03 2021

Digital Strategy 2021-2027

Rautaki Matihiko

WHAKARATONGA IWI

FIRE EMERGENCY NEW ZEALAND

Contents
Ngā ihirangi

Foreword
He tīmatanga kōrero

I am pleased to present Fire and Emergency New Zealand's first digital strategy.

Technology offers many opportunities and possibilities to support our organisations priorities. These opportunities will require careful consideration to decide what capabilities to invest in given the challenging financial environment that is with us today. The digital strategy outlines a set of foundations that will improve our core network, improve security, managing and sharing data better and digital workflow. Enabling these foundations will provide an improved technology environment so that Fire and Emergency can have the confidence to make future decisions to meet is priorities and aspirations.

The digital strategy also proposes that a digital maturity assessment is undertaken to establish a baseline for the organisation and to be able to measure, over time, a lift in our digital maturity. This lift is important as it will support a wider use of technology solutions to support and create national priorities, for example, intelligence lead.

There is an expectation over time that ICT services will change from a capital intensive model to operating (opex) model. While this shift is occurring now, it is expected to accelerate as new services are provided through the Public Safety Network. Legacy systems that are owned and operated by Fire and Emergency are also expected to be converted to software as a service.

This forward will be updated as part of the communication review prior to formal publication.

Russell Wood

Deputy Chief Executive Organisational Strategy and Capability Development

Signature

Why we are writing this strategy
He aha mātou e tuhi nei i tēnei rautaki

Information communications technology (ICT) touches many parts of Fire and Emergency New Zealand. It's in fire appliances, our stations, our offices and our homes.

Technology is evolving

ICT is changing all the time and we aspire to change with it. That means continually evolving technological capabilities, as well as our skillsets and mindsets, to make our jobs easier, our work more efficient and our communities better served.

This is to fulfil our organisational purpose of "protecting and preserving lives, property and the environment."

This strategy supports the National Strategy and 10-Year Plan, ensuring robust, resilient and fit-for-purpose digital services for Fire and Emergency. This strategy maximises benefits for the organisation by minimising the complexity of technologies, improving data collection, storage and shareability. This ensures that the technology we invest in is intuitive and will make our people's jobs easier and more efficient.

Accurate and timely data is essential to the work we do. However, we have a dependency on paper-based processes. This can mean restricted access to information and less situational awareness and knowledge. This also impacts the administrative load for our frontline workers.

We are unable to collect, store, protect, access and share data as well as we could, our digital strategy aims to address these challenges.

We plan to continue to build on the work accomplished over the past four years. This is to create a robust digital culture right across Fire and Emergency.

To create a robust digital future, this strategy needs to:

- Provide accessible, real time information so we can all do our jobs to the best of our ability – particularly those on the frontline.
- Support the business to streamline our processes through digital transformation. This will enable automation to drive simplicity and increase service quality.
- Integrate technologies to allow better dissemination of information within Fire and Emergency and to external stakeholders
- Support the simplification and seamless interaction between services on-premise and public, private and hybrid cloud.

Setting the foundations for success
Te whakatakoto i te tūāpapa mō te angitu

As we plan for our digital future over the next five-to-six years, we continue to focus on work that covers our 'business as usual' activities, foundational work and organisation priorities. This work provides our digital environment with the best foundations for success.

This work includes maintaining our current systems, implementing new capabilities as required and meeting our organisational priorities, including those set within the Fire and Emergency's National Strategy, the 10-Year Plan and the Enterprise Information Management Strategy (EIMS).

Some of the systems we currently use, e.g. Station Management System (SMS), have grown organically and been added to over time without a clear target state. As a result, we have many platforms and interfaces – including some legacy systems – that are built inconsistently, connecting with each other at multiple points. This complication and duplication cause many issues and costs, particularly with data management and infrastructure maintenance.

Why are robust digital systems important?

As a Crown entity and emergency service, Fire and Emergency has key business, organisational and operational imperatives that require quality data, information, knowledge and intelligence. Technology changes will provide opportunities that need to be understood to support the changes our organisation will encounter over time. These opportunities need to be underpinned with the right technology foundations that simplify our systems and network to meet organisational growth.

Alongside our work as detailed in this digital strategy, we are undertaking several foundational programmes of work to ensure our systems are simpler, more secure, and better able to meet our needs now and in the future.

This work should be completed within the next two-to-three years and includes four main areas: core network, security, managing and sharing data better, and digital workflow.

Core network

Implement configuration 2020–21

Our core network provides connectivity between the two data centres and to public cloud services. The data centres have grown over the years and while one has a modern configuration and is compatible with future use, the other is built on a legacy system. This creates complexity and cost as we must manage a different and outdated system.

Our objective

We plan to create a single modern configuration for all Fire and Emergency users. This removes complexity, simplifies the core network and makes the configuration consistent. We plan to remove redundant technologies and simplify design for easier and more efficient maintenance and support.

Expected results/benefits

A modern, robust, reliable and secure single network that is monitored and managed so our people can confidently connect to our services as and when they need to.

Security

High priority work 2020–21

Continuous improvements 2021–22 onwards

Security is an ongoing challenge in the information technology and digital environment. It is an ever-evolving threat-management issue, and there will always be the need to take action to mediate new threats.

Our objective

In addition to our ongoing security programme of work, between December 2020 and July 2021 we are decommissioning a number of no longer fit-for-purpose legacy systems still operating within Fire and Emergency. We are also completing a review of all personal information held at Fire and Emergency – where it's stored and who can access it.

Expected results/benefits

Decommissioning these legacy systems will close potential gateways for security breaches, and remove other security risks based around those systems. Our foundational security work will also improve our ability to build up our security over time.

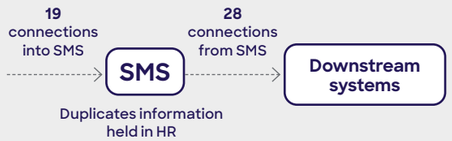
Managing and sharing data better

Procure a service 2021–22

Removing point to point interfaces 2021–22 onwards

This area involves two pieces of foundation work we are focusing on to manage and share our data better. First, we are procuring integration software to allow us to share information faster and more reliably across the organisation. Currently, data is updated automatically in one system, but there's a 24 hour delay in presenting information which means more administration and less reliable information. The installation of this new software is planned for completion in the 2021–2022 financial year.

Next, we plan to reduce the complexity and duplication of our various systems that interface with each other. Our current systems are fragmented across many interfaces, each with several connections with other systems. This causes unnecessary complexity, duplication, areas for error and slower access. It is also costly and time-consuming to maintain functionality and security. An example of this is the SMS system (see example of current state below).



Our objective

We plan to implement one system that supports sharing across the organisation. This will create a single source of key data, where data that is entered in one area can be accessed by multiple systems.

Expected results/benefits

A single data management platform improves the accuracy, reliability, timeliness and shareability of information, which can be easily and quickly transferred between systems and users. Data fragmentation will be decreased, reducing the need for data entry replication, while users can access the same accurate information across the organisation. Security is also improved.

Over time the number of point-to-point connections will be reduced, which will reduce the complexity and maintenance of the systems and improve the accuracy of information and security.

Digital workflow

Procure common platform 2020–21

Ongoing migration programme 2021–22

Fire and Emergency has multiple disparate systems that use similar data, but often that information is siloed within its own system. When it comes to accessing and using the data – for reporting to government, for example – the fragmentation and disparity cause many issues, especially around locating the information required. This does lead to a time and resource consuming manual search of the various systems to collate what's required.

Our objective

We procure a common platform to make managing workflows and documents much easier, quicker, and more accurate. Part of this work also involves reducing risk by decommissioning existing legacy systems and putting in place modern business functions.

Expected results/benefits

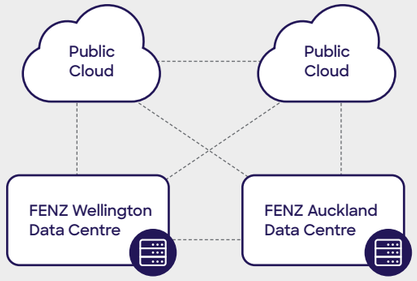
We create a common set of data that can be used across many platforms, using fit-for-purpose applications that make our work easier to manage and track (such as case management) while reducing manual workload and administration. This work sets us up for the future as we can add more business functions onto it to meet the strategic priorities and direction of our digital strategy and 10-Year Plan.

The common platform will also support a single channel of communication to transact with Fire and Emergency.

Future state

Core network

Delivering an accessible and resilient, future proofed network.

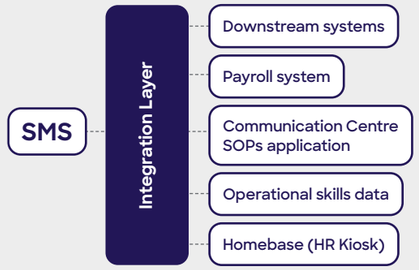


Security

Microsoft Office 365 suite (email, calendar, documents etc.) is located in the public cloud, providing improved security and accessibility.

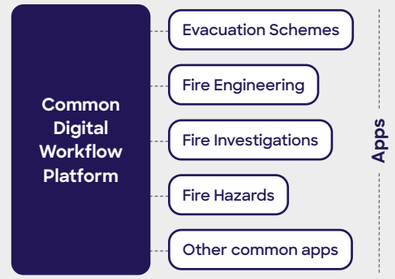
Managing and sharing data better

Integration layer service used that is expected to reduce connections from 28 to 6.



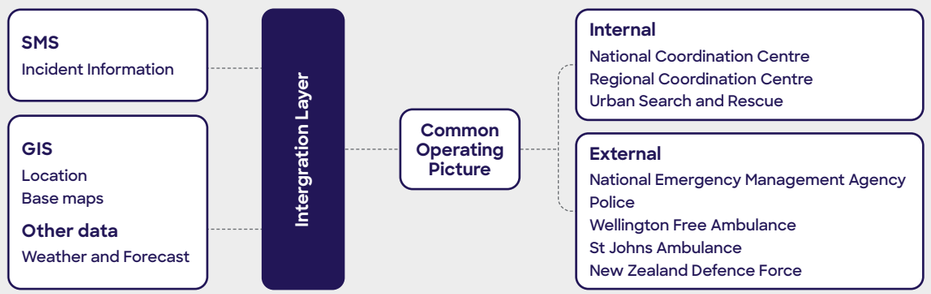
Digital workflow

A common platform will support multiple business functions, making maintenance support and reporting easier and with reduced cost.



Sharing our data externally and within Fire and Emergency

We use the integration layer to electronically interact with our external partners to provide a common operating picture for emergency services.



Digital strategy vision

Empowering our people with the right technology to better serve communities

Technology will make our jobs easier

Our digital strategy is aimed at ensuring our people can work better, smarter, from anywhere and at any time.

Whatever the technology adopted, it will be intuitive, easy to use and can be justified. At every step of the way, our people will receive the appropriate training to use these technologies fully and efficiently.

Our digital strategy aligns with:

- Our National Strategy and its five key strategic priorities
- 10-Year Plan and roadmaps
- The Enterprise Information Management Strategy (EIMS) and its Enterprise Architecture Principles
- Business Intelligence Plan

Under Development

- Our Cloud Strategy
- Operational Intelligence Plan

Why a six year strategy?

Technology changes fast. While being future-focused, we aspire to remain agile and open to opportunities both anticipated and unforeseen. A six-year strategy allows us to complete the foundational work as well as maintaining business as usual and deliver on our digital priorities.

We will continually review, monitor and evaluate our ICT needs and the products and services to meet them.

Our digital strategy is influenced by:

- The Government's Strategy for a Digital Public Service
- The Government's Protective Security Requirements

Linking to the Cloud

Fire and Emergency's Cloud approach is a hybrid model that uses Cloud Services commercially provided alongside our own locally hosted services. The hybrid model recognises that not all of our ICT services are appropriate to be migrated to the Cloud. Work is ongoing to analyse and decide which services will be hosted where.

Our National Strategy and Strategic Framework
Te rautaki matua ā-tari me te tarāwaho ā-rautaki

Our purpose

Protecting and preserving lives, property and the environment

Our vision

Stronger communities protecting what matters

Our outcomes

Communities prepare for, respond to and recover well from emergencies

Our services are valued and trusted

Social, economic and environmental impacts from emergencies are minimised

Our operating principles

Put safety, health and wellbeing first

Value people

Champion inclusion

Strengthen communities

Work together

Drive change

Be accountable

Our Values

We do the right thing
Kia tika

We serve and support
Manaakitanga

We are better together
Whanaungatanga

We strive to improve
Auahatanga

Our strategic priorities

Building resilient communities
Te hanga hapori aumangea
Empowering communities to identify local risks and needs so they are well prepared when emergencies happen.

Collaboration, partnerships and influence
Te mahi tahi, ngā rangapū, me te aweawe
Working towards a strong and collaborative role in our sector with a focus on shared outcomes.

Growing our people
Te whakatipu i ā mātou tāngata
Building an organisation with a respectful and inclusive culture that people want to be a part of.

Intelligence-led, evidence-based decisions
He whakatau whakamātautau ā-taunakitanga, ārahi ā-atamai
Evidence-based decision-making will help us deliver our outcomes and make strategic shifts.

Keeping pace with change
Te haere tahi ki te hurihuritanga
We will be responsive and courageous in a changing environment.

Our digital priorities for the next six years
Ō mātou whakaarotau matihiko mō ngā tau e ono e tū mai nei

Our work in planning and delivering our digital future has four digital priorities. These do not stand alone but often overlap and support each other.

Information as an asset
Ko pārongo hei taonga

We plan to improve our systems to capture accurate data which can be disseminated into structured information and used for intelligence-led, evidence-based decisions when and where required. This information becomes a strategic asset and by building these foundations, we can work efficiently and with more agility while delivering better services to our communities. A better understanding of our assets, operations and capabilities means we can make smarter decisions about everything we do. These standardised, integrated systems also ensure our information is better protected from loss, corruption and cyber threats.

Becoming a digital-first organisation
Te putanga mai hei ohu matihiko tōmua

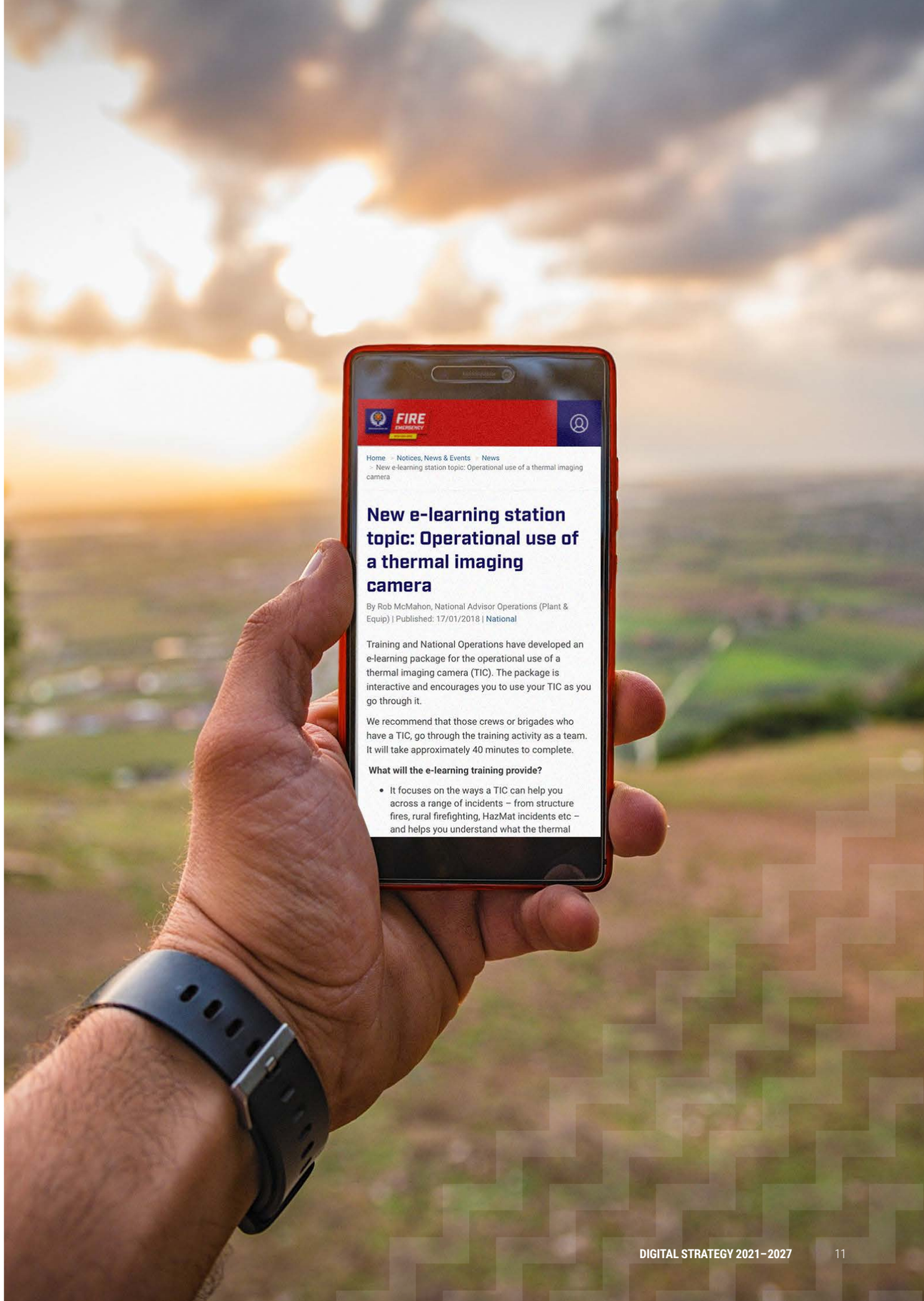
We are planning simpler processes where data is entered directly into our information management systems. This means less paper, less duplication and less administration. Improved online processes will also make it easier for our communities and partners to engage and work with us.

Working from anywhere
Mahi ana ahakoa ki hea

Ensuring up-to-date ICT systems means we can work from anywhere – from home if necessary, or from fire appliances or incident site without having to return to the station or office to report. Key benefits from this work are less administration for both our people and the general public, and applications that are intuitive for our people to access and use anywhere.

Lifting our digital maturity
Te whakawhanake i tō tātou tūpakeketanga a-matihiko

We will create an environment where we support our people's adoption of new technologies and continue to enhance our people's digital capabilities. By engaging and collaborating with our people, we can ensure a fit-for-purpose digital future. Intuitive applications and solutions will improve our service delivery and help develop a culture of collaboration, where sharing data, decisions and processes become our default way of working. This also reduces training requirements and increase the uptake of new ICT systems by providing better user experiences.



Digital Strategy - Strategic view
Rautaki Matihiko - tirohanga rautaki

Vision: Empowering our people with the right technology to better serve communities.

Digital Strategy

Digital priorities

Information as an asset
Ko pārongo hei taonga

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Business Principles*

Focus on people
Everything we do aims to make it easier for our people to do their jobs, whatever task they do, wherever and whenever they need to work.

Most benefits
Everyone gets the most out of ICT, with the best use of appropriate technology designs and systems.

Easy to use
All tools, systems and processes are easy to access and use, reducing duplication and paperwork, so people can focus on their core tasks.

Affordable
Re-using existing systems where appropriate, and adopting cloud-based or other remotely hosted systems if more efficient, affordable and can be justified.

Information Principles*

Well managed
As stewards of Crown information, Fire and Emergency NZ applies good management practices to its information across and over its lifecycle.

Appropriate information
All ICT systems are focused on helping people do their jobs and fulfil their responsibilities, even when mobile. Flexibility is allowed within the framework to meet our organisation's broad needs.

Information that meets users needs
Our people have confidence in the information at hand, and can access accurate information wherever and whenever they need it.

Open by default
Our information is open by default, restrictions and security are added where necessary.

Our objectives

- **Accessible, real-time information about our organisation**, so that information is analysed to derive strategic, operational and tactical insights for decision-makers.
- **Robust systems that capture data** about all our operations, assets and resources in an accurate and timely way.
- **Information that is easily shared and accessible** across all our digital platforms enabling us to electronically interact with our external partners.
- **ICT systems that allow us to track, monitor, and evaluate** our performance, and show us where we need to do better.

*Our business and information principles align to government recommendations and/or the Enterprise Information Management Strategy.

The digital strategy is influenced and enabled by external and internal documents and strategies highlighted/identified below.

INFLUENCING

External

Strategy for a Digital Public Service
NZ GOVERNMENT

Public Safety Network
EMERGENCY SERVICES SECTOR

Protective Security Requirements
NZ GOVERNMENT

ENABLING

Internal (FENZ)

Enterprise Information Management Strategy

Cloud Strategy

Infrastructure Roadmap

Business Intelligence Plan

Operational Intelligence Plan

Eight key areas of change

See full overview of these supporting documents and strategies in Appendix 3.

SUPPORTS

National Strategy **Our 10 Year Plan**

The digital strategy aligns to the 10-Year Plan and National Strategy.

Information as an asset
Ko pārongo hei taonga

"Using the right data in the right context can substantially improve decision-making and analytical models, and will avoid generating potentially harmful outcomes"

GOVERNMENT CHIEF DATA STEWARD

National strategic priority link

Building resilient communities

Intelligence-led, evidence-based decisions

Keeping pace with change

Supporting documents/strategies

External: Strategy for a Digital Public Service | Protective Security Requirements

Internal: Enterprise Information Management Strategy | Cloud Strategy | Infrastructure Roadmap
Business Intelligence Plan | Operational Intelligence Plan

Why this is a priority

Fire and Emergency creates, receives and shares huge amounts of data every day, which we must collect, protect, analyse and store. Having accurate and timely information supports all areas of our 4Rs model: risk reduction, readiness, response and recovery.

Currently, our information is collected inconsistently and stored in multiple repositories, using various systems, resulting in inaccuracies and conflicting interpretations. We are planning systems that offer a "single source of truth". As well as benefiting our ability to do our jobs, more accurate data helps us work with and support our emergency management partners, agencies, commercial providers, communities and stakeholders.

Ultimately, building up our data accuracy allows us to make smarter and more timely decisions about everything we do.

Our objectives

- Accessible, real-time information that is centralised, easy-to-access, and allows us to be more agile and proactive in our planning. This ensures we make evidence-based decisions that not only benefit the work we do but also the communities we serve.
- Confidence in our data management and data sharing practices, allowing our people to respond quickly, efficiently and effectively because they have access to timely, quality information that they trust.
- Information security will be applied where it is considered appropriate.

How this helps our work

- We have a better understanding of our operations, assets and capability, and be able to identify and address issues in advance. For example, receiving automated notifications for routine equipment servicing.
- We extract more value from our data, which will see improved intelligence-led, evidence-based decision making, enhancing our performance.
- Intelligence-led decision making allows us to update existing systems with confidence and rigour.

How we will achieve this

- **Create robust 'information architecture'** (how our data is organised, structured and labelled) so all information is integrated, accessible, reliable, accurate, shareable and protected, creating one source of truth.
  - Our Enterprise Information Management work plan has begun this work, providing a framework for the way we create, store, use and share quality information securely.
  - We plan to use Cloud Services, that could be a combination of public, private and hybrid, alongside locally hosted services to reduce the need for hardware and operating system support, and provide more reliable access.
- **Create requirements**, principles and models to support informed decision making and effective change.
- **Create an integrated database** that supports the work of our people (e.g. accurate data that's accessible during an incident response where appropriate) and our support people to assist in planning, procurement, organisation reporting and analytics, now and in the future.
- **Create standardised methods of sharing information** and ensure data and information is better protected from loss, corruption and cyber threats.
- **Continue to research, pilot and review solutions**, sharing the results as we have done with the Mobility Programme Pilot and the Microsoft Office 365 licensing suite.

Becoming a digital-first organisation
Te putanga mai hei ohu matihiko tōmua

We aspire to develop simpler processes where data is entered directly into our information management systems, meaning, less paper, less duplication, less administration. Improved online processes are planned to also make it easier for our communities and partners to work with us.

National strategic priority link

Building resilient communities

Collaboration, partnerships and influence

Growing our people

Intelligence-led, evidence-based decisions

Supporting documents/strategies

External: Public Safety Network | Protective Security Requirements

Internal: Cloud Strategy | Infrastructure Roadmap | Business Intelligence Plan | Operational Intelligence Plan

Why this is a priority

We still collect much of our information on paper forms, including incident response and critical information relating to buildings and fire permits. This information is very valuable but collecting it on paper is time consuming, difficult to access, sometimes unreliable, and it can be easily lost. That information must then be uploaded to a database, adding more time and opportunities for error.

Moving to a digital-first workplace where our data is entered directly into our ICT systems means the information becomes more immediate, accurate, complete and easily accessed across Fire and Emergency and shared with partnering government agencies.

Our objectives

- Easy-to-access, accurate, well-protected centralised information that helps us all make better decisions.
- Our people are motivated to input detailed, vital information because it's quick and easy to do, and they know they benefit from having it.
- An integrated database environment that allows easier and more accurate information sharing internally, as well as with our partner agencies and the government.
- Our firefighters and other frontline workers are better equipped to manage readiness, reduction, response and recovery, using systems such as the Geospatial Information System (GIS).
- Using cloud-based technology, with encryption and password protection, means we meet our mandate to keep our systems secure.

How this helps our work

- Digitised data enables us to make timely and intelligence-led decisions based on immediate, up-to-date and accurate data, held by us and other emergency services.
- We have high levels of confidence in our decisions, knowing they are based on the best information possible, improving the speed and accuracy of decision making.
- We will see increased accuracy and time saving from using template technologies to capture data.

How we will achieve this

- **Create an integrated platform** for capturing all asset data.
  - This will allow us to create a clear picture of all our assets for the first time, meaning better, more cost-effective procurement.
- **Continue creating mobile tools accessible anywhere, anytime** to upload and receive information as soon as it is collected, wherever it is collected.
  - These include mobile apps that are being deployed, Operational Site Data (OSD) and electronic forms (for example breathing apparatus and vehicle check forms).
- **Provide tablets and other digital tools** – and the appropriate training – for our people to input and access the information they need for operations, education and training.
- **Create digital workflows** for evacuation schemes and other similar applications to make it easy for our communities to engage with us.
- **Conduct comprehensive user testing and pilot programmes** so we can trial and pilot before making significant investment decisions.

Working from anywhere
Mahi ana ahakoa ki hea

Up-to-date ICT systems mean we can work from anywhere, at any time. For example, it will be much easier to work from home if necessary, and from fire appliances or incident site without returning to the station to report.

National strategic priority link

Building resilient communities | Growing our people | Intelligence-led, evidence-based decisions | Keeping pace with change

Supporting documents/strategies

External: Public Safety Network

Internal: Cloud Strategy | Infrastructure Roadmap | Business Intelligence Plan | Operational Intelligence Plan

Why this is a priority

In the modern workplace, our people can ideally work from anywhere, whether that's the fire appliances, the frontline, or home office. Many of our people currently still work on paper or use old technology that can be unreliable or has poor connectivity. Currently, it is difficult for them to make timely, intelligence-led decisions to serve the community, nor can they easily and accurately collect data to help with future incidents.

COVID-19 has meant many of our people had to work from home. We have come a long way, as only three years ago we simply could not have supported our people to do this. But more must be done to enable them to work remotely, stay in touch online, and do their work in a digitally secure environment, without any restrictions.

Our objectives

- Information is available at any time or place so our people can do their jobs efficiently and effectively with greater accessibility and ease of use.
- Less administration for both our people and the general public – so it is easier for our people to do their jobs and easier for the public to engage with us.
- Relevant data is captured in the field and automatically updated in systems so it is immediately available to any of our people who need to access it.
- Applications are easy to use out anywhere, whether attending incidents or working remotely, with the information presented in a logical, consistent way so it's more intuitive to access and use.

How this helps our work

- New tools and other mobile solutions mean our people can work remotely more effectively, resulting in better service continuity.
- We use those tools to address changes to the emergency events we respond to, or at which we assist other agencies, helping us deal with future incidents.
- We can make intelligence-led decisions from anywhere and at any time.

How we will achieve this

- **Continue to equip our people with appropriate technology where justified and affordable.**
  - We will build on the work already underway to deliver mobile apps such as the site and contacts, AMS and breathing apparatus check forms
- **Continue to develop technology to support Incident Management.**
  - Enabling video capability and other tools such as assessment and incident management applications
  - Utilising best use of current technologies to support the Incident Management Team (IMT), such as deployment cases, cloud software and portable satellite capabilities.
  - Improving current common operating picture capabilities to integrate IMT with National Coordination.
- **Improve networks and tools for working from anywhere**, with better applications that can be used anywhere, anytime.
  - Everyone receives appropriate training to use new systems.
- **Increase collaboration between IT designers and operational people** to ensure all systems are business and purpose-led and effective.

Lifting our digital maturity
Te whakawhanake i tō tātou tūpakeketanga a-matihiko

All our priorities put our people at the centre, but this priority is about developing a culture of collaboration, where you are listened to and feel confident and supported as you learn to use new ICT tools.

National strategic priority link

Collaboration, partnerships and influence

Growing our people

Intelligence-led, evidence-based decisions

Keeping pace with change

Supporting documents/strategies

External: Strategy for a Digital Public Service

Internal: Enterprise Information Management Strategy | Cloud Strategy | Infrastructure Roadmap
Business Intelligence Plan | Operational Intelligence Plan

Why this is a priority

We aim to work closely with our people to ensure they all have access to the same tools and technologies. We have been working towards this for the past four years since Fire and Emergency was created in 2017.

We are planning for a more consistent digital future, using ICT to bring everyone together with the same digital capabilities across the organisation, no matter where they're based. Communicating with our people, wherever they are, is a vital part of this process. We plan to continue to consult with and listen to our people to deliver what they need and ensure they are trained to use it.

Our objectives

- Intuitive applications and solutions that are easily adopted, providing better user experiences and reducing training requirements.
- We plan to undertake a digital maturity assessment to set a baseline to measure our improvements over time.
- The improvements will be directly aligned with achieving organisational priorities and direction.

How this helps our work

- It develops a culture of collaboration, where sharing data, decisions and processes become our default way of working.
- Continues and strengthens partnerships with our people to develop and deliver new digital tools and products.
- Working collaboratively is supported and enabled by platforms that allow the same digital capabilities across the organisation, allowing better communication.
- Our people will have easier access to better quality information due to new paperless processes.
- We become more agile and proactive in our decision making and planning. We anticipate needs before they become issues, quickly adapting to unforeseen circumstances, such as COVID-19, ensuring continuity of service.

How we will achieve this

- **Create more robust consulting processes** so we talk directly with the people who have the greatest understanding of the issues and potential solutions for proposed and identified projects.
- **Create an integrated digital system** where everyone can access trustworthy information, where and when they need it, so they are informed.
- **Continuing to pilot projects** so new tools are always thoroughly user-tested before making significant investments decisions.
- **Because some issues are complex, we will start small**, get it right, then look at making bigger changes.

What's my digital future?
He aha taku anamata matihiko?

Planned objectives and benefits from the digital strategy.

Management teams

- Knowledge our teams are better supported.
- Streamlined organisational ICT systems – easier to communicate with all parts of Fire and Emergency.
- Improved analytics from more reliable and timely data.
- Easier to meet reporting obligations under the Act to:
  - Fire and Emergency Board
  - Minister of Internal Affairs.
- Ability to access systems and work safely and securely from anywhere at any time.

Frontline staff

- Confidence that our information and data is accurate, comprehensive and easily accessible.
- Improved collaboration and visibility at an incident with increased ability to exchange information with other sector personnel.
- More information sharing between partner agencies, allowing for a fuller picture of an incident environment.
- Less administration by using digital data entry – using pre-populated forms, available at an incident site.
- Ability to work from anywhere, even the incident site – no need to return to the station to report or file.

District and region services

- Easier to support our people so they can do their jobs efficiently and effectively.
- Confidence in making the right decisions for their communities, knowing that our data and information is accurate and reliable.
- Streamlined and shared systems with head office improving communication and access to timely information.
- Ability to access systems and work safely and securely from anywhere at any time.

Support services

- Improved efficiencies in all areas of work due to standardised organisational ICT systems – including better communication, streamlined personnel and organisational systems (with an acknowledgement that each region has its unique challenges).
- Improved ability to work from anywhere and at any time.
- ICT systems and applications are current and align with software used by partner agencies – Fire and Emergency is keeping pace with technology – where it is necessary and affordable.
- Less administration through improved and streamlined digital systems – less paper and less manual handling.
- Improved information sharing across Fire and Emergency, and with partner organisations.
- Increased confidence in making decisions in the knowledge that all data is reliable and up-to-date.
- Everyone can access and use the same data – one source of truth.

General public and communities

- Easier to communicate online with Fire and Emergency.
- Streamlined online process to apply for online services.
- Easier to find trusted and relevant online information.
- Higher levels of assurance and trust in Fire and Emergency.
- Higher confidence in making the right decisions for their communities due to more reliable and timely information.
- Communities have improved access to Fire and Emergency.

Appendix 2: Supporting documents and strategies
Ngā tuhinga me ngā rautaki tautoko

EXTERNAL

Strategy for a Digital Public Service

The Strategy sets out a whole-of-public-service direction. It is one that improves the efficiency of New Zealand's public service, enables change, supports better services and the digital transformation of agencies, putting people and businesses at the centre of government services.

The Government Chief Digital Officer (GCDO) developed the strategy in partnership with chief executives from the Digital Government Leadership Group (DGLG) and key stakeholders, using research and feedback, workshops, 'hacks' and open forum sessions. Focused on more than just new technologies and improving IT systems, the Strategy for a Digital Public Service also sets out ways for New Zealand's public service to do things differently, using new mindsets, skills, data and technologies to overcome barriers and better meet New Zealanders' needs.

The aim is to create a culture of collaboration between public sector agencies, growing a public service that can react quickly, navigate change and deliver digital outcomes for New Zealanders. This Strategy provides an opportunity to join up government behind the scenes, so it works as a unified public service, collaborating with partners from within and outside of government, making people-centred decisions, acting quickly, prioritising value for money and remain accountable to the public. The Strategy reflects and embraces te ao Māori, this country's collaborative and innovative spirit, and globally recognised leadership in trust, integrity and transparency – including New Zealand's high regard as a global leader in digital government.

Public Safety Network

The Public Safety Network (PSN), a joint project involving Fire and Emergency, Police, St John and Wellington Free Ambulance, is undertaking procurement of a modern, nationwide, mission-critical communications capability for emergency services that will enable the sector to implement innovative ways of delivering their services. Currently, emergency services rely heavily on radio and mobile communications to coordinate, manage, protect and direct geographically dispersed staff and resources. These are voice-centric and radio networks, which need replacing as they are ageing and not capable of meeting future operational needs. This new capability will replace the current ageing communications infrastructure and be known as the Public Safety Network.

Secure, reliable communications methods are essential for us (alongside our partners) to enable us to respond to emergency situations and natural disasters. The PSN will enable emergency services agencies to further develop and enhance their service delivery and mobility strategies. The PSN will enable new ways of working. For example, telemedicine will allow patients to be treated in situ rather than transported to a health facility. Remote specialists will be able to support the frontline through video streaming to help diagnose patient conditions or identify hazardous substances. Our people on the frontline can expect to see a transition to the PSN capabilities as they become available and before the current radio networks are decommissioned in 2023.

Protective Security Requirements

The Protective Security Requirements (PSR) outlines the government's expectations for security governance and personnel, information, and physical security.

The PSR is a policy framework that sets out what your organisation must do to manage security effectively. It also contains best practice guidance you should consider following. The PSR is suitable for both public and private sector organisations.

Effective security enables New Zealand organisations to work together securely in an environment of trust and confidence. Protecting your people, information, and assets helps your organisation to meet its strategic and operational objectives.

Core policies of the PSR

- Security governance (GOVSEC)
- Personnel security (PERSEC)
- Physical security (PHYSEC)
- Information security (INFOSEC)

INTERNAL

Enterprise Information Management Strategy

As a Crown entity and emergency service, Fire and Emergency has key business, organisational and operational imperatives that require quality data, information, knowledge and intelligence.

This Strategy is about building an Enterprise Information Management (EIM) capability to support those imperatives and meet our various legislative and government obligations that set expectations for efficient and effective information management, knowledge development, and organisational intelligence requirements. To meet those, this Strategy has three core objectives:

- To describe the activities required to establish a robust foundation on which to build our information, data and intelligence capabilities.
- To set the direction of travel for the Information and Knowledge function under the operating model currently being implemented.
- To change the way we think about and use our information, and realise the value it holds as a strategic asset across all our lines of operation.

Building an EIM capability maintains line-of-sight to our vision for the future: "Our people act quickly, efficiently and effectively because they have access to timely, quality information they trust."

Cloud Strategy

In line with the direction set out in the National Strategy, we are developing a Cloud Strategy that makes the best use of cloud and remotely hosted data storage.

The resulting strategy will outline a hybrid model where some data is stored by Fire and Emergency, while other information is stored off-site. This allows us to take advantage of savings created from the economies of scale offered by large, specialised data storage providers. It also makes it easier – and cheaper – for us to stay up to date with technology changes and challenges around data storage. As part of developing the cloud strategy, we are analysing which functions and data sets should go to the cloud and which should be locally stored. It is likely our cloud storage future state will see us continue to use Azure DevOps for building, testing and deploying applications using Continuous Integration (CI) and Continuous Delivery (CD) CI/CD.

Infrastructure Roadmap

This roadmap describes the current and future states of Fire and Emergency's ICT infrastructure between 2014 – 2024 to inform budget planning and investment.

Since amalgamating 40 organisations in 2017, the focus has been on designing and delivering an integrated organisation that is more connected and capable of working with communities to identify, manage and respond to local risks together with our partners. However significant opportunities exist to support the new organisation through the use of technology.

The roadmap follows a strategic approach, in alignment with the National Strategy, the Strategic Asset Management Plan (SAMP) and the "8 Key Areas of Change". It also includes strategic initiatives and tactical initiatives to provide robust, reliable and supportable ICT services.

The following key themes reflect the approach to this roadmap, which aims to maintain and streamline current services, while establishing foundational capabilities for the next roadmap period. Those key themes are:

- Continue to build foundational capabilities to maintain and improve the availability and supportability of our applications.
- Consolidate and rationalise ICT infrastructure where possible to reduce costs, reduce overhead and optimise hardware, licensing and support processes.
- Migrate services to the cloud where it makes sense to do so, thereby reducing hardware, licensing and support costs.

Business Intelligence Plan

The purpose of this Business Intelligence (BI) Plan is to set the foundation for establishing a BI capability and in doing so, improve the ability of Fire and Emergency New Zealand (Fire and Emergency) to make *intelligence-led, evidence-based decisions*.

The objective of BI is to enable effective decision-making. It is an umbrella term that refers to the methods, processes, technologies and tools that transform raw data into meaningful and useful information about a business or an organisation.

Operational Intelligence Plan

Under development. Responsibility of the Service Delivery Leadership team.

Appendix 3: Glossary of terms
Papakupu

Public Cloud
The public cloud is defined as computing services offered by third-party providers over the public Internet, making them available to anyone who wants to use or purchase them.[1]

Private Cloud
Private cloud is a term for cloud computing services offered over the Internet or a private internal network to only select users instead of the general public.[2]

Hybrid Cloud
Hybrid cloud refers to using a combination of both public and private cloud services.

Data
Data is raw, unorganised facts that need to be processed. Data can be something simple and seemingly random and useless until it is organised.

Information
When data is processed, organised, structured or presented in a given context so as to make it useful, it is called information.

GIS
A geographic information system (GIS) is a framework for gathering, managing, and analysing data rooted in the science of geography.[3]

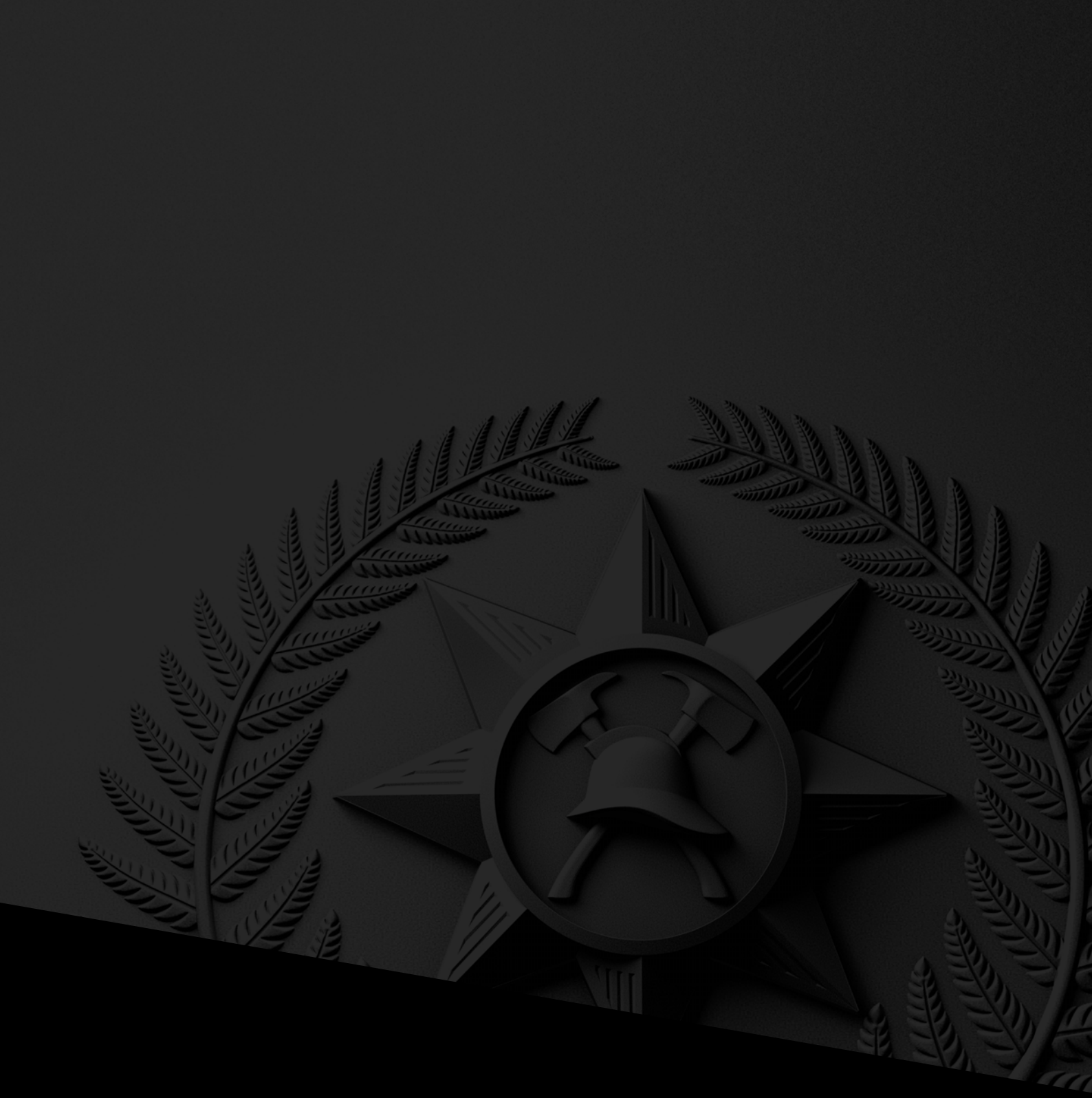
Geospatial is that type of spatial data which is related to the Earth, but the terms spatial and geospatial are often used interchangeably.

[1] azure.microsoft.com/en-us/overview/what-is-a-public-cloud

[2] azure.microsoft.com/en-us/overview/what-is-a-private-cloud

[3] esri.com/en-us/what-is-gis/overview

Notes
Wāhi tuhituhi



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