Te pae tawhiti whaia kia tata
Navigating to new horizons

DIGITAL STRATEGY 2020

Version 1.0

Department of Conservation
Te Papa Atawhai

Contents

Introduction

The Introduction sets the context for the Digital Strategy by referencing our organisational strategy and the principles of our Treaty Partnership as guiding values in the work we do at Te Papa Atawhai.

The introduction includes:

- a Foreword from the Sponsor for the Digital Strategy
- a cultural perspective on the strategy
- an Executive Summary
- a timeline of events

Assessing the Current State

The 'Assessing the Current State' segment of the document provides the detail on how we identified areas for improvement, and a summary of the high-level opportunities for improvement we discovered.

This section includes:

- detail on Strategic Drivers
- detail on the process for identifying opportunities for change
- key findings of the assessment – Identification of Business Change Opportunities

Prioritising and Planning

The 'Prioritising and Planning' section of this document provides background on how business change opportunities and initiatives identified during the assessment phase were prioritised, and sequenced into a roadmap for business improvement.

This section details:

- the process and outcome of SLT's prioritisation of the Business Change Opportunities
- the Enterprise Architecture techniques used in the prioritisation process
- the process and outcome of refinement of the BCOs into initiative briefs

The Way Forward

'The Way Forward' segment of this document details our plans to effect changes to opportunities identified, including our Roadmap for activities within the strategy for the next 36 months, how the Strategy Portfolio and governance is structured, and our approach to governance of the portfolio.

This section includes:

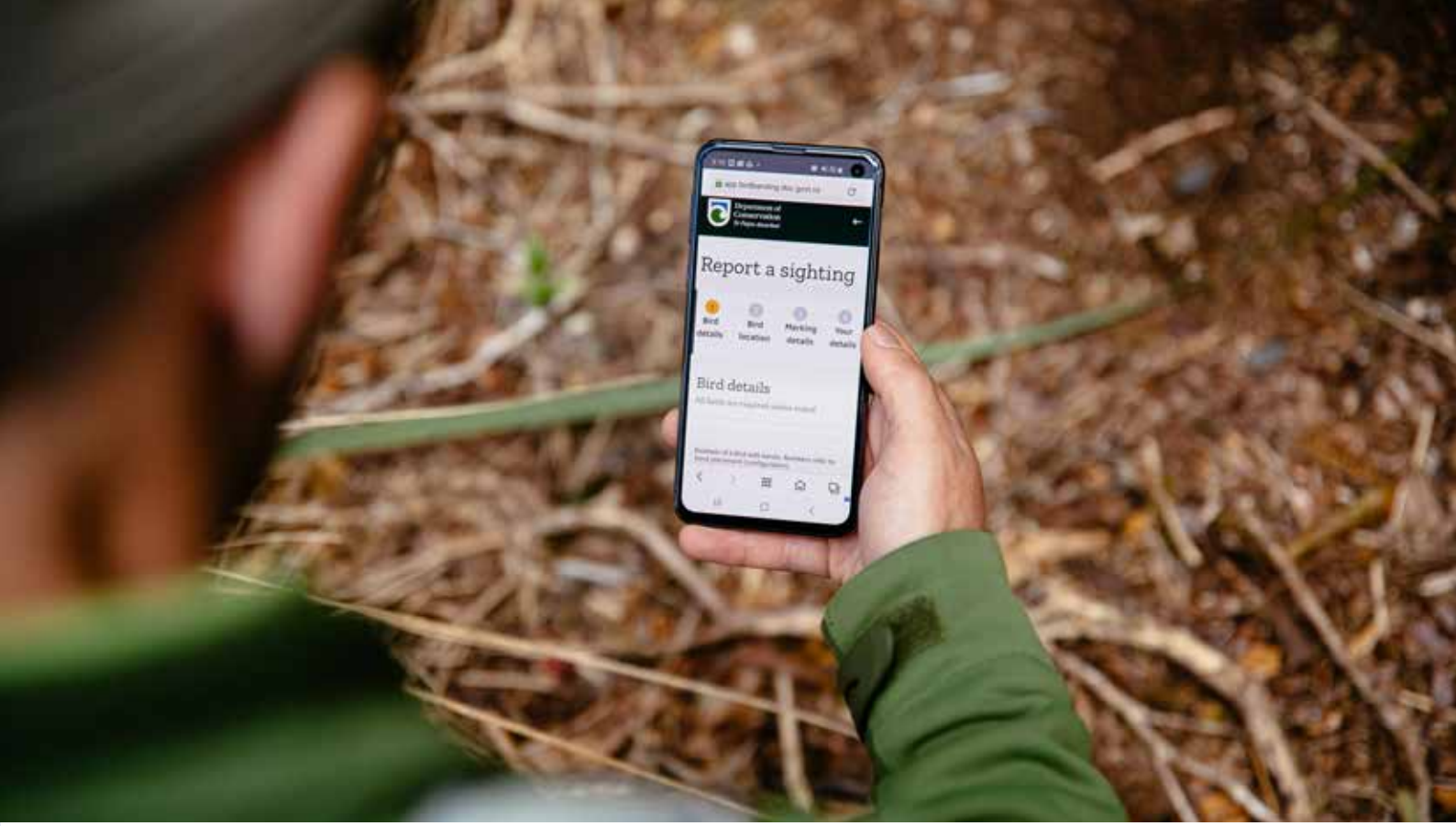
- high level detail of initiatives derived from the BCOs
- an overview of the Digital Strategy Roadmap
- detail on structure of the Digital Strategy Portfolio and Governance

Conclusion and Appendices

This section includes a concluding statement from the Chief Information Officer, and appendices of several one-page summaries detailing the high-level plans to achieve success in each of the programmes of work within the Digital Strategy.

DOC – 6474181

Introduction



Foreword

Through these trying times our technology, and our mahi that supports our systems stood as a shining example of our resilience and adaptability. The pandemic has spotlighted the importance of our technology in enabling Papatūānuku to thrive; and in keeping our staff, visitors, and partners healthy and safe.

This strategy represents our Senior Leadership Team's commitment to investment in technology to be more efficient, effective, and safe when delivering conservation outcomes and working with conservation partners.

Through the mahi of our Senior Leadership Team, guided by te Kaupapa, the support and advice of our ISS team, and the coordinated information gathering of PricewaterhouseCoopers, this strategy has set the course for the journey to new technological horizons, Te pae tawhiti whaia kia tata.

As with any journey, there will be twists and turns, and we will have to reprioritise as new information and technologies become available.

To provide structure to Senior Leadership Team's commitment to continuous technological improvements, all technology and information related projects and programmes will be managed through Te pae tawhiti whaia kia tata portfolio process.

The strategic pathways articulate the data and information needs, and will be aligned within this strategy. This assures the Senior Leadership Team that our technology/data and engagement are aligned across Te Papa Atawhai priorities and strategy.

Since the initial consultation for this strategy, new business change opportunities have appeared and there are numerous unexplored and exciting opportunities to work with our international and local partners.

The vision at Te Papa Atawhai is to work with others to achieve greater positive outcomes for nature. Many external organisations want or need access to our data, and we require data from others. This creates complexity and can often stall progress. To mitigate these delays, these engagements will be channelled to the Portfolio Governance Group and highlighted in the pathways and group business plans. We will achieve far more if we reduce the churn collectively, understand SLT's priorities and share our requirements (data and technology) through our strategy, planning and governance channels.

The potential for technology in conservation is vast. We have scarcely touched the benefits of drones, the use of satellite communication and 'edge' computing to solve management problems in real-time. Nor have we invested in in-field eDNA processing to tell us about the species present, or processed our terabytes of sound files to see what else they hold. These technologies are in use around the globe, they are proven and adaptable to New Zealand conditions and needs.

This strategy aims to deliver Te Papa Atawhai into the modern era of conservation possibilities, and provide the steppingstones for future strategies to keep our technology modern and effective. I am very excited to sponsor and endorse the investment in this strategy and look forward to realising the conservation benefits.

Rachel Bruce
DDG of Corporate Services Group

Te Kaupapa a Te Papa Atawhai and the Digital Strategy

In August of 2020, Te Papa Atawhai adopted Te Kaupapa a Te Papa Atawhai. Te Kaupapa underpins our mahi and sets out how we will work with others to achieve our purpose, *Papatūānuku thrives*.

Te Kaupapa provides the context and purpose for Te pae tawhiti whaia kia tata, and is the guiding principle for our how our work will achieve the strategy goals.

Papatūānuku Thrives

Our Roles

We build technology tools that enable Te Papa Atawhai to collaborate, advocate, and share stories.

Supporting collaboration with each other and with our partners in conservation helps us work toward our shared purpose of helping Papatūānuku to thrive.

Our Outcomes

Our technology supports the mahi for thriving communities and healthy nature.

We improve health and safety of staff, visitors and partners, we foster collaboration to deliver conservation, and we innovate to find solutions to make delivery of conservation more effective and efficient.

Our Behaviours

We work with others to deliver tools for conservation and innovate on behalf of nature.

By working with others we ensure that our technology solutions are fit for purpose and as efficient as they can be at supporting conservation in Aotearoa.

Our Principles

The technology we design and the services we deliver support our mahi with others to keep people safe and healthy, and leave Papatūānuku thriving.

Our principles align with te kaupapa. Our shared purpose of helping Papatūānuku to thrive ensures all our mahi works toward a common goal.

Our Treaty Partnership

Te Papa Atawhai has an equal partnership role with iwi, hapū and whānau. We share responsibility for protecting and nurturing the natural heritage of Aotearoa and enabling Papatūānuku to thrive.

Our partnership with iwi, hapū, and whānau, and the principles and behaviours of Papatūānuku Thrives guide and influence the outputs and outcomes of this strategy.

Our Treaty Principles are:

Partnership	Mutual good faith and reasonableness
Informed decision making	All parties need to be well informed of each other's interests and views
Active protection	The interests of Māori must actively be protected as part of the promises made in the Treaty for the right to govern
Redress and reconciliation	The relationship with Māori should allow for differences in views to be addressed in a collaborative manner

Story of the Digital Strategy

To tell the story of the Digital Strategy and what it means for Te Papa Atawhai, the Information Systems and Services Unit has collaborated with all Business Units and worked closely with the Kahui Kaupapa Atawhai Group (KKA) to develop Te pae tawhiti whaia kia tata – Navigating to new horizons, the strategy journey story.

Te pae tawhiti whaia kia tata
Navigating to new horizons

Matariki – Beginning our journey

Matariki is our guide. We look to the stars of Matariki to navigate our path to new conservation and partnership horizons. The stars Pōhutukawa, Hiwa-i-te-rangi and Matariki represent our strategy development – reflecting and learning from the past to shape an innovative future. Waitī, Waitā, Tupuānuku, Tupuārangi represent our connection to Papatūānuku and how our Digital Strategy supports conservation outcomes. Ururangi, the manifestation of wind, gives us the power to push the waka on this journey. Waipuna-ā-rangi represents rain, which refreshes and revitalises our technology on the journey.

Maramataka – Living by the stars

Maramataka is the Māori lunar cycle, following natural rhythms to determine the right time to do work on our land and sea. Technology is cyclical, but also constantly evolving. This strategy guides our whānau through change and evolution to enable Papatūānuku to thrive. Maramataka requires us to gather and understand the data we have and to use it to inform our work, including when and where we do it. Understanding our work cycles enables us to provide our whānau with the right tools at the right time to do the mahi anywhere.

Whakaauaha
Delivering innovatively

Whakatīnanatia
Solutions found

Whakawhānaungatanga
Building relationships

Atawhaitia a Papatūānuku
Technology at the heart of nature

Papatūānuku – Thriving nature and growing together

This Digital Strategy is about enabling our Partners, iwi, whānau and hapū with the information, and technology needed to lead conservation outcomes for all of Aotearoa.

Introduction

To formulate this strategy, consideration has been given to the environmental and political context Te Papa Atawhai will be operating in for the next four years.

Keeping pace with the rate of change in the digital world is no easy feat. Both the public and private sectors are now racing to respond to the significant challenges posed to our societies by climate change and most recently the global COVID-19 pandemic.

The strategy for a Digital Public Service gives the public service a call to action – to operate in a more modern and efficient way. It is the mandate for government departments to plan and deliver digital transformation to accelerate and reinforce the technology that support our mahi. The Senior Leadership Team have responded to this through ownership of the strategy and investment in the programme to deliver transformational outcomes, helping to create healthy communities and ensuring Papatūānuku thrives.

It is important that people, not technology, are the drivers of our digital transformation. Director-led consultation across all our business groups ensures that the contents of this strategy and the initiatives it seeks to enable are owned and supported by the people of Te Papa Atawhai and our partners. Clear connections should be evident between the work of this strategy and work of our people in conservation.

Relationships with iwi, hapū, and whānau and visitors to our wild spaces will be enriched by the digital improvements this strategy will deliver. Advanced reporting across our rich data resources will drive smarter decision making and other key drivers of a modern government. Improved infrastructure and tools to support flexible working across Aotearoa will aid the health, safety and wellbeing of staff as well as significantly reducing the carbon footprint of Te Papa Atawhai – reducing negative impacts on our environment.

This strategy is the Senior Leadership Team's four year investment in information, technologies, and knowledge creation to deliver better outcomes for conservation and enhance how we do our mahi across the department.

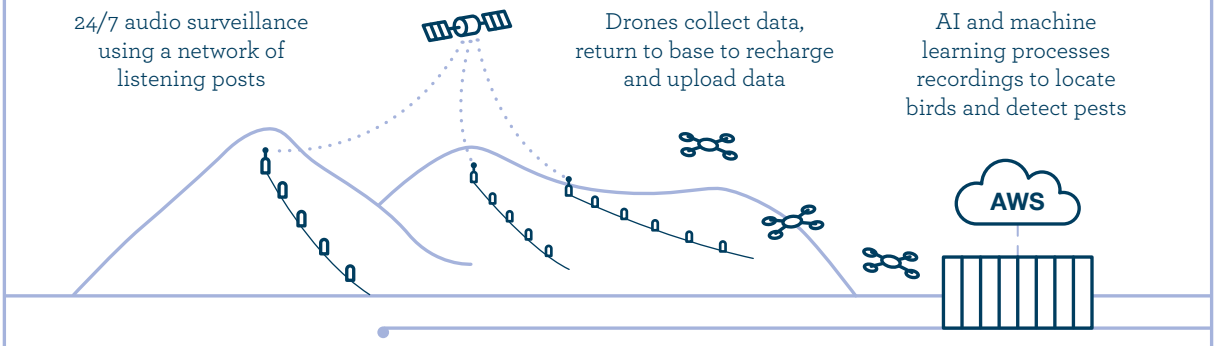
The future of conservation

Predator and bird density mapping using listening posts, drones, and AI and machine learning

24/7 audio surveillance using a network of listening posts

Drones collect data, return to base to recharge and upload data

AI and machine learning processes recordings to locate birds and detect pests



Predator eradication with mobile robotic units

Drones deploy robotic predator eliminators in locations where pest activity has been detected

Crate contains charging capability and wireless connection to home base

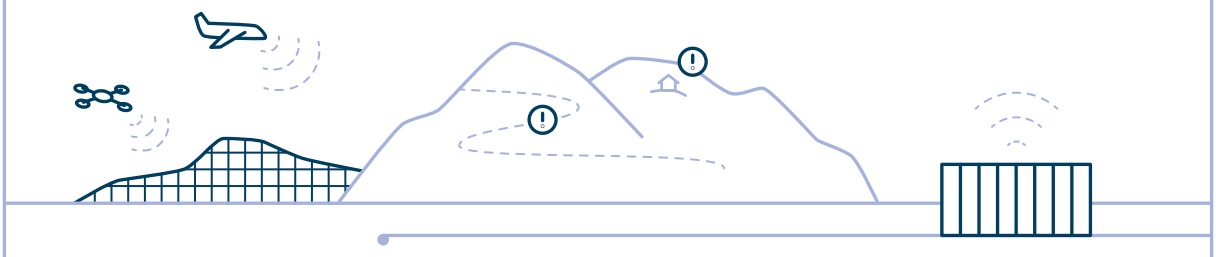
Robotic units use built in chemical lures and predator recognition systems to identify and eradicate pests by electrocution

Geographic mapping and track quality assessment using drones

Drones collect images and video to generate a 3D model of the landscape

Models can be used to assess the status of Te Papa Atawhai tracks and huts

Controlled remotely, able to access difficult terrain, time efficient, lower risk for Te Papa Atawhai staff



Timeline

Each step of the Digital Strategy & Roadmap refresh has maintained a spotlight on the business and focused on determining the business context and capabilities required.

SEP–DEC 2019

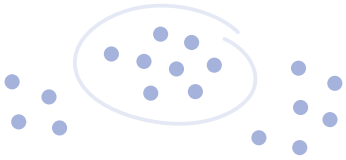
Ideation – 13 workshops

- SLT defined their critical issues
- Business Groups defined their needs and aspirations
- Cross Business Group workshops defined their priorities
- 350+ staff attended 13 workshops
- Operations staff surveyed (200+ responses)

DEC 2019

Opportunities identified

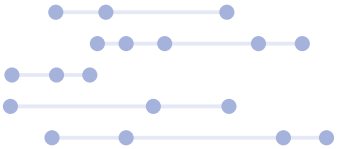
Insights from workshops were combined with evaluation of the technology supporting DOC's business capabilities developed 18 Business Change Opportunities (BCOs).



JAN 2020

Prioritisation

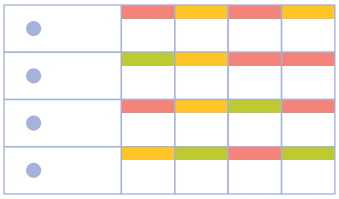
Validation and prioritisation of the 18 BCOs with SLT for all business groups. Identified priorities for year 1 and validated the 6 streams of the draft roadmap.



FEB 2020

Roadmap created

Breakdown and structuring of the 18 BCOs into initiatives.



MAR–APR 2020

Investment plan and Architecture Blueprint developed

- 1:1 working sessions were held with each initiative Lead Director to refine business context
- 3 workshops with Lead Directors group prioritised and sequenced initiative delivery over 2020–2025
- The Digital Strategy Roadmap, Investment plan and Architecture Blueprint were produced iteratively as greater understanding of business context and priorities was achieved

Assessing the Current State

Assessing the Current State

The previous DOC Information Systems Strategic Plan concluded at the end of 2019. This allowed the Information Systems and Services (ISS) unit and the Senior Leadership Team the opportunity to review the status of our existing technological capabilities and set the course of this strategy.

In September 2019 the Senior Leadership Team and representatives across the business began working in partnership with the Information Systems and Services team to refresh the Digital Strategy. The goal was a comprehensive plan to innovate and improve the technology systems and processes at Te Papa Atawhai that support our people and partners to deliver conservation safely and efficiently, enabling Papatūānuku to thrive.

Strategic Drivers

The strategic drivers for the Digital Strategy are aligned with the vision and principles of Te Kaupapa, and our responses arising from COVID-19.

The Senior Leadership Team's Strategic Drivers:

Delivering...

- technology that enables innovation
- integrated and optimised systems and processes

Complying...

- with New Zealand Government financial regulations
- with requirements by providing clear and accurate financial reporting for conservation in New Zealand
- with requirements by providing consistent investment insights

Improving...

- access to data assets for decision making
- use of data to provide better health and safety for staff, visitors, and volunteers
- data governance and stewardship for accountability of data assets
- availability and use of real-time data to DOC and our partners

Understanding...

- iwi, hapū, and whānau and other key stakeholders
- how to engage with stakeholders
- the needs of customers to be able to access Te Papa Atawhai data and systems to improve conservation in New Zealand

Providing...

- the right technology and support to staff and collaborators when they need it
- a digital workplace that meets the requirements of staff, volunteers, other conservation stakeholders, and iwi, hapū, and whānau
- the tools and ability to work flexibly and remotely

We are responsible for:

Over 8 million
hectares of public conservation land

13
national parks

36
conservation parks

100s
of reserves and islands

We manage:

6
marine mammal sanctuaries

44
marine reserves

1
whale sanctuary

1
seal colony

Our current approach:

Labour intensive

Exposes operations staff and conservation partners to hazardous environments

Our current oversight and use of our data for conservation has a lot of room for improvement

Taking stock of what we have

To begin the process of transforming our technology, it was crucial to first build a clear understanding of the technology already in use at Te Papa Atawhai. This included assessing our existing technology, identifying the improvement required, and highlighting the technology gaps.

Ideation workshops and surveys

Thirteen workshops were held between September and December 2019 with 350 staff from all the business groups at Te Papa Atawhai. Feedback was also gathered from over 200 responses to Operations staff surveys.

Key findings – identification of Business Change Opportunities

In December 2019, the insights provided by the ideation workshops and surveys were reviewed in combination with the results of the evaluation of the existing technology at Te Papa Atawhai.

The review of these insights, guided by the principles of the Kaupapa and SLT's Strategic Drivers, identified 18 Business Change Opportunities (BCOs) that would help Te Papa Atawhai achieve our goal of improving conservation efforts and our purpose of helping Papatūānuku thrive by improving our technological capabilities.

The Business Change Opportunities (BCOs)

1. Availability of data insights for Te Papa Atawhai decision makers	Improve the data architecture at Te Papa Atawhai to achieve better data quality, management and reporting outcomes. Placing real-time data insights closer to business decision makers, and making data open by default.
2. Cross-business integrated people, process and technology	Create alignment across people, process, information and technology, producing time and cost savings by reducing manual data input, and making information more accessible.
3. Financial management that meets government, department and business group needs	Remediate the Te Papa Atawhai finance system to meet government, department and business groups requirements for finance management. Additionally, establish end-to-end financial control, value management and accountability where cost drivers are understood, and implement the All of Government common work processes.
4. Capability for performing relationship management, engagement, collaboration and IDAM	Build the department's capability to identify, track, and engage external stakeholders for achieving joint conservation goals and outcomes. Engage and influence external conservation stakeholders more effectively.
5. Department-wide visibility over task management	Create department-wide visibility over tasks assigned through team process, and align them to business outcomes. Connect tasks and business outcomes to enable business plan monitoring and reporting.
6. Flexible and remote working capabilities aligned to major Te Papa Atawhai personas	Understand key user-personas and provide teams working flexibly or remotely with tools that support their requirements for information access and management. Enable the department's distributed and remote workforce to consume and update conservation information where they are, and when they need to.
7. Accessible and available information and documents	Improve the Te Papa Atawhai documentation management platform to meet the business and user needs for accessibility and findability.
8. Uplift in digital training and education capability to enable staff to work more efficiently	Increase the resources available to support learning management at Te Papa Atawhai. Identify the shortfalls in training and education and prioritise investment into raising staff capabilities. Utilise internal resources to educate external stakeholders.
9. Stakeholder access to intuitive digital channels that simplify end-to-end processes.	Replace manual, paper-based processes within the department by improving the digital channels capability to provide end-to-end online systems (e.g. Permitting, Pass Management, P2P). This will create more efficient and better user experiences with both internal and external stakeholders.

10. Make use of remote sensing equipment to monitor asset and ecosystem performance, and make positive interventions	Improve efforts to automate data capture by increasing investment for enabling field operations monitoring and data capture (e.g. remote trap sensing). Minimise personnel at risk and disturbance to natural habitats.
11. Effective communication options, including reliable video conferencing, available to all Te Papa Atawhai staff	Improve the video conferencing capability by supporting a single solution. Promote more effective communication for remote or distributed Te Papa Atawhai staff.
12. Clear pathway for developing innovative ideas	Improve the departments proficiency for delivering and supporting innovative solutions for conservation by strengthening engagement between the business and IS.
13. Capability to manage programmes and projects across all business groups	Enable programme and project management with a platform for managing project and programme resources, interdependencies and risks. Link projects with conservation outcomes.
14. Persistent awareness of ranger and field staff distribution	Provide the capability for tracking and monitoring the location of Rangers and field-operation staff in real-time.
15. Effective visitor experience that utilises analytics to remain safe and engaging	Improve the capability of Te Papa Atawhai for engaging with visitors through a visitor-lens. Provide visitors with the services they require when they need them, capture visitor insights, and keep visitors safe.
16. Organisation-wide health and safety culture that extends to cover external stakeholders	Improve the safety of Te Papa Atawhai stakeholders engaged in conservation work (Te Papa Atawhai staff, volunteers, community conservation groups, etc) with a focus on each stage of the conservation journey.
17. Consistent access to IT equipment that suits each employees requirements	Provide the necessary hardware and infrastructure for every employee based on a persona that encapsulates each employees technical requirements.
18. Reliable and effective ICT support service for regional and remote staff	Uplift ICT support for the regional offices of Te Papa Atawhai by adding support staff or providing dedicated channels for regional staff to access.

Prioritising and Planning

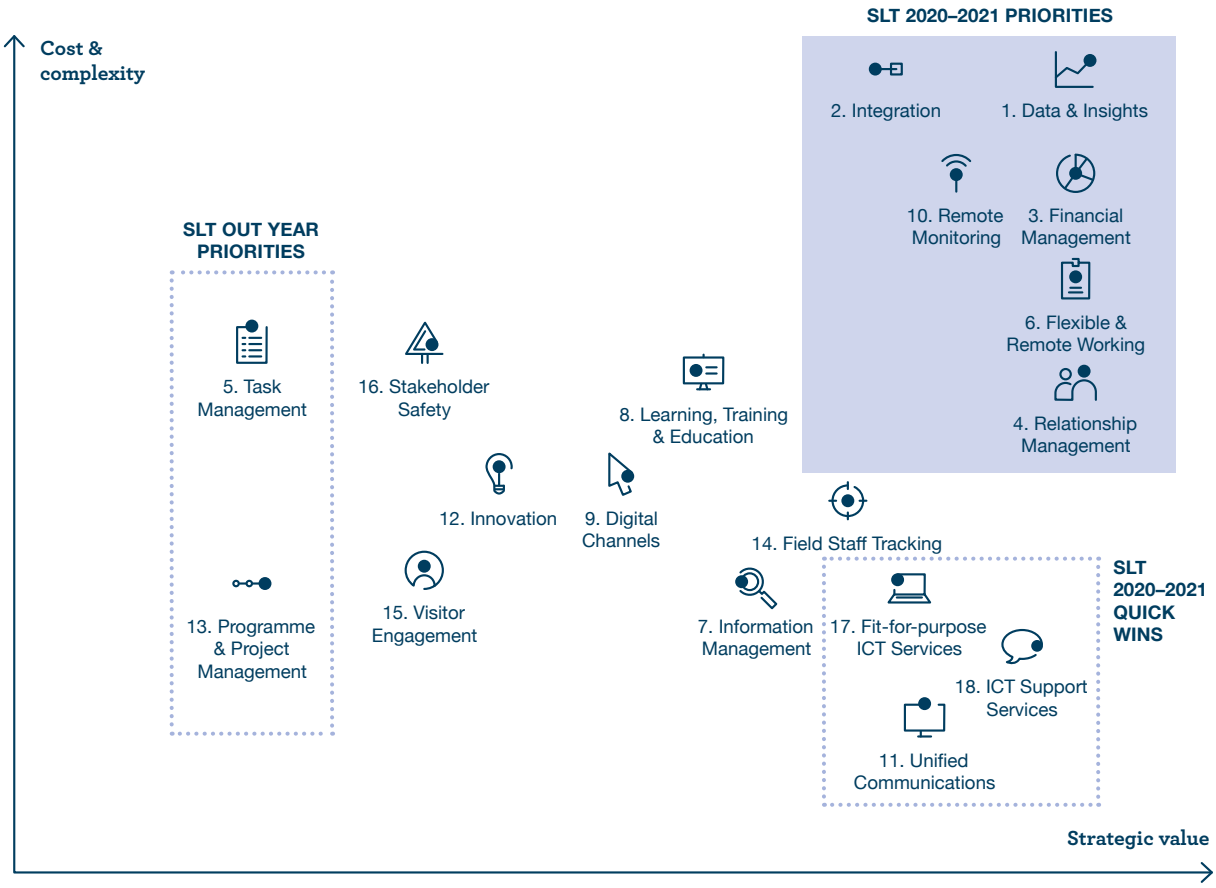
Determining Priorities and Planning

With the high-level Business Change Opportunities (BCOs) identified, the Senior Leadership Team began to prioritise the BCOs, refine them into a more specific set of initiatives to achieve those opportunities, and plan a schedule for implementation of the initiatives.

Prioritisation of the BCOs

In January 2020, the Senior Leadership Team reviewed the findings of the business consultation to evaluate and prioritise the 18 Business Change Opportunities for the next 36 months.

The Senior Leadership Team had to prioritise the wide ranging interdependencies across their outcomes to create a balanced portfolio of investment, which delivers immediate benefits in their critical areas of concern, while ensuring that we make progress in the Business Change Opportunities identified in the business workshops.



SLT 2020–2021 priorities

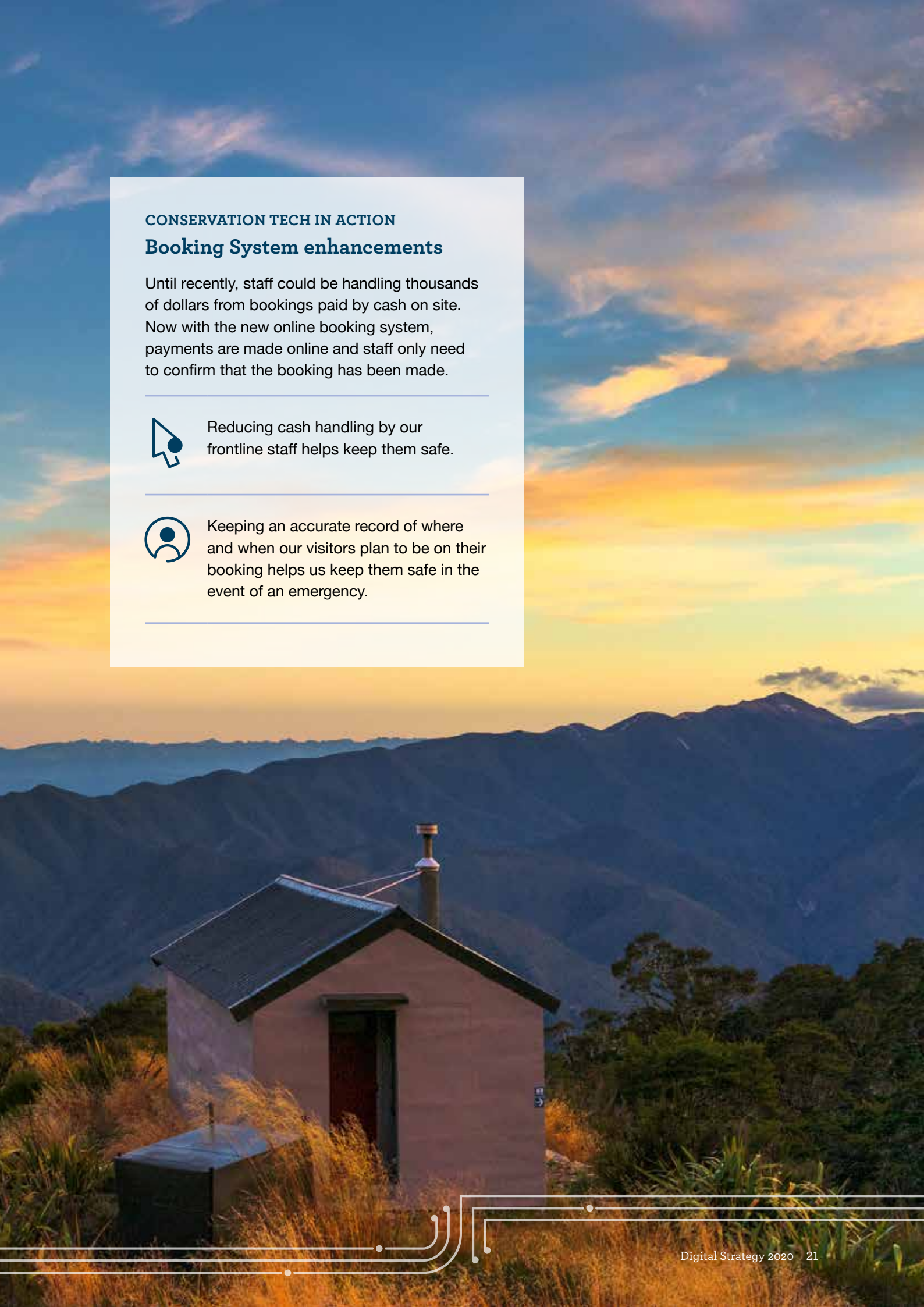
- Providing strategy-driven data insights (1) and business system integration (2) for decision makers was rated as a very high priority. It is identified as the key enabler and dependency to deliver other strategic opportunities.
- Remediating the existing Financial Management solution (3) to meet requirements at all levels (Government, Department and Business Groups) was identified as a leading priority.
- Other prioritised focus areas are improving remote monitoring capabilities (10), enabling relationship management (4), and enabling flexible/remote working (6).

SLT 2020–2021 quick wins

- Opportunities relating to ICT hardware (17), end user support (18), and video conferencing (11) were identified as high value and low complexity initiatives which would greatly improve on the current state and provide a greater flexible/remote working outcome (6) to the Department.

SLT out year priorities

- Initiatives to enable task management (5) and programme/project management (13) were deprioritised in favour of concentrating on other initiatives that would address critical needs for the Department. However, some improvement in these areas would be achieved as part of the Financial Management (3) initiative activities.



CONSERVATION TECH IN ACTION

Booking System enhancements

Until recently, staff could be handling thousands of dollars from bookings paid by cash on site. Now with the new online booking system, payments are made online and staff only need to confirm that the booking has been made.

Reducing cash handling by our frontline staff helps keep them safe.

Keeping an accurate record of where and when our visitors plan to be on their booking helps us keep them safe in the event of an emergency.

Architecture Building Block Blueprint

The strategy working group used an industry standard, the Architecture Building Block (ABB) Blueprint, to explore and assess the health of our systems.

The ABB Blueprint provided a landscape view of the health of our systems, enabling Lead Directors to align their respective Business Change Opportunities (BCOs) to the blueprint, and identify which systems would need to be improved to deliver on their BCOs.

ABB Blueprints

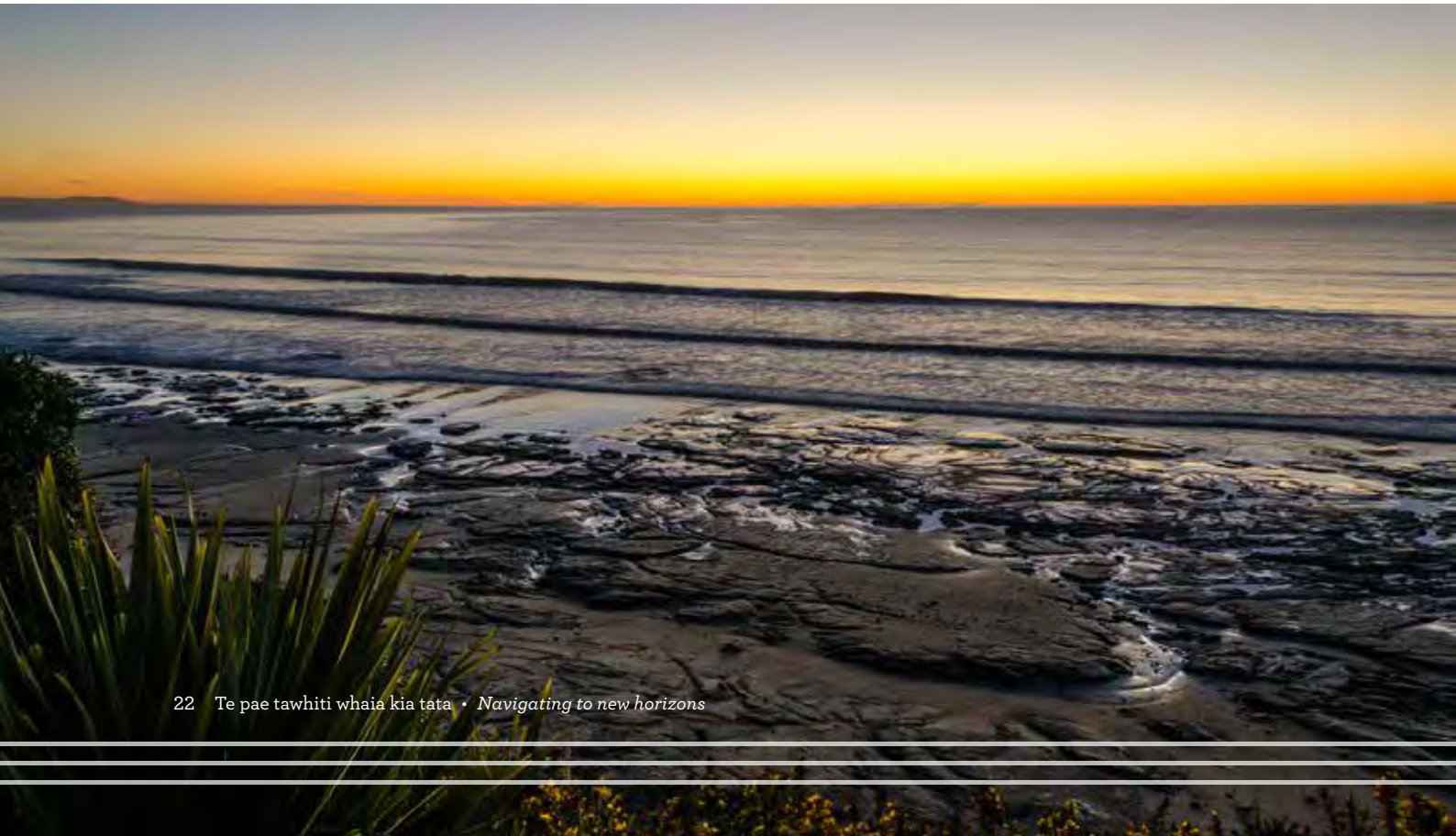
An individual 'Architecture Building Block' is described as a package of functionality defined to meet business needs.

The building blocks provide a common language (or 'taxonomy') between business capabilities and the supporting technology, which allows us to identify where technological changes will affect the different business capabilities.

Each of the coloured blocks is an individual Architecture Building Block. The blocks are coloured with a Red, Amber, or Green status to indicate the health of the business capabilities, and the underlying/supporting technology. The building blocks are categorised and mapped to form the ABB Blueprint.

Why use an Architecture Building Block Blueprint?

While organisational structures continuously change and evolve, the ABB Blueprint is functional and independent of organisation structure, ABBs avoid siloed thinking and are robust enough to accommodate operating model changes.



The categories used in the Blueprint

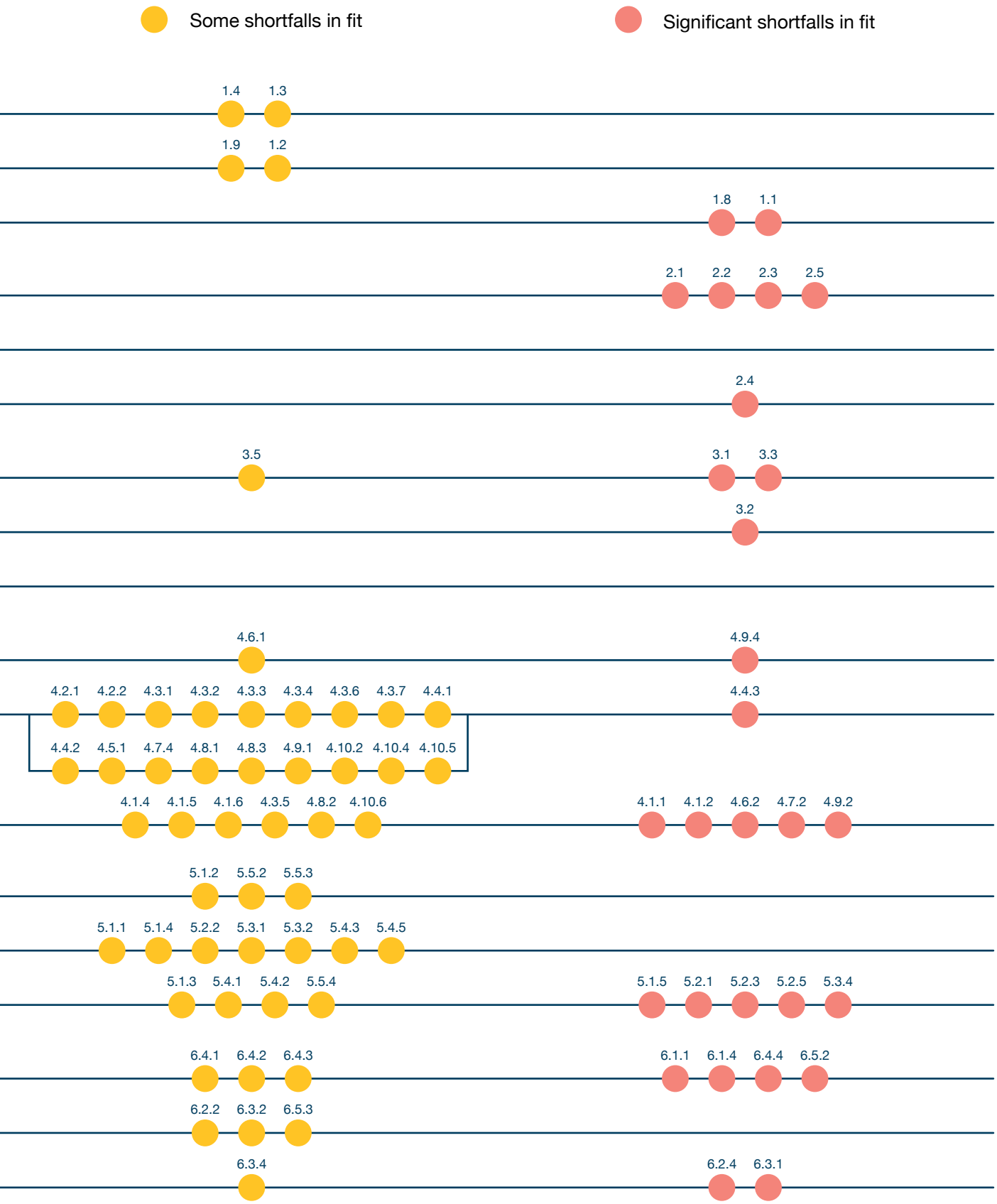
The Architecture Building Blocks were categorized into six core business outcomes that form the basis of the structure of the ABB Blueprint.

The purpose of these structural elements was to group the ABBs by a common purpose or content to give a clearer picture of key areas for improvement to help with prioritisation of change initiatives. Those categories are:

Engagement Channels	These building blocks are essential to support users, partners and stakeholders engage with Te Papa Atawhai. They are the service and information tools that our customers, partners, volunteers and visitors need to work with us, experience Papatūānuku, and help our nature thrive. Improving these tools will reduce the number of manual processes currently in place for managing engagement channels, and create capacity for the department to focus on adding value to our relationships with customers, partners, volunteers, and visitors.
Systems Integration	These building blocks enable us to more effectively collect and connect internal and external data assets, improving access and use of the data across DOC and the wider conservation community.
Systems of Insight	These building blocks enable us to analyse and utilise data and information assets to inform and monitor the delivery of strategic outcomes. These systems will tell us “what has happened” and model “what could happen”.
Core Conservation Services	These building blocks work together to support the overall delivery of our core conservation functions and processes.
Corporate Services Supporting Conservation	These building blocks are the shared Enterprise or Corporate enabling functions of financial and asset management, human resource management, risk and business planning.
Systems of Agility, Resilience & Reliability (Technology)	These are foundation building blocks of technology capabilities that underpin and support all of Te Papa Atawhai. These include our network, the data centre, the devices we use every day and the support of our system users.

The Architecture Building Block Blueprint and Heatmap

SEE APPENDIX 7 FOR DETAIL



The Way Forward

Refinement of the BCOs into initiative briefs

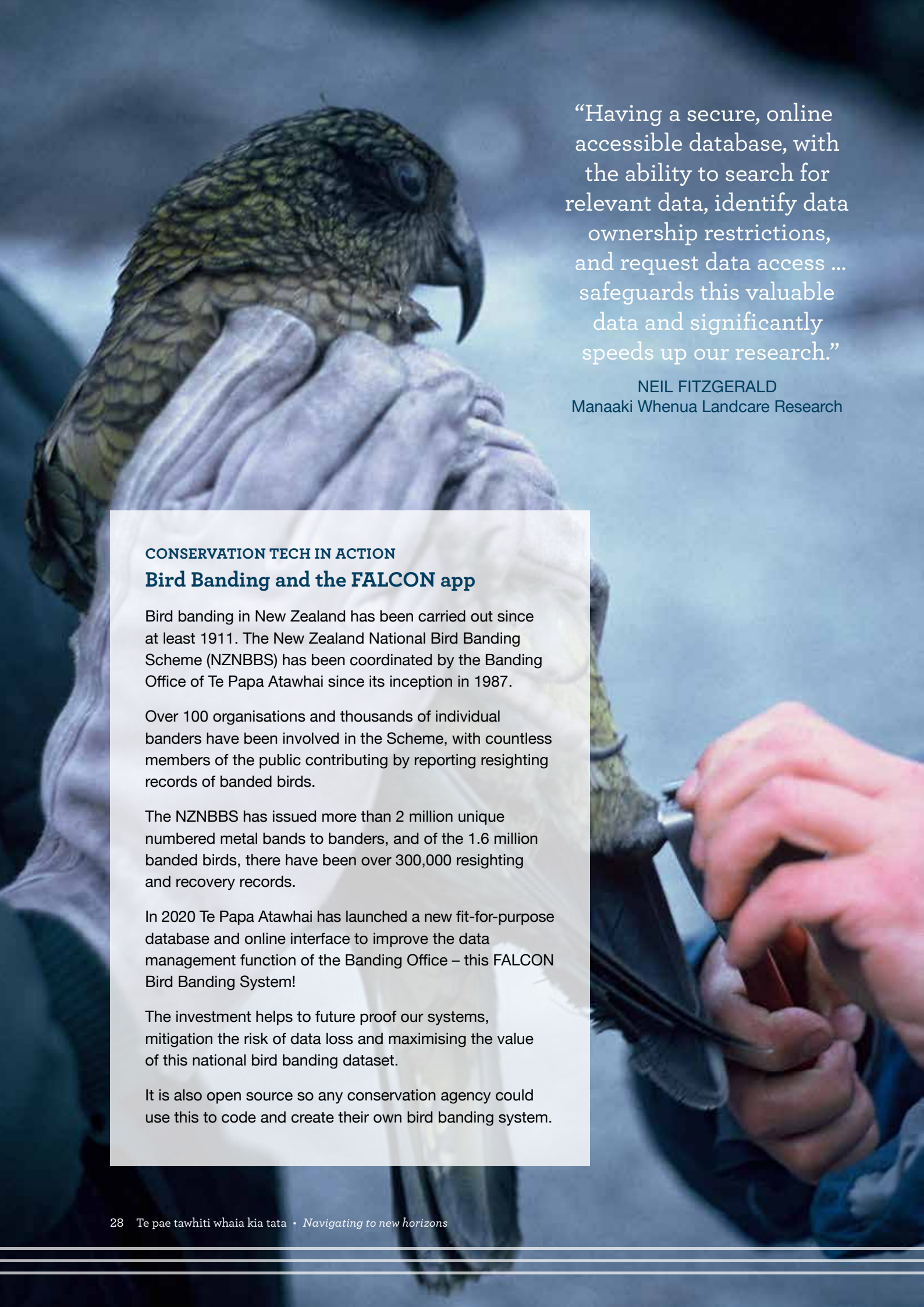
In February of 2020, one-on-one sessions were held with each of the BCO Lead Directors to clarify drivers and requirements. Lead Directors aligned the 18 Business Change Opportunities (BCOs) with the ABB Blueprint and identified over 60 initiative briefs to be implemented to contribute toward the success of the BCOs.

The initiative briefs set out the high-level requirements for systems and process changes to contribute toward the success of the BCOs by improving the technology and support available at Te Papa Atawhai.

Prioritisation of the initiative briefs to develop a Roadmap

During March to April 2020, the initiative briefs were assessed in three Lead Director workshops to test business value, strategic alignment, and project feasibility.

The results of this assessment were used to support the SLT in prioritising and sequencing the initiatives into a Digital Strategy Roadmap.



"Having a secure, online accessible database, with the ability to search for relevant data, identify data ownership restrictions, and request data access ... safeguards this valuable data and significantly speeds up our research."

NEIL FITZGERALD
Manaaki Whenua Landcare Research

CONSERVATION TECH IN ACTION

Bird Banding and the FALCON app

Bird banding in New Zealand has been carried out since at least 1911. The New Zealand National Bird Banding Scheme (NZNBBS) has been coordinated by the Banding Office of Te Papa Atawhai since its inception in 1987.

Over 100 organisations and thousands of individual banders have been involved in the Scheme, with countless members of the public contributing by reporting resighting records of banded birds.

The NZNBBS has issued more than 2 million unique numbered metal bands to banders, and of the 1.6 million banded birds, there have been over 300,000 resighting and recovery records.

In 2020 Te Papa Atawhai has launched a new fit-for-purpose database and online interface to improve the data management function of the Banding Office – this FALCON Bird Banding System!

The investment helps to future proof our systems, mitigation the risk of data loss and maximising the value of this national bird banding dataset.

It is also open source so any conservation agency could use this to code and create their own bird banding system.

The Way Forward

The initiatives derived from the BCOs

Engagement Channels		
Visitor Journey and Experience Mapping	Deliver visitor experience minimal viable product (MVP)	Improve engagement experience for additional visitor experiences
Improve digital channels and digital experience	Delivery of an internal and external enterprise collaboration capability	External stakeholder persona & journey mapping
Intranet Upgrade		

Systems Integration		
Deployment of API management and re-engineering of existing APIs for candidate integration projects	Develop new APIs to support new use cases	Integration discovery phase and define integration architecture, strategy and governance

Systems of Insight		
Data discovery, architecture and governance phase	Establish and enhance data platform for analytics and insights	Model data lifecycles for key user journeys
Automated and self-service reporting (incl. financial reporting)	Uplift Enterprise Content Management and Search	Adopt new data architecture, data governance and master data management iteratively
Define and implement information lifecycle management	Enterprise search implementation	ArcGIS Geospatial Platform Upgrade
Digital Media Management		

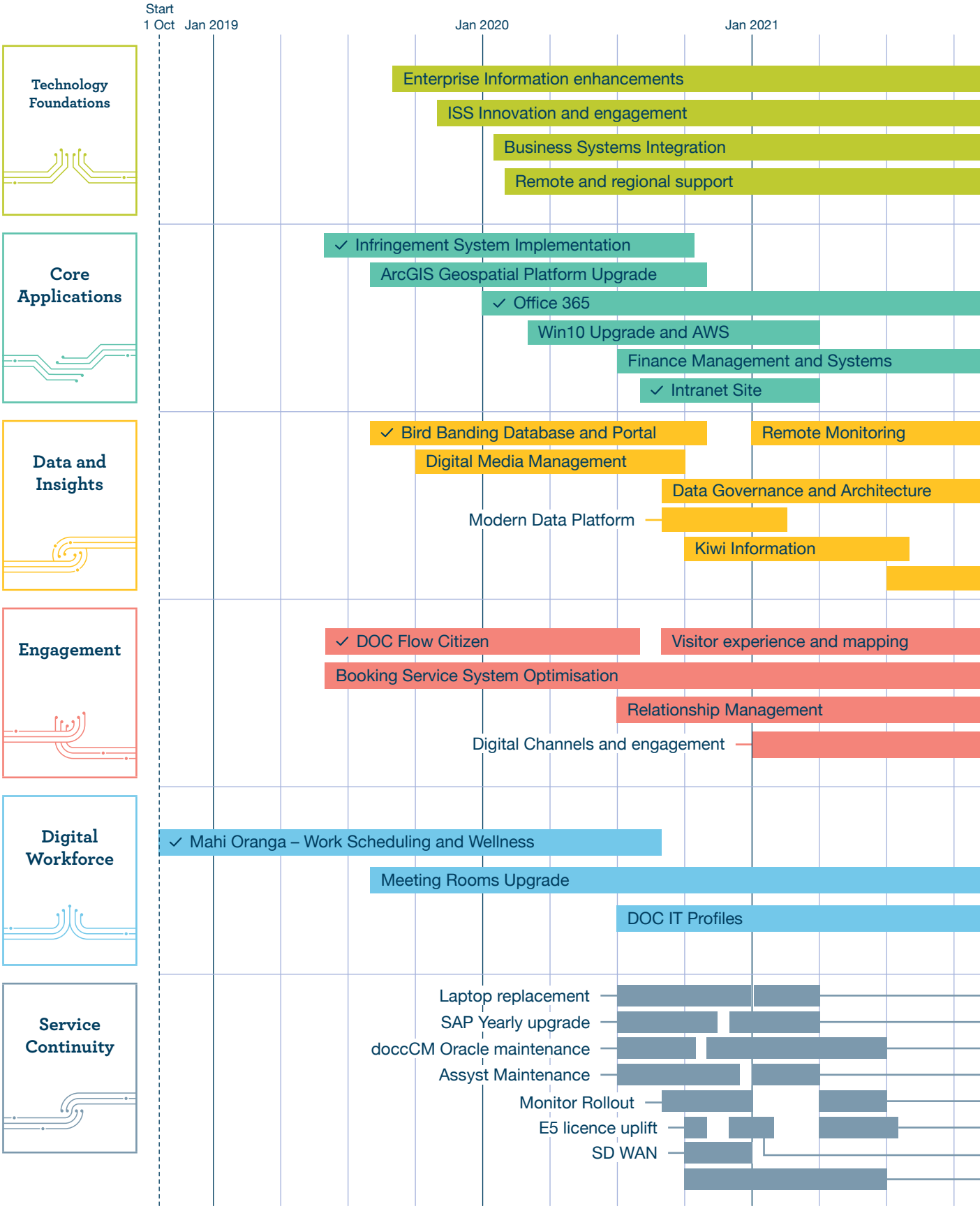
Core Conservation Services		
Implement task management system	Identify, define and journey map all Māori relationships	Discover and consolidate relationship data and define relationship model
Relationship Management platform procurement and implementation (iterative releases)	Implement field staff tracking	Identify touchpoints to enhance stakeholder health, safety and privacy
Options analysis and strategy for tracking field staff	Task Assignment process review and optimisation	Remote monitoring benefits analysis and prioritisation
Consolidate and improve remote monitoring capabilities	Ongoing improvement of remote monitoring	Bird Banding Database and Portal
Booking Service System Optimisation	Mahi Oranga – Work Scheduling and Wellness	DOC Flow Citizen
Infringement System Implementation		

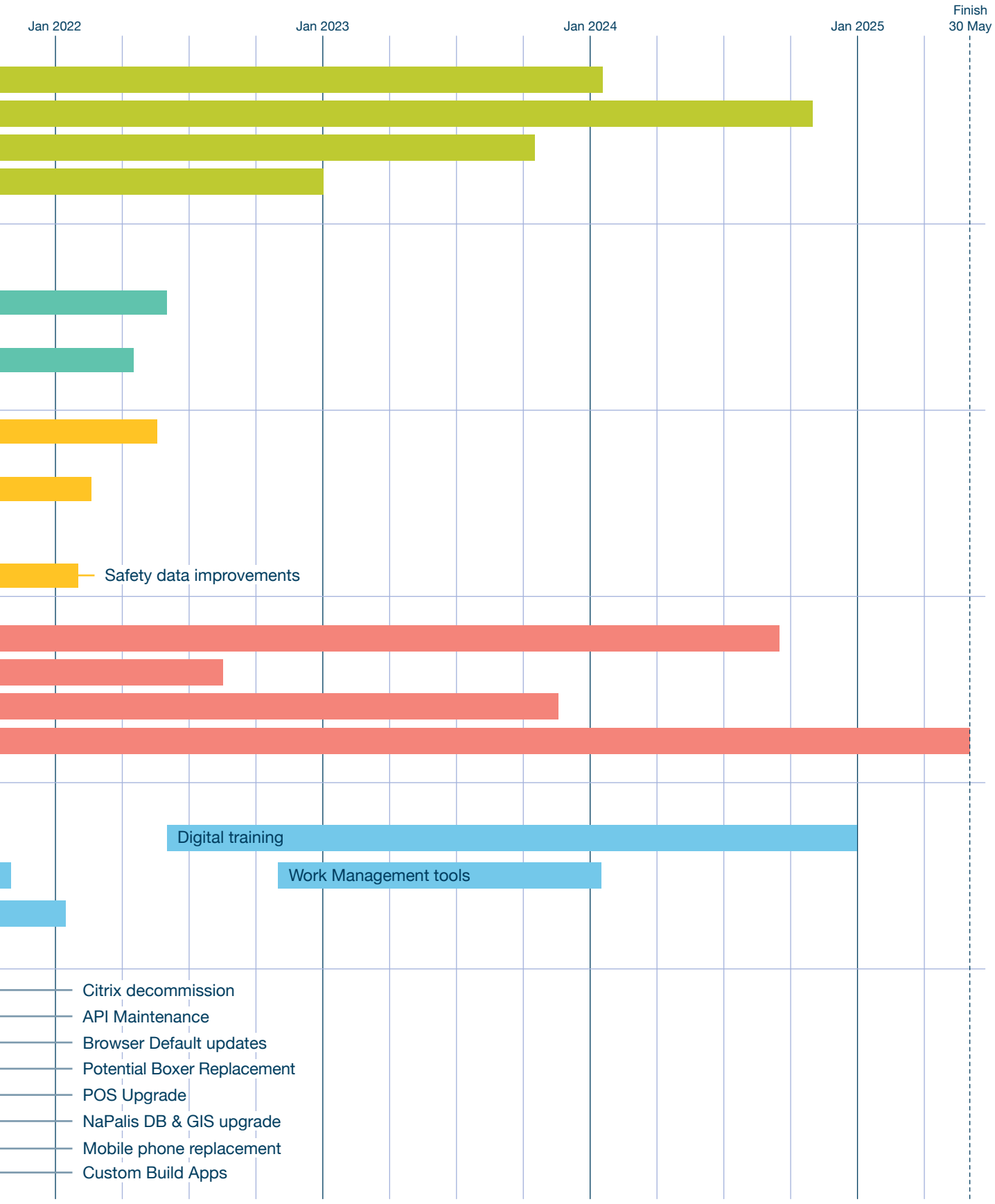
Corporate Services Supporting Conservation		
Explore and implement concepts for delivering collaborative and shared learning	Finance function review and FMIS transformation mobilisation	Configuration of solution to financial management requirements
Educate, train and uplift staff capability on ICT application and tool use	Remediate ICT training curriculum for onboarding and induction	Digital process discovery and prioritisation
Implement process mapping system	Procure and implement platform for programme and project management	Establish innovation 'hub' including roles and processes
Identify and deliver innovation proof of concept	Strategic planning and scenario modeling	Business Planning System replacement
IT Service aggregation review to manage multiple vendors and implement service improvement processes (ITMS)	IT Helpdesk Improvements to deliver end-user support (ITMS)	

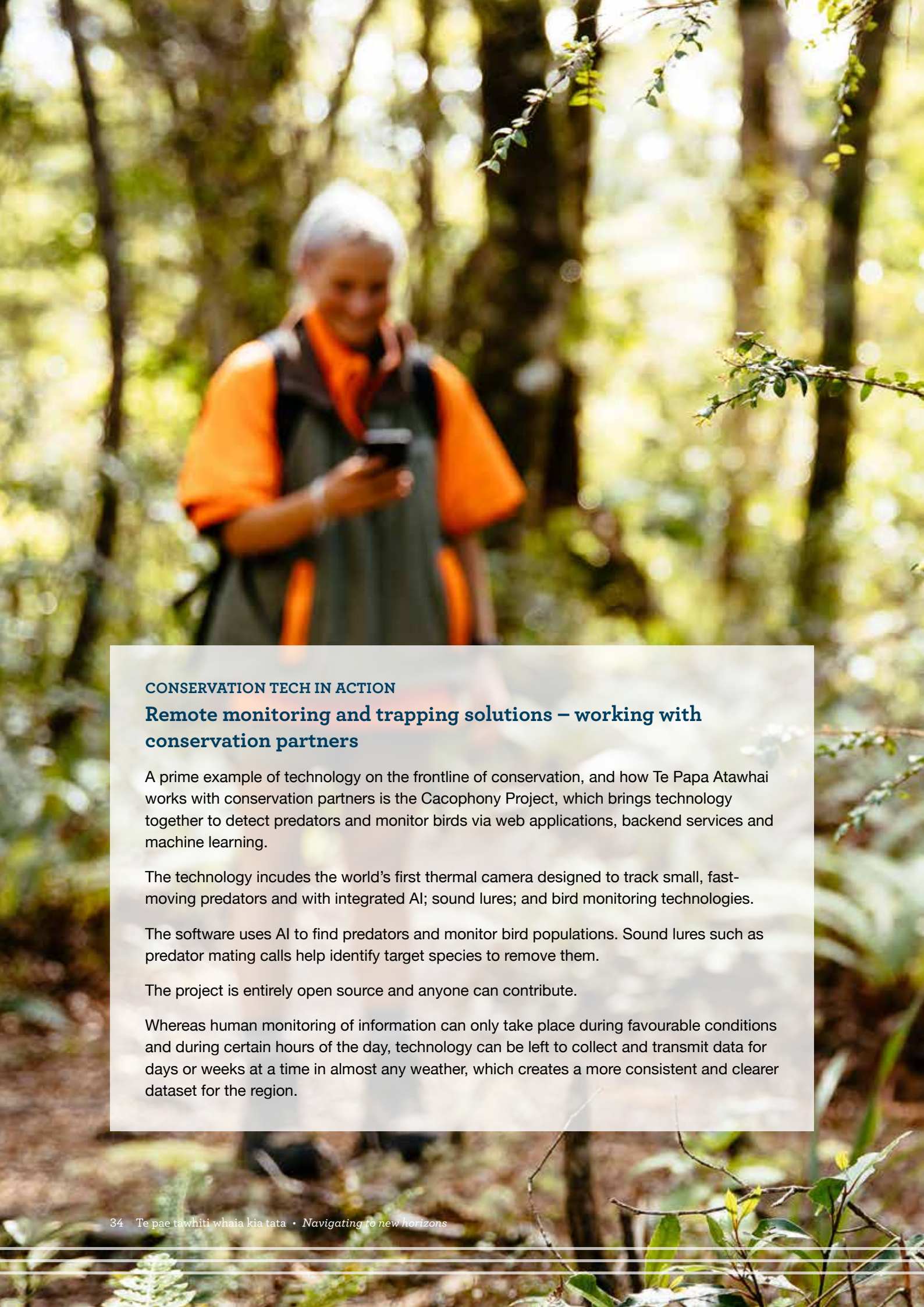
Systems of Agility, Resilience & Reliability (Technology)		
Deploy Identity and Access Management platform	Automate provisioning/ deprovisioning of access rights for internal / external user roles	Increase end user support roles for regional and remote areas
Define key internal user personas and user journeys	Application portfolio cataloguing, optimisation and rationalisation	Define and onboard principal technology advisor and business engagement roles
Establish 'Engagement Hub' including roles and processes	Ongoing ISS operating model and capability uplift	Review ISS operating model to support delivery of innovation and new delivery models e.g. Agile, DevOps
Review multimedia device and format solutions for remote video conferencing and communications	Gap assessment of ICT capabilities for delivering user persona requirements	Equip user personas with appropriate ICT capabilities
Review and execute options for enhancing network in remote regions	VHF Radio Replacement	Office 365
Win10 Upgrade and AWS	Meeting Rooms Upgrade	Improve Cyber security and protect DOCs digital information
Core IT Managed Services		

The Digital Strategy Roadmap

The prioritised initiative briefs form the Digital Roadmap for delivery. The Roadmap has six programmes – each focused on delivering cross-business benefits over 3–5 years. Each theme will be championed by two to three Lead Directors from across Te Papa Atawhai.




Jan 2022
Jan 2023
Jan 2024
Jan 2025
Finish
30 May
Safety data improvements
Digital training
Work Management tools
Citrix decommission
API Maintenance
Browser Default updates
Potential Boxer Replacement
POS Upgrade
NaPalis DB & GIS upgrade
Mobile phone replacement
Custom Build Apps



CONSERVATION TECH IN ACTION

Remote monitoring and trapping solutions – working with conservation partners

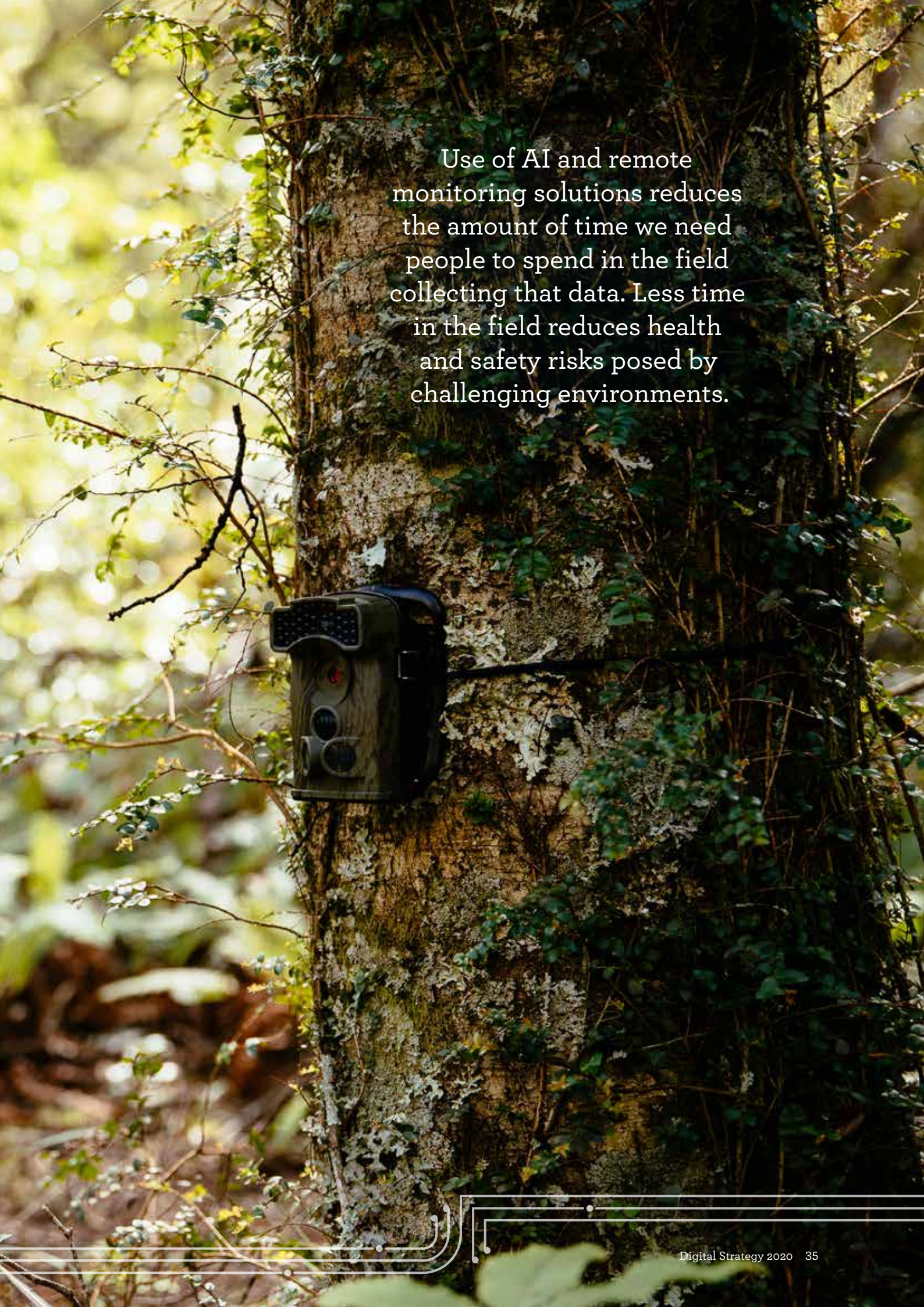
A prime example of technology on the frontline of conservation, and how Te Papa Atawhai works with conservation partners is the Cacophony Project, which brings technology together to detect predators and monitor birds via web applications, backend services and machine learning.

The technology incudes the world's first thermal camera designed to track small, fast-moving predators and with integrated AI; sound lures; and bird monitoring technologies.

The software uses AI to find predators and monitor bird populations. Sound lures such as predator mating calls help identify target species to remove them.

The project is entirely open source and anyone can contribute.

Whereas human monitoring of information can only take place during favourable conditions and during certain hours of the day, technology can be left to collect and transmit data for days or weeks at a time in almost any weather, which creates a more consistent and clearer dataset for the region.



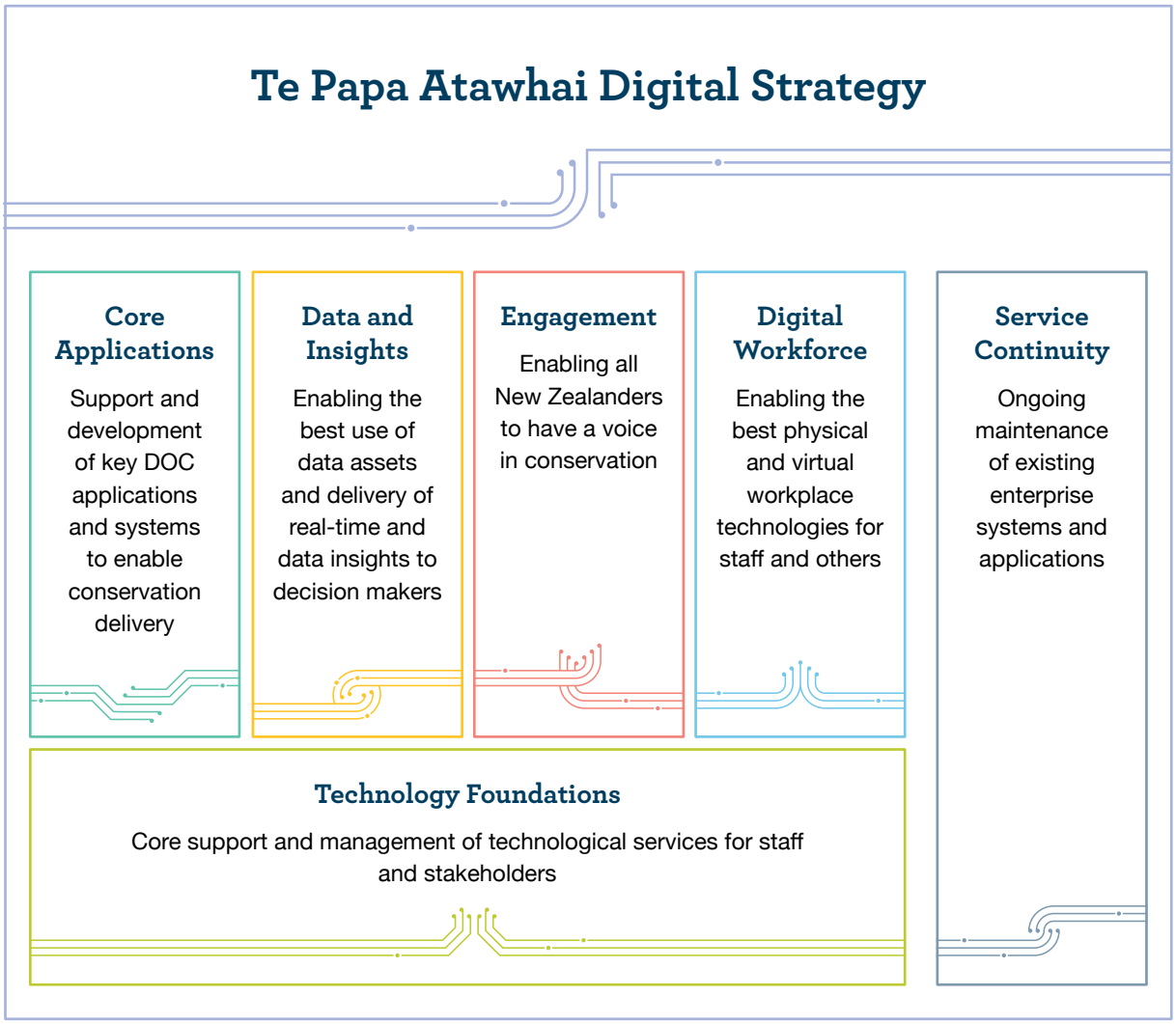
Use of AI and remote monitoring solutions reduces the amount of time we need people to spend in the field collecting that data. Less time in the field reduces health and safety risks posed by challenging environments.

Structure of the Digital Strategy Portfolio and Governance

The Senior Leadership Team tasked Lead Directors to govern the implementation of the portfolio. The Portfolio Governance Group ensures delivery on the initiatives within the portfolio, and reports to the Enterprise Investment Task Force (EITF) – the investment board of the Senior Leadership Team.

Strategy Governance

The Digital Strategy was agreed by the Senior Leadership Team (SLT) and reflects SLTs prioritisation of the technology investment. Rachel Bruce, Deputy Director General of the Corporate Services Group, represents SLTs views as the Portfolio Sponsor.



Te Papa Atawhai Digital Strategy Portfolio Structure

Portfolio Structure

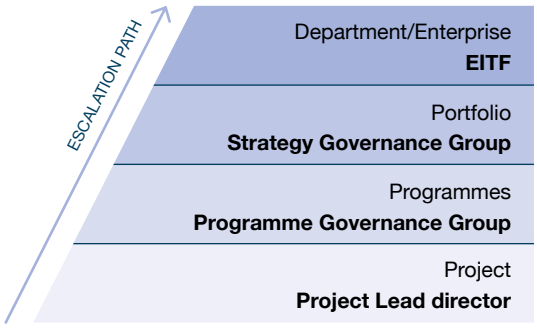
As referenced on the Digital Strategy Roadmap, the Digital Strategy Portfolio consists of six programmes: Technology Foundations, Core Applications, Data and Insights, Engagement, Digital Workforce, and Service Continuity.

Service Continuity will be delivered through BAU and will be governed by ISS Tier 4 managers with the CIO holding the Single Point of Accountability.

Governance Structure

Portfolio Governance

The Portfolio Governance Group is responsible for the delivery of the DOC Digital Strategy on behalf of the Senior Leadership Team. The Senior Leadership Team and Enterprise Investment Task Force provide guidance to endorse the decision making of the Governance Group.



The Portfolio Governance Group's role is to ensure that the portfolio remains viable, balanced, and embedded in the business at all levels. It allocates and re-distributes funds between the programmes and projects as needed, based on strategic alignment and recommendations from Programme Governance Groups. It escalates investment decisions that exceed the approved Portfolio Detailed Business Case to the Enterprise Investment Task Force.

Portfolio governance membership is defined by SLT. Programme governance and responsibilities will be based on scale, context, and change impact of the initiative. This approach to Governance will ensure that decisions are made quickly and with the right level of detail, enabling the Portfolio to deliver effectively.

The Portfolio Governance Group provides guidance and support to the Portfolio SRO (Chief Science Advisor) to ensure that delivery is aligned with the Enterprise Investment Taskforce priorities. It is also responsible for leading business change and championing the Strategy Portfolio.

Programme Governance

Each programme has a Programme Governance Group that provides oversight, guidance, and decision making across the projects and initiatives within the programme. Each Programme Governance Group reports to the Portfolio Governance Group. Individual project governance is also in place. It may be light, or provide more oversight as appropriate for differing projects.

Management by exception

The key principle will be management by exception. This means that Digital Strategy Portfolio Governance will take an agile approach, and have shorter meetings on a more frequent basis focusing on decisions and strategic guidance.

Membership

Sponsor	SRO	Chief Advisor Digital Strategy Portfolio	Ex-officio
DD-G Corporate Services Rachel Bruce	**Chief Science Advisor** Ken Hughey	**Chief Advisor** Jeffrey Cornwell	**Portfolio Manger** Bruce Norris **Chief Architect** Gavin Walker
Team members*			
CFO Kevin Martin	**Director Customer Engagement** Vicki Connor	**Director Cultural Awareness** Te Taute Taiepa	*Other Directors to be confirmed*

* Other members may be added at SRO's discretion throughout the life of the portfolio

Approach to Governance

Te Papa Atawhai is a combination of complex systems. Governance of both the Digital Strategy and portfolio must continuously review the business and external context, stakeholder needs, and the growing capabilities in the technology industry.

Investment in current and new systems, for example the Financial Management Information System, will have consequences across the entire business by changing business processes, role changes, and potentially increasing/decreasing DOC operating costs.

To realise the transformational benefit of this strategy and portfolio, our approach to governance will evolve to meet the needs of system users and those with an interest in how the Department operates, taking advantage of procurement and technology changes.

To be effective, governance will focus on the whole system rather than individual business units or silos. The aim is to achieve positive change across the strategic drivers and maintain a steady pace of improvement in digital services.

Te Papa Atawhai Te pae tawhiti whaia kia tata is the Senior Leadership Team's response to a long legacy of underinvestment in Information Technology across the Department. This strategy reflects business needs and the Department's Strategic Drivers. Implementation of the portfolio is the role of a core group of Lead Directors nominated by the Senior Leadership Team.

Governance Decision Making

Inputs

- Strategy Governance TOR
- Portfolio Mandate and Detailed Business Case
- Digital Strategy approved roadmap
- Portfolio Dashboard
- Escalated items from Programme Governance via ISS Project Management Office

Focus & decision-making

Stakeholder/Business Change

Responsibilities:

- ✓ Understand and manage the impact of change
- ✓ Understand the programme's stakeholder profile

Financial and business case

Responsibilities:

- ✓ Ensure that projects remain viable and outputs are aligned to the programme benefits
- ✓ Monitor programme delivery against the baselines defined in the Project Business Cases

Decisions:

- → Approve Project Business Cases for inclusion in the Programme; ensure Project Business Cases align with Digital Strategy Roadmap
- → Approve or reject non-financial Change Requests

Benefits

Responsibilities:

- ✓ Ensure that benefits identified by the projects are clearly defined, owned, and handed over

Risks and Issues

Responsibilities:

- ✓ Take ownership of actions from escalated risks and issues within own areas of control
- ✓ Advise on mitigations for escalated risks and issues
- ✓ Ensure risks are managed in accordance with the risk management system at Te Papa Atawhai

Decisions:

- → Agree treatments for escalated risks and issues
- → Escalate issues and risks when they cannot be resolved

Dependencies

Responsibilities:

- ✓ Manage dependencies between projects within the programme

Decisions:

- → Decide the order of conflicting projects or initiatives within the programme, according to strategic priority and value for money

Outputs

- → Funding escalation memo to EITF (endorsement)
- → Approved financial change and contingency requests

Outcomes

- ✓ Portfolio has clear business ownership
- ✓ Portfolio is delivering to agreed baselines
- ✓ Portfolio is aligned to strategy and is delivering benefits for Te Papa Atawhai

Establishing New Roles

In order to maintain cross-business engagement and governance, new roles will be established.

Elevating the role of technology function in the Department to a strategic enabler, aligned with DOC's business strategies.

Key accountabilities

1. Create alignment between the needs of the business and the overall technology vision at DOC. Leading the technology direction for the Department
2. Lead infrastructure data, information, applications and EUC to address the ICT challenges that arise within ISS
3. Establish and maintain business ownership of ICT assets, ICT innovation and governance of overall ICT Roadmap

Key responsibilities

- Foster continued innovation across Business Groups, assessing opportunities for ICT innovation at the Department
- Champion technology change on behalf of the SLT and across the wider Department
- Manage the ongoing change of ISS's operating model and technology foundations, including vendor management and strategic sourcing
- Work with Business Relationship Managers to ensure prioritisation of business outcomes and realisation of benefits to Business Groups

Trusted ICT advisors to DOC's Business Groups.

Creating an interface between ISS and the business, so that ICT can be more effectively integrated into the business.

Key accountabilities

1. Establish and maintain engagement with Business Groups, and driving the Business Group agendas into the ICT planning and capital allocation processes
2. Provide a single-point-of-contact for Business Groups to navigate ICT related issues and provide input (i.e. 'voice of the customer')
3. Maintain ongoing understanding of the strategy of Business Groups, and ensuring this is related to the Department's ICT strategy

Key responsibilities

- Assist in the prioritisation of the ICT projects and programmes, to ensure that the ICT strategy is directed in support of enabling business strategies
- Facilitate effective communication and collaboration between each Business Group and ISS, to ensure that ICT assets, investments and capabilities provide maximum return on investment to the Business
- Ensure that Business Groups understand technology solutions, solution delivery, and comply to various governance processes, architecture standards, etc

Conclusion and Appendices

How the Digital Strategy Benefits Te Papa Atawhai and Conservation Efforts

Over the next five years the Digital Strategy will:

- Provide the technological foundations that support the delivery of business and conservation initiatives
- Support and develop key systems at Te Papa Atawhai to enable delivery of conservation
- Make better use of the information we hold to guide our conservation work
- Implement systems and processes to improve the experiences, services and interactions with external stakeholders (e.g. visitors, volunteers, iwi, hapū, and whānau)
- Improve our physical and virtual workplace technologies for employees, supporting staff to be productive, collaborative, and connected
- Keep existing systems stable alongside the introduction and development of new systems.

What does this mean for Te Papa Atawhai and its Partners?

With refreshed technological capabilities, we will improve the health, safety, and wellbeing of our staff, volunteers, partners, and visitors.

Our whānau will be given the tools they need to work flexibly and remotely, and work more efficiently than ever before to contribute to conservation and fulfill our purpose of enabling Papatūānuku to thrive.

We will gain a clearer understanding of how we can work best with our partners and stakeholders to ensure our relationships are managed effectively to deliver conservation efficiently.

We will have a deeper understanding of the data and information we hold, and find innovative ways to use that information to improve our conservation efforts.

What does this mean for conservation?

Bringing Te Papa Atawhai into the modern era of technology will allow us to deliver conservation in efficient and innovative ways we have never experienced before.

Improvement of our technological capabilities will have measurable effects on reducing our carbon emissions, and increasing the efficacy and efficiency of our work in conservation to benefit Aotearoa and our natural heritage.

Closing Statements

Mike Edginton, Chief Information Officer

Te Papa Atawhai Digital Strategy – A guiding Investment Plan & Architecture Blueprint for Te Papa Atawhai.

This Digital Strategy provides the framework for the detailed implementation plan of all Information Communication Technology (ICT) initiatives at Te Papa Atawhai. In this strategy we reflect the business point-of-view on the technology capabilities Te Papa Atawhai needs to help Papatūānuku thrive.

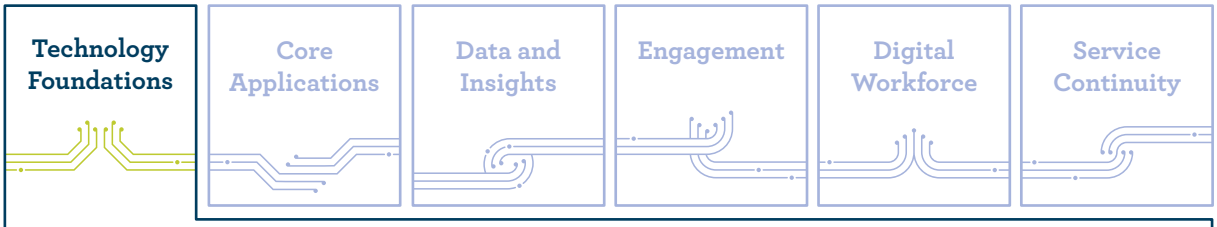
In this document we outline the ICT systems, services, and support that the Senior Leadership Team have prioritised to meet the business needs.

The development of the strategy has been achieved through close, ongoing engagement and partnership with all business groups and teams. Hundreds of staff have contributed their needs, Lead Directors have contributed their context, and SLT the vision and guidance about where to focus.

To ensure that our investment in technology continues to reflect business needs, the implementation is governed by Business Directors. The role of the Business Directors is to enable and foster close engagement with business groups, be responsive to the needs of broader stakeholders, and to support the Senior Leadership Team in refining the strategy to align with conservation priorities, technologies, and ways of using them for conservation.

Mike Edginton
Chief Information Officer
November 2020

Appendix 1: Technology Foundations Programme on a Page



Programme on a page

Technology Foundations

The scaffolding to support the delivery of DOC technology

Improved Information Management Service • Integrated Business systems • ISS innovation and collaboration

Context/Purpose

- The technological foundations that allow DOC to delivery on Conservation outcomes
- Clear focus on appropriate technology to do the work

Risks/Issues

- Levels of competency with technology are variable
- Significant change process
- Variable processes that need to be optimised

Dependencies

- Discovery work for Identity/personas
- Systems Maintenance / Core Applications / Data & Insights

Benefits/Outcomes

- Business processes are understood
- Technology support is clear and targeted

Deliverables

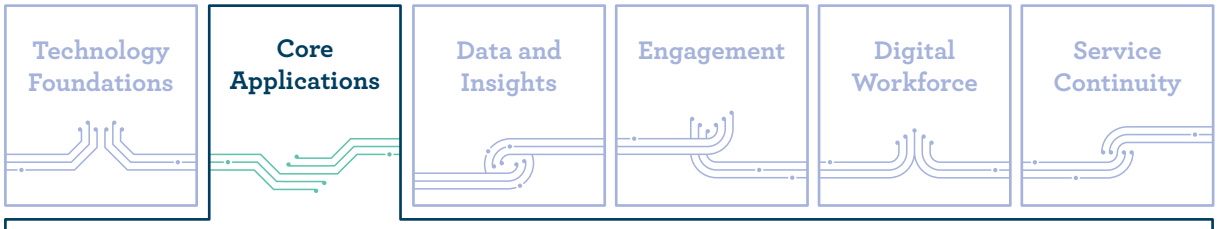
- Technology systems which are fit for purpose and support end-users
- Tools that support business processes
- Appropriate hardware and software at the right time to deliver conservation anywhere

Lead Directors/Contacts

Vicki Connor, David Talbot, Mike Edginton, Sal Smutek, Sharon Alderson

DOCDigitalStrategy@doc.govt.nz

Appendix 2: Core Applications Programme on a Page



Programme on a page

Core Applications

The technology that supports our systems to deliver conservation outcomes

Accurate financial information • Evergreen office tools (Office365) • Intranet to support the business

Context/Purpose

- Current Finance system does not provide adequate visibility of Conservation outcomes
- Lack of enterprise approach to business workflows

Risks/Issues

- Current finance system does not follow best practice
- Significant change management for Finance work
- Long standing financial structures that people work around

Dependencies

- Discovery work for Finance
- Clearly identified workflows, processes
- Technology Foundations / Data & Insights / Engagements

Benefits/Outcomes

- Finance management following NZ Government best practice workflows
- Cleansed data accurately supports Conservation outcomes

Deliverables

- Finance system that reflects current Government procedures and produces clear, timely reports
- Finance system follows NZ Government best practice

Lead Directors/Contacts

David Talbot, Mike Edginton, Kevin Martin

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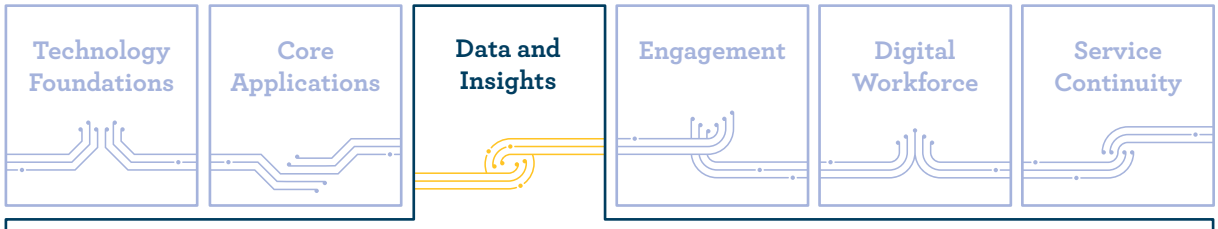
Appendix 3: Data and Insights Programme on a Page



Programme on a page

Data and Insights

Making better use of information to guide our conservation work

Data Governance & Integration • Health & Safety data usage • Remote Monitoring

Context/Purpose

- Making our data available to improve conservation in NZ
- Implement Data Ownership & Stewardship for our critical data resource

Risks/Issues

- Significant amounts of data are spreadsheets
- Culture change to how we treat 'open' data
- Lack of data governance and stewardship

Dependencies

- Technology Foundation / Core Applications / Engagements
- Reporting tools
- Business process

Benefits/Outcomes

- Data Governance, making it clear who owns data at DOC
- Data is accessible, adding value to decision making
- Partners can use our data, improving conservation in NZ

Deliverables

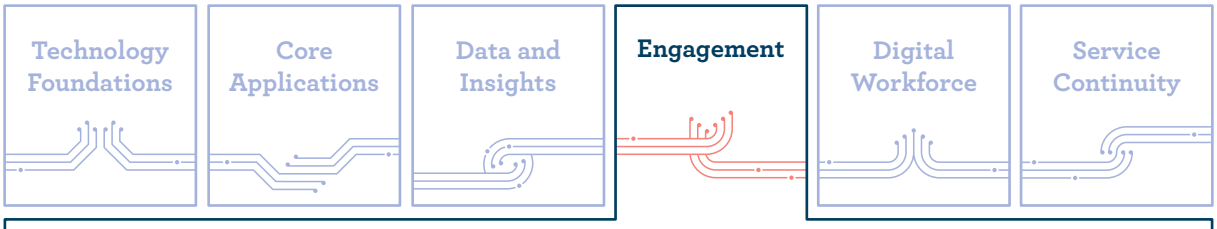
- Data Governance and Stewardship adopted through DOC
- Open data available for use by partners and others for conservation in NZ
- Reporting based on real-time data hosted in a secure stable environment
- Reduction of spreadsheets

Lead Directors/Contacts

Ken Hughey, Sharon Alderson, Mike Edginton, Steve Taylor, Neal Gordon

DOCDigitalStrategy@doc.govt.nz

Appendix 4: Engagement Programme on a Page



Programme on a page

Engagement

Technology enabling all New Zealanders to have a voice in conservation

CRM to improve relationships • Visitor experience and mapping • Digital Channels and engagement

Context/Purpose

- DOC understands customers, stakeholders, and iwi, hapū, and whānau
- DOC can provide relevant data and systems to help conservation in NZ

Dependencies

- Technology Foundations / Core Applications / Data & Insights / Digital Workplace
- Key stakeholder identification
- Stakeholder engagement strategy

Deliverables

- CRM for managing relationships
- Clear processes for engagement with our partners
- Understand how iwi, hapū, and whānau want to work with DOC
- Accessibility of DOC data for partners to improve conservation in NZ

Risks/Issues

- Significant variation in approach between districts
- Each stakeholder will have differing requirements
- Significant change management to engage appropriately with all key users

Benefits/Outcomes

- Understand our external stakeholders and how we engage with them
- Understand how we engage with iwi, hapū, and whānau
- Clear process for all of DOC for key stakeholder engagement
- Access to data and systems for all partners to improve conservation in NZ

Lead Directors/Contacts

David Talbot, Steve Taylor, Vicky Connor, Ken Hughey, Mike Edginton, Laura White

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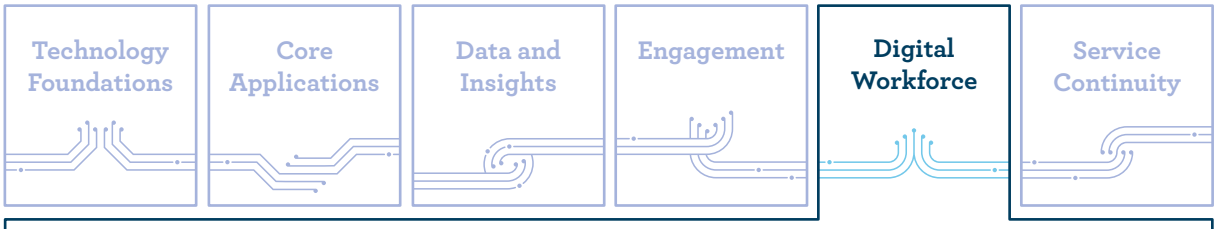
Appendix 5: Digital Workforce Programme on a Page



Programme on a page

Digital Workforce

Technology connecting people to work anywhere

Work Management Tools • Improve field staff safety • Identity and Personas • Digital Training

Context/Purpose

- All DOC staff are connected and productive with the right tools
- This includes volunteers, stakeholders and iwi, hapū, and whānau

Risks/Issues

- Varied levels of IT skills
- Significant change for new technology
- Personas not well understood

Dependencies

- Technology Foundations / Core Applications / Data & Insights
- Training and support for technology
- Personas definitions

Benefits/Outcomes

- Understand DOC personas and IT requirements for these groups
- Digital workplace can reduce carbon emissions (fewer business trips, better online collaboration)
- Improved safety for rangers

Deliverables

- Appropriate tools and systems for all DOC staff, volunteers, stakeholders and iwi, hapū, and whānau
- Potentially reduced carbon emissions with correct IT tools
- Improved safety and ranger location awareness

Lead Directors/Contacts

Sal Smutek, Harry Maher, Graeme Ayres, Vicki Connor, Ken Hughey, Mike Edginton, Jeffrey Cornwall, Darryl Lew, Hilary Aikman

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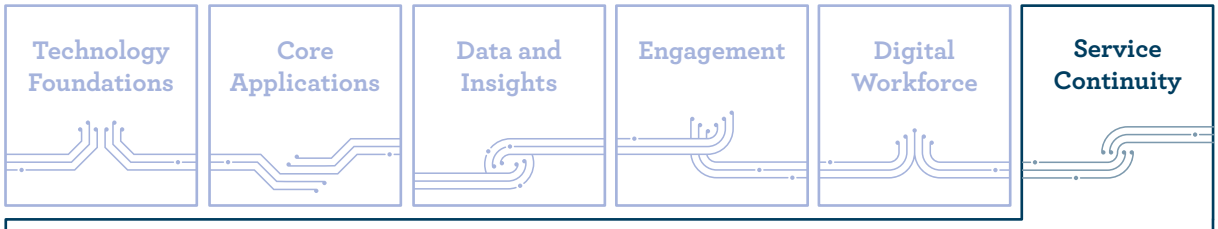
Appendix 6: Service Continuity Programme on a Page



Programme on a page

Service Continuity

Maintaining and upgrading our existing enterprise systems and applications

Supporting existing systems • Upgrade systems • Improve usage of existing systems

Context/Purpose

- Maintenance and upgrades of DOC's enterprise systems and applications, ensuring Service Continuity

Risks/Issues

- Systems maintenance affects systems used by all of DOC – potential change impact of rollout is high

Dependencies

- Costs and timelines are estimates at this stage +/- 40%
- Technology Foundations / Core Applications / Data & Insights

Benefits/Outcomes

- Reduced risks of running old versions of software
- Software and hardware stays operational – information and resources remain accessible and secure
- Vendor support continues

Deliverables

- Stable, secure and supportable systems and applications

Lead Directors/Contacts

Mike Edginton, Mark Ingram, Matthew Brown
DOCDigitalStrategy@doc.govt.nz

Appendix 7: The Architecture Building Block Blueprint and Heatmap

Functionality:

- Fit for purpose
- Some shortfalls in fit
- Significant shortfalls in fit

Technical quality:

- Good
- Moderate
- Poor

Engagement Channels

1.1 Intranet *DOC Intranet*	1.2 Visitor Centre & Visitor Experience Mgmt	1.3 Collaboration Mgmt *Skype, Dropbox, MS Teams, Google Drive, Zoom, Confluence*	1.4 Operative/ Radio Communications *Radio, GPS, PLB*	1.5 Social Media *Facebook, Twitter, Instagram*
1.6 Online & public website *www.doc.govt.nz*	1.7 Contact Centre Mgmt *DOC Hot*	1.8 Partner Portal	1.9 Information/ Data Portal	

Systems Integration

2.1 Data Integration & Replication *AWS API Gateway, Postman, Katalon Studio*	2.2 Application Integration	2.3 Remote Data Integration	2.4 Business Rule/Business Process Mgmt	2.5 Business-to-Business API Mgmt *AWS API Gateway, Postman, Katalon Studio*

Systems of Insight

3.1 BI Reporting and Visualisation Platform *Power BI, Excel, Tableau, SAP BI*	3.2 Enterprise Content Mgmt *DOC CM, Piction*	3.3 Data and Information Mgmt *AWS Data Lake, MS SQL, DB/Textworks*	3.4 Geospatial Information Systems *ArcGIS*	3.5 Knowledge Management *DOC Learn*

Core Conservation Services
Stakeholder Services

4.1.1 Stakeholder Relationship Mgmt *Excel*	4.1.2 Request Handling Mgmt *Excel, www.doc.govt.nz*	4.1.4 Iwi, Hapū, and Whānau Mgmt *Excel*	4.1.5 Conservation & Business Partnerships Mgmt *Excel*	4.1.6 Community Engagement and Education Mgmt *Excel*

Core Conservation Services
Science and Research

4.2.1 Remote Sensing and Monitoring Mgmt *QGIS, ArcGIS, Camera traps, Acoustic sensors*	4.2.2 Conservation Research Mgmt *Mendeley, R Studio, NeSI Cluster Computers, MS Access*	4.2.3 Tool development and deployment

Core Conservation Services
Conservation Strategy and Planning

4.3.1 Visitor Services Strategy Mgmt *BPRS*	4.3.2 Pricing and Economics Mgmt *BPRS*	4.3.3 Heritage Strategy Mgmt *BPRS*	4.3.4 Partner and Community Strategy Mgmt *BPRS*	4.3.5 Biodiversity Strategy Mgmt *BPRS*
4.3.6 Conservation Delivery Strategy Mgmt *BPRS*	4.3.7 Iwi, Hapū, and Whānau Strategy Mgmt *BPRS*			

Core Conservation Services
Work Planning Management

4.4.1 Work Planning & Scheduling Mgmt *DOCFlow, MS Project, MyPM*	4.4.2 Resource Planning & Allocation Mgmt *iScheduler*	4.4.3 Task Assignment Monitoring & Tracking *Timefiler, Trello, MyPM*

Core Conservation Services
Ecosystems and Environment Management

4.5.1 Ecosystems & Environment Monitoring *Excel, MS Access SeaSketch*	4.5.2 Ecosystems and Landscape Feature Mgmt

Core Conservation Services
Pests and Threats Management

4.6.1 Pest Control Mgmt	4.6.2 Pest Monitoring *Bioweb, MS Access, Pestlink*

Core Conservation Services
Threatened Species Management

4.7.1 Species Recovery Mgmt	4.7.2 Species Inventory Mgmt *Bioweb, MS Access*	4.7.3 Captive Species Mgmt	4.7.4 Species Monitoring *Bioweb, MS Access, SAP BI, Kakapo, Bird Banding*

Core Conservation Services
Heritage Protection & Management

4.8.1 Heritage Assessment Mgmt	4.8.2 Heritage Inventory Mgmt *AMIS, Napalis*	4.8.3 Heritage Promotion & Communication Mgmt

Core Conservation Services
Visitor and Recreation Management

4.9.1 Retail Mgmt *Infinity POS, IBIS POS*	4.9.2 Permits, License and Pass Mgmt *Permissions Database*	4.9.3 Recreation and Infringement Mgmt *Excel, AMIS*	4.9.4 Visitor Services and Booking Mgmt *www.doc.govt.nz, Seekom iBex, US eDirect*

Core Conservation Services
Common Core Capabilities

4.10.2 Health, Safety & Wellbeing Mgmt	4.10.4 Incident, Event and Response Mgmt	4.10.5 Conservation Asset Mgmt	4.10.6 Risk and Hazard Mgmt
Risk Manager, OCC Health System		*AMIS, Excel*	*Risk Manager*

Corporate Services
Strategy, Planning and Budgeting

5.1.1 Strategic Planning	5.1.2 Enterprise Architecture	5.1.3 Project Portfolio Mgmt	5.1.4 Governance	5.1.5 Innovation Mgmt
BPRS	*Sparx EA*	*Excel*	*BPRS*	

Corporate Services
Finance, Procurement & Contract Management

5.2.1 Financial Mgmt	5.2.2 Remuneration (Payroll) Mgmt	5.2.3 Accounts Receivable and Payable Mgmt	5.2.4 Procurement & Contract Mgmt	5.2.5 Grants and Funds Mgmt
FMIS, CFIS Net, Excel, FlexiPurchase	*Jade, Jadestar*	*Excel*	*Excel*	*One Note*

Corporate Services
Legal, Compliance and Assurance Management

5.3.1 Business Risk, Assurance & Quality Mgmt	5.3.2 Compliance Mgmt	5.3.3 Legal Advice, Service & Litigation Mgmt	5.3.4 Business Performance Mgmt & Reporting	5.3.5 Business Continuity Mgmt
Excel, Risk Register, Liability Register	*Excel*	*Thomas Reuters Database*	*BPRS, SAP ERP*	

Corporate Services
Asset Management

5.4.1 Asset Inventory & Tracking Mgmt	5.4.2 Asset Lifecycle & Maintenance Mgmt	5.4.3 Facilities, Fleet and Equipment Mgmt	5.4.4 Security Mgmt	5.4.5 Land Acquisition and Administration
AMIS, RAMM, MAM		*Smartrak, Fleetworks*	*CCTV*	*Napalis*

Corporate Services
Human Resource Management

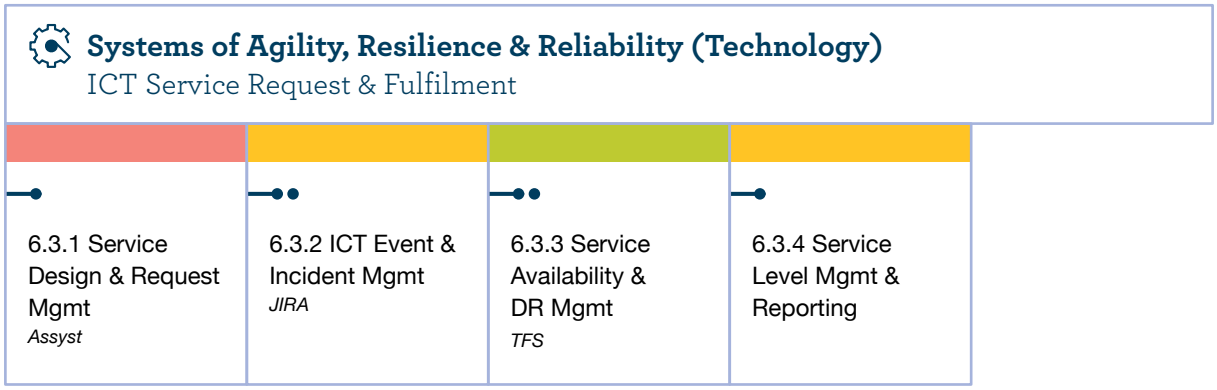
5.5.1 Workforce & Recruitment Mgmt	5.5.2 Human Resource Info Mgmt	5.5.3 Training & Career Development	5.5.4 Employee Performance Mgmt	5.4.5 Marketing and Communication Mgmt
Springboard, AboutMe	*Jade*	*DOC Learn, Articulate 360*	*Excel*	*Social Media, Meltwater, Adobe Suite*

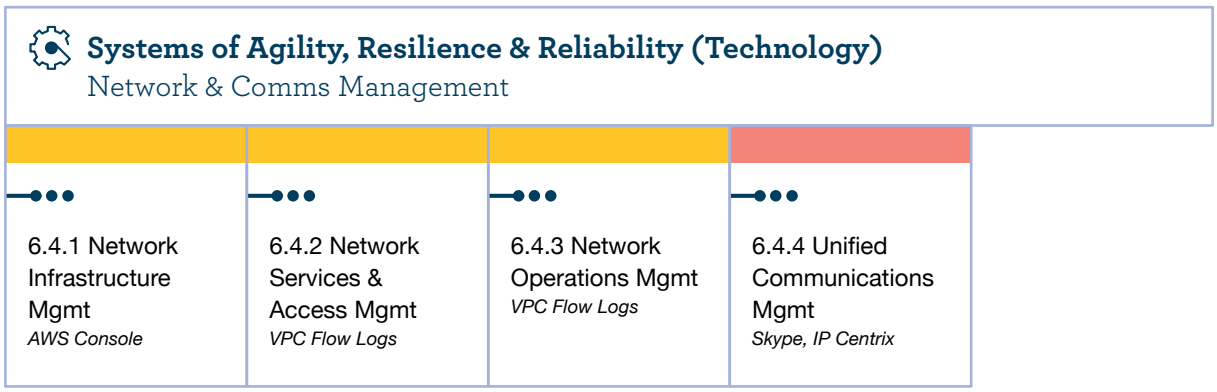
Systems of Agility, Resilience & Reliability (Technology)
Digital Workplace & ICT Platform Management

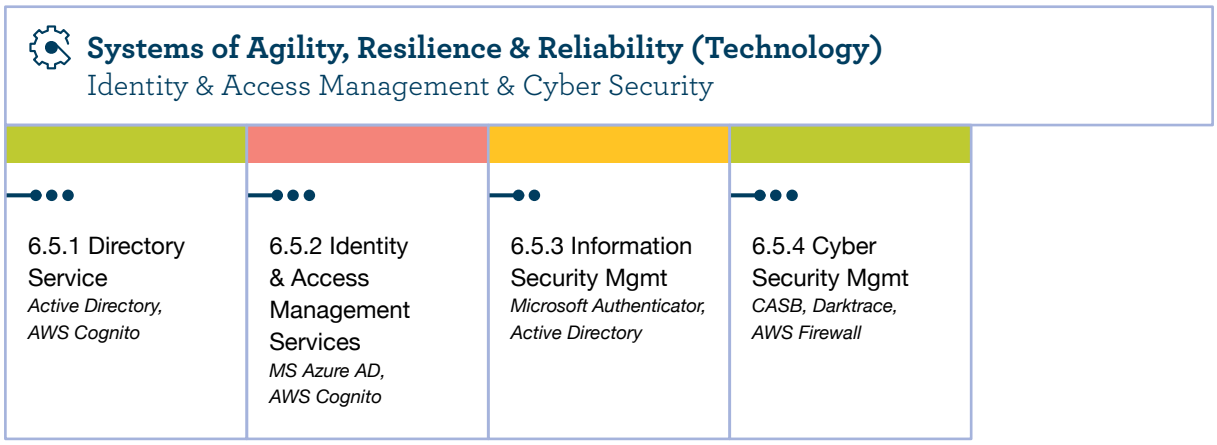
6.1.1 End User Computing & Mobility Mgmt	6.1.2 Productivity Suite	6.1.3 Email & Calendaring Mgmt	6.1.4 ICT Infrastructure & Platforms Mgmt
AWS Workspace, Thin Client, Mobile phone	*Office365*	*Outlook*	*AWS, Azure, VMWare*

Systems of Agility, Resilience & Reliability (Technology)
ICT Service Design & Transition

6.2.1 ICT Change & Release/ Deployment Mgmt	6.2.2 ICT Service Design & Delivery Mgmt	6.2.3 Cloud Service Brokering Mgmt	6.2.4 ICT Asset and License Mgmt
DOC CM, Excel		*Cloudhealth, CloudCheckr*	*MAM, AMIS*


Systems of Agility, Resilience & Reliability (Technology)
ICT Service Request & Fulfilment
6.3.1 Service Design & Request Mgmt
Assyst
6.3.2 ICT Event & Incident Mgmt
JIRA
6.3.3 Service Availability & DR Mgmt
TFS
6.3.4 Service Level Mgmt & Reporting


Systems of Agility, Resilience & Reliability (Technology)
Network & Comms Management
6.4.1 Network Infrastructure Mgmt
AWS Console
6.4.2 Network Services & Access Mgmt
VPC Flow Logs
6.4.3 Network Operations Mgmt
VPC Flow Logs
6.4.4 Unified Communications Mgmt
Skype, IP Centrix


Systems of Agility, Resilience & Reliability (Technology)
Identity & Access Management & Cyber Security
6.5.1 Directory Service
Active Directory, AWS Cognito
6.5.2 Identity & Access Management Services
MS Azure AD, AWS Cognito
6.5.3 Information Security Mgmt
Microsoft Authenticator, Active Directory
6.5.4 Cyber Security Mgmt
CASB, Darktrace, AWS Firewall

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