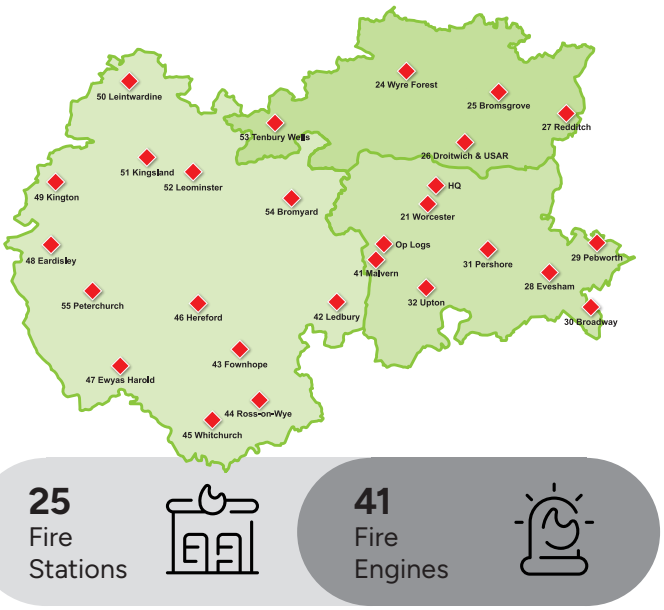
As a living document, the strategy must remain agile and flexible to be able to respond to the changing needs of our workforce and other circumstances as necessary. We will maintain this through continual monitoring and review of all aspects of this strategy.

Jonathon Pryce
Chief Fire Officer / Chief Executive

Our Purpose, Vision and Mission

Who We Are

Hereford & Worcester Fire and Rescue Service receives approximately 17,000 emergency calls each year requesting assistance at a wide variety of incidents, including property and countryside fires, road traffic collisions, collapsed structures, water rescues, hazardous materials and animal rescues. We attend on average 7,366 incidents each year – that equates to 142 incidents every week across the counties of Herefordshire and Worcestershire.



Purpose

Why we are here

Keeping people safe from fire and other risks. Responding efficiently and effectively to incidents and emergencies.

Vision

What we want to do

Saving More Lives: Building on our successes to continue to make a difference, improve lives and help secure resilient communities.

Mission

What we do every day

As one professional team we will work hard every day to deliver high quality, sustainable services to our communities.

Our Fire Stations are staffed by a mix of 'Wholetime' Firefighters – operating on a full-time basis and providing an immediate response, and On-Call Firefighters who live or work locally and are available within five minutes should they be needed. All our Fire Stations respond to emergencies 24 hours a day, 365 days a year. Some Stations are crewed by Wholetime Firefighters as well as On-Call colleagues. We also operate three 'day-crewed' stations that have Firefighters operating Wholetime during the day and On-Call overnight. The remaining Stations are all staffed solely by On-Call Firefighters.

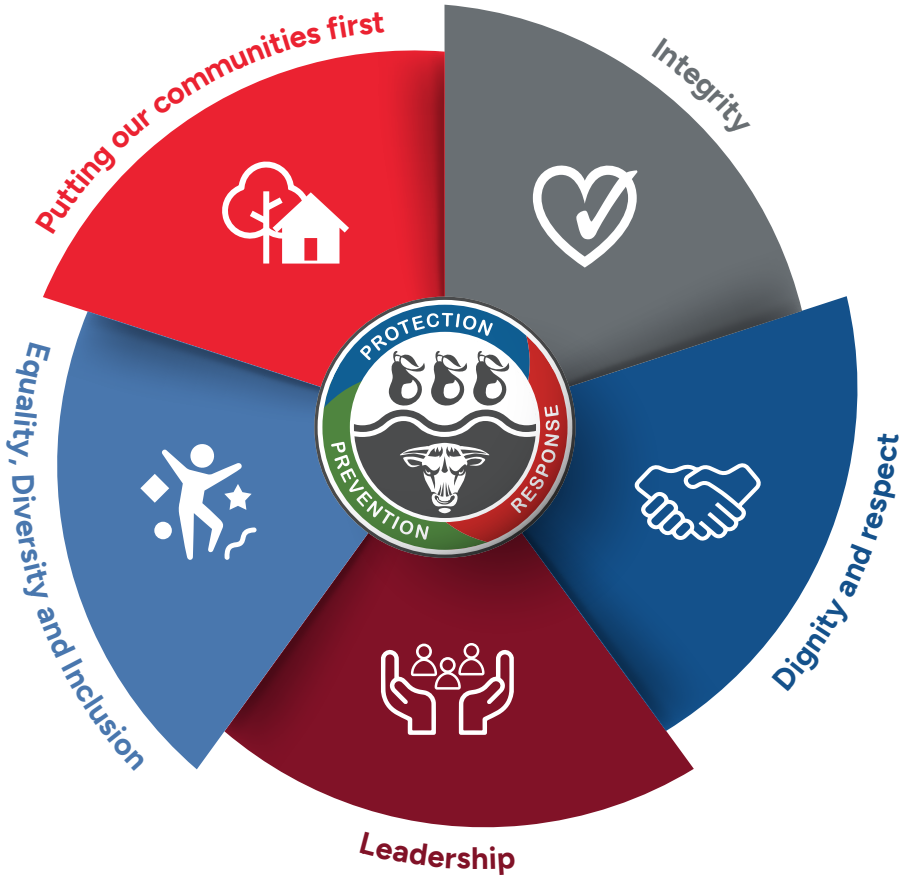
Our Service is supported by our Fire Control team who answer emergency calls and deal with mobilising, communications and other activities and also our Support teams in our corporate areas such as ICT, HR & Development and Payroll, Operational Logistics and Finance.

Our core purpose, vision and mission are what drives and motivates our people to make the communities of Herefordshire and Worcestershire safer. To do this effectively we need to understand and appreciate the diversity of the communities we serve and have a workforce that is inclusive; where our people fully represent and understand those communities.

Our Ethical Principles

We are guided by the Core Code of Ethics for Fire and Rescue Services (FRS) in England.

The Core Code of Ethics sets out five ethical principles, which provide a basis for promoting good behaviour and challenging inappropriate behaviour. These principles are our guiding set of values and help us to improve organisational culture and workforce diversity, ensuring that communities are supported in the best way.



Putting our communities first
We put the interest of the public, the community and service users first.

Integrity
We act with integrity including being open, honest and consistent in everything we do.

Dignity and respect
We make decisions objectively based on evidence, without discrimination or bias.

Leadership
As positive role models, we are accountable for everything we do and challenge all behaviour that falls short of the highest standards.

Equality, Diversity and Inclusion
We stand against all forms of discrimination, create equal opportunities, promote equality, foster good relations and celebrate difference.

Introduction

This Digital and Data Strategy sets out our plans for the next six years towards achieving our overarching core purpose, vision and mission, and our work will be guided by the Core Code of Ethics for Fire and Rescue Services. The Digital and Data Strategy outlines how HWFRS will leverage digital and data to meet its objectives, improve public safety, enhance community engagement, simplify system and process, and support staff Safety, Health and Wellbeing. It identifies the technological infrastructure, processes, and tools needed to support the organisation. In addition it outlines the citizen interactions required to deliver value to the community and drive innovation through data analysis.

What our Digital and Data Strategy seeks to achieve:

1. Setting Strategic Objectives

1.1 Should be specific and measurable.
1.2 Aligning with organisations vision and missions.
1.3 Should be set in the context of a SMART framework.

2. Data Collection and Analysis

2.1 Sets out an approach to the collection / harmonisation from various sources.
2.2 Requirements for data analytics tools to extract meaningful insights.
2.3 Digital and data insights to inform decision-making.
2.4 Foster a culture of openness and deepen collaboration with partners.

3. IT Infrastructure and Governance

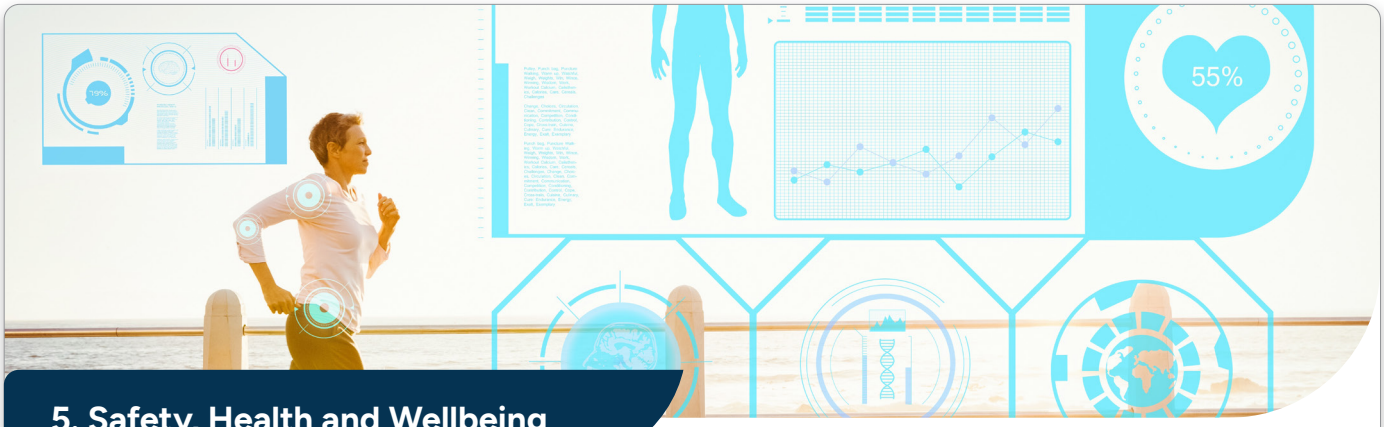
3.1 Requirement for robust infrastructure that includes hardware, software, and data management systems.
3.2 Employ best practices for data security, access management, and compliance.
3.3 Transition to mobile devices to support information at the point of need.

4. Community Engagement

4.1 Cultivate trust between communities and HWFRS.

4.2 Provide transparency around HWFRS services and processes.

4.3 Gain insight into community needs and inform approaches that align with community values.



5. Safety, Health and Wellbeing

5.1 Use of online training and support materials.

5.2 Use of wearables and health tracking tools.

5.3 Facilitate employee-led wellness programs and promote better work-life balance, reducing stress levels and improving mental health.

6. Continuous Improvement

6.1 By measuring outcomes and analysing data, HWFRS can identify areas for improvement and optimise processes continually.

6.2 Allows HWFRS to stay agile in the evolving public safety landscape, responding to community needs and maximising public trust.

Vision and Mission
Digital and Data

The vision, as seen below, outlines how HWFRS looks and feels when digital and data are used in the most efficient and effective way to provide greatest value.

There are four mission statements, describing how the organisation will orientate itself to deliver the vision and achieve the identified benefits. These benefits are discussed in the Digital and Data Objectives on page 11.

Objectives
Digital and Data

Approaches to achieve the mission
To achieve each of the mission statements, high level plans or approaches, have been identified. The approaches will be delivered through various projects.

Mission 1
Use digital and data capabilities to support operational excellence in Response, Protection and Prevention.

Approach
Develop the infrastructure and capabilities to make the prevention and protection information accessible to communities and partners
Develop stakeholder engagement strategy and channel management capabilities to support community and partner engagements.
Develop reliable and consistent data sources, data integration capability and data analytics to inform decision making.
Develop enhanced response information, resource capability and resource availability to optimise our response function.
Develop communication approach and tools to inform and promote HWFRS services.

Mission 2
Use digital and data capabilities to provide access to contextual knowledge to enable staff to make more informed decisions.

Approach
Understand the data sources that contribute to the development of CRMP.
Evaluation to develop an evidence base to understand the impact of various sources on Community Risk Profiles and strategy development.
Develop enhanced information, resource capability and resource availability to optimise our effectiveness and efficiency.
Understand all the data sources and the dependencies across the corporate functions to develop information to support better decision making.
Identify and implement enhanced digital technologies and work practices to deliver targeted approaches in both the operational and corporate business areas.

Objectives (continued)
Digital and Data

Mission 3
Use digital and data capabilities to support analysis and evaluation to drive evidence-led continuous improvement.

Approach
Produce data classifications and models and visualisations to improve understanding of the existing data landscape. Develop HWFRS data models to align with national standards and implement across the organisation.
Identify and document core operational and corporate processes. Develop capability and tools to identify, analyse and improve both operational and corporate processes to ensure efficiency & effectiveness of the activities.
Define requirements for data analytics. Identify and implement tools for data collection / harmonisation, data integration ,data analytics and data visualisation.
Review existing process for debriefing and capturing lessons. Identify tools for automatic capture of lessons learned. Develop stakeholder list and appropriate channels for information dissemination.

Mission 4
Using digital and data capabilities to support our workforce to learn, develop, feel valued, and thrive.

Approach
Profile each role and understand digital and data requirements. Undertake Training Needs Analysis (TNAs) to identify the gaps. Develop and document training and development plans.
Develop on-line learning platform to support staff learning and development. Identify which content can be delivered through digital channels. Supplement with in-class training as appropriate.
Use the highlighted digital and data capabilities and outputs to automatically identify skills gaps and target training as needed.
Explore the opportunities to use digital technologies to monitor and improve staff Safety, Health and Wellbeing (SHW). Investigate appropriateness of wearable technologies to monitor staff SHW. All digital developments need to be assessed through the lens of staff SHW.
Develop systems to assess staff numbers and capabilities against organisation requirement. Identify training or recruitment options as appropriate.

Principles
Digital and Data

This strategy sets five principles that underpin the modernisation of our service and allow HWFRS to improve its digital and data capabilities.

1. Strategic Alignment and Design

1.1 We will align to the vision for HWFRS Service Digital and Data Strategy. This will influence the architectural principles we apply, and will guide our technology investments.

1.2 Support convergence to NFCC technology blueprint.

1.3 Updates to target architecture in line with ongoing market evolution and horizon scanning.

1.4 User driven design that provides easy and effective access to digital and data services.

2. Data Driven

2.1 The right data is available to the right people, at the right time.

2.2 HWFRS will use a common data model to ensure data be accurate, defined and understood.

2.3 Establish data governance, provenance of data and organisation structures.

2.4 Remove duplication of data and move to direct API based integration with authoritative sources of data.

2.5 Develop standards for the stewardship of data, with appropriate recourse to the Information Asset Owner.

2.6 Produce taxonomies, entity models and visualisations to improve understanding of the existing data landscape.

2.7 Establish input validation to ensure that data is accurately captured.

Principles (continued)
Digital and Data

3. Modern Core Technology

3.1 Systems components and processes will take advantage of industry best practice and open standards wherever possible.
3.2 Reduce the complexity and cost of the legacy infrastructure as we modernise.
3.3 Application rationalisation and optimisation.
3.4 Develop connected technology standards and roadmap (link to enterprise architecture).
3.5 Functionality to mobile devices – mobility platforms.
3.6 Migrations to cloud based services where appropriate.
3.7 Develop insights through big data analytics & AI solutions.

4. Security

4.1 Develop risk and vulnerability assessment based on NCSC framework.
4.2 Develop security model (link into enterprise architecture) to embed secure by design approach.
4.3 Establish security controls to address risks of data usage.
4.4 Promote ethical use of data and define the risk appetite for control and management of data
4.5 Build confidence in the organisation's compliance with policy and legislation in the use of data.

5. Develop Data and Digital Talent & Culture

5.1 Define the appropriate skills required for the role and have these staffed with the right people.
5.2 Develop competency model to enable the change in core digital activities by delivering skill shifts in the digital, data and technology functions.
5.3 Invest in people, from senior leadership through to the front-line, to ensure they are equipped with the right capabilities.
5.4 Establish digital leadership and ways of working to allow the workforce to focus on critical and value-adding activities.
5.5 Foster a culture of openness and deepen collaboration with partners to design and tackle complex public safety issues.

High Level Benefits
Digital and Data

Outcome	Benefits
Reduced risk of harm to communities	• More efficient and effective service will deliver improved outcomes and reduced risk of harm. • Greater confidence in HWFRS will allow communities to be more resilient and more proactive in owning prevention & protection activities. This reduces the risk of physical harm to communities, as well as a reduction in the risk of economic harm. • An efficient and effective service delivery, and a more informed community, will decrease the number of avoidable incidents that HWFRS are required to respond to.
Increased community confidence	• With greater engagement through digital channels and consistent service delivery HWFRS is able to provide communities with improved response, protection and prevention activity. Digital channels will also be used to demonstrate the value of the services offered to increase community perception of these and ensure increased community confidence.
Enhance staff health, safety and wellbeing	• Data is used to support the recruitment & development of the workforce and help them to thrive in their service to the public. • More focused learning and development opportunities, including digital and data literacy, of all staff • Greater use of digital and data capabilities will enhance situational awareness to allow response teams to respond safely. • A decrease in incidents decreases the risk of harm to the staff.
Increased effectiveness of service delivery	• Response decisions are based on real-time information to ensure resources are used in the most effective way. • With skilled workforce, and real-time situational awareness, better decisions-making about prevention & protection activity will result in a safer community, improved outcomes and increased community satisfaction. • Greater use of digital channels will enable wider community reach. This supported with in-person prevention activity, will result in a reduction in the number of incidents attended.
Increased efficiency of service delivery	• Understand demands and available capabilities (resources and skills) in real-time and prioritise the deployment in the most intelligent way against threats and risks. • Greater use of digital channels for dissemination of prevention and protection information and advice to allow communities to access information at a time and point suitable for them. In-person support can be more targeted and focused to deliver the greatest impact.

Detailed Data Principles

Data Classification
- Use of automated inference and classification of information, based on its contents but also on the services that consume it.
- This will make their subsequent searching and analysis significantly easier.
- Allow different control regimes to be applied in a data security and privacy context based on the sensitivity and usage context of the information.

Data Quality
- Investigate gaps and inconsistencies in data and populate them where data is held in other stores / sources of information.
- Conduct greater input validation to ensure accuracy.
- Applying more intuitive interfaces and investing in auto-population (for example, of location information based on device location services) to reduce the administrative burden of data capture.

Data Ownership
- Reused or replicated data in multiple services will be tagged with the organisational owner.
- Easier to understand who owns and controls the risks and handling of data.
- Asset Owners can see where data they are accountable for is in use.
- Develop standards for the stewardship of data, with appropriate recourse to the Information Asset Owner (be that internal or external) Ensure all applications can manage in line with these standards, or that mitigating action can be taken through their use in an informed manner.

Data Integration
- Established trend of removing duplication of data across systems and moving to direct API based integration with authoritative sources of data.
- Use of its data Integration Platform to make data from critical systems more broadly available for consumption.
- Prioritise learning and skills data, availability information and location / mapping information.

Data Security, Privacy and Compliance
- Establish security controls to address risks of inappropriate data usage.
- Promote broader privacy and tighter control and management of data.
- Build confidence in the organisation's compliance with policy and legislation in the use of data.

Data Architecture
- Produce taxonomies, entity models and visualisations to improve understanding of the existing data landscape.
- Apply to internally held data that can be processed and exchanged with partners. Focus on where data enrichment can / should occur.

Data Assurance
- Establish input validation to ensure that data is accurately captured or validated from the start.
- Explore tooling to analyse existing data for accuracy, completeness and compliance and automatically correct errors (where possible) or provide reports on errors to be addressed to the Information Asset Owner where these cannot be adjusted without risking the integrity or the record.

Data Asset Realisation
- Develop offerings to conduct discovery and reporting of data within the organisation.
- Ensure that reports and outputs can be consumed with confidence indicators on their completeness, accuracy, currency and volatility.
- Standard outputs to be automated to ensure the broader availability of data assets to wider audiences.

Definitions

Vision
The vision statement describes what it looks and feels like across HWFRS when digital capabilities and data are used in the most efficient and effective way across the identified missions, providing maximum possible value.

Mission
Missions describe the core areas where HWFRS wants to effect change to achieve the vision.

Approach
The approach statement describes the high-level plan to achieve an element of the mission.

Project in progress / gap
Projects are the specific sets of actions needed to execute an approach (either actions already in progress or actions identified as gaps).

Digital technology
Refers to digital devices, systems, and resources that help create, store, and manage data.

Data
Information that has been translated into a form that is efficient for movement or processing.

Enterprise Architecture
The process by which organisations standardise and organise structures, behaviours, processes and IT infrastructure to align with business goals.

Taxonomy
The science of classification.

Inference
The process of reasoning and making decisions based on available information or data.

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