Statement of Corporate Intent

2025–2030

PHF Science

New Zealand Institute for Public Health and Forensic Science

E/S/R

Science for Communities

He Pūtaiao, He Tāngata

Cover photo: Health security scientists Jane Clapham and Andrea Grana check results.

Presented to the House of Representatives pursuant to section 16 of the Crown Research Institutes Act 1992.

The Institute of Environmental Science and Research Limited (ESR) is a Crown Research Institute. It was incorporated in June 1992 and is wholly owned by the New Zealand Government. The two shareholding Ministers appoint a Board of Directors to govern the organisation. ESR has science facilities in Auckland, Wellington (Porirua and Wallaceville) and Christchurch. From 1 July 2025, ESR will change its name to the New Zealand Institute for Public Health and Forensic Science Limited (PHF Science).

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Chair and Chief Executive's overview

The period covered by our Statement of Corporate Intent (SCI) 2025–2030 is one of change and opportunity for ESR.

As we become the New Zealand Institute for Public Health and Forensic Science – or PHF Science – our transition into a Public Research Organisation (PRO) ushers in a new chapter as part of wider changes to New Zealand's science system. This change will build on the valuable work we do to contribute to strengthening national resilience, accelerating economic growth and driving scientific advancements for New Zealand – and making an even greater difference for New Zealanders.

Delivering science that makes a real, tangible difference to the lives of New Zealanders has always been at the heart of ESR's work. We live our commitment to delivering 'science for communities' daily. From enabling early warning of disease outbreaks to providing closure to families seeking answers and justice, we are proud of the importance and impact of our work in partnership with the sectors and communities we serve.

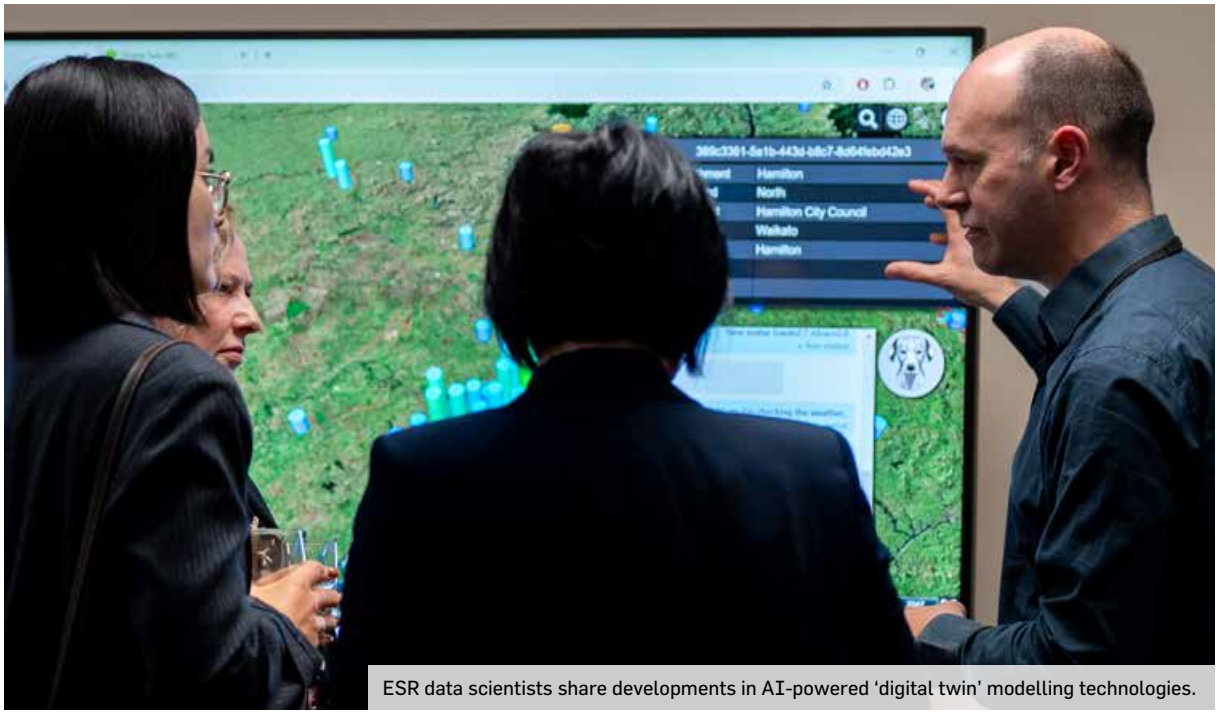
As a PRO we will build on long-standing strengths and relationships as a critical and trusted science partner to New Zealand's public health and justice agencies. This is an opportunity go further in ensuring our science is accessible, impactful and aligned with New Zealand's interests.

ESR's research and services have always contributed to New Zealand's economic resilience and prosperity by supporting good health and justice outcomes, and therefore the stability and productivity of our social and economic environment. We will now incorporate an increased focus on contributing to economic growth in our work in line with the Government's Going for Growth strategy.

Working in partnership is a cornerstone of our future direction. We are part of a wider science ecosystem including other PROs and universities, working together to build and maximise our capabilities. We will build on existing international links and partnerships in both the health and forensics areas and the work we have done with Māori communities to ensure our science delivers benefits for all New Zealanders.

This year's SCI incorporates the change programme that will prepare us to contribute fully to a reshaped science system. It includes our focus areas and performance measures for 2025/26, as well as signalling important longer-term strategic development work alongside other Crown Research Institutes, as we all move to being PROs.

We are pleased to be fully involved in strengthening New Zealand's pandemic prevention, preparedness and response (PPPR) capability, and supporting the delivery of the new Public Health Surveillance Strategy. This includes providing scientific expertise, strengthening health security systems, and delivering evidence-based solutions that protect communities, enhance resilience and mitigate the impact of future health crises.



ESR data scientists share developments in AI-powered 'digital twin' modelling technologies.

We will ensure New Zealand is well-equipped to respond to new challenges and major events, whether this is a severe cyclone, disease outbreak, emerging health biosecurity threat or potential harm from illicit drugs. Key capabilities we will continue to develop and strengthen include genomics, artificial intelligence and data science to provide faster, more effective responses. We will also continue investing in our people who deliver great work for New Zealand every day.

Building on the success of pioneering products such as Lumi and STRmix, we will expand our research partnerships and commercial initiatives to develop effective solutions with real-world impact.

Above all, we remain committed to being a trusted, customer-centric organisation that delivers science for the public good, innovates for economic growth and is committed to impact and wellbeing for our communities.

Our firm focus is on delivery to achieve the aspirations outlined in this SCI, ensuring we continue to lead with science, innovate with purpose, and contribute to a future New Zealand that is thriving.

Professor Sarah Young
Board Chair

Sir Ashley Bloomfield KNZM
Chief Executive Officer

Section 1:

Bronwyn Humphries measuring wastewater, Christchurch Science Centre.

Our strategic science

Our purpose

Our purpose is to enhance and protect New Zealand's public health and justice systems to support economic growth and resilience, innovation, and improved health, safety and security for people and communities. This focus is captured in our interim Statement of Core Purpose, which will guide our work over 2025/26 as we transition toward becoming a PRO.

Our work supports New Zealand to thrive and prosper – and means New Zealanders can feel more confident their water and food is safe, disease outbreaks are monitored and managed, the impact of drug harm in the community is reduced, and we live in a society where justice is supported by trustworthy evidence.

We deliver this through science leadership, provision of research that impacts the economy, applied science services, and the transfer of data, technology and knowledge in partnership with government, health sector, justice sector, Māori, industry and communities to:

- foster innovation and economic opportunity through the development and commercialisation of science-based innovative tools that contribute to New Zealand's resilience, productivity and economic growth, including the Māori economy
- support a resilient economy by protecting and promoting the health of New Zealanders through strengthening health security through effective and timely detection, prevention and response to public health threats, including infectious diseases, pandemics and environmental hazards
- support a healthy economy by enhancing public safety through the quality, reach and application of forensic science services in criminal investigations, court proceedings and crime prevention efforts
- enable science-informed policy and decision-making by delivering science service and innovation that addresses important threats to public health and justice while supporting regulatory and governance agendas at national and local levels
- contribute to creating a more dynamic, effective and efficient science, innovation and technology system for New Zealand by working collaboratively, including with other CRIs and universities.

Scope of operations

To deliver on our core purpose and strategic outcomes, we lead and contribute to science that strengthens public health, justice and national resilience. Our operations span a set of integrated capabilities where we provide specialist knowledge and skills, national infrastructure and science-based services to support New Zealand's wellbeing and prosperity.

Health security and pandemic preparedness

Delivering surveillance, diagnostics (including reference laboratory functions) and modelling to detect, prevent and respond to infectious diseases, antimicrobial resistance and other emerging health threats affecting New Zealanders

Forensic science and justice services

Providing forensic expertise in DNA analysis, toxicology, digital forensics and scene examination to support criminal investigations, court processes and crime prevention, ensuring timely and fair justice outcomes

Drug harm prevention and integrated health-justice interventions

Applying forensic and public health science to assess, monitor and reduce the harm associated with alcohol, illicit substances and synthetic drugs across both health and justice systems

Environmental health and risk science

Investigating the impact of environmental hazards on human health, including contaminants in drinking-water, groundwater and freshwater systems, as well as safe biowaste use and exposure pathways for chemical, radiation and microbial risks

Food safety and public protection

Supporting public health and the food industry through science-based assurance of food safety and quality, delivered in partnership with regulators and industry

Science for policy and public good

Generating knowledge and tools that support the government and the wider economy, including the private sector – including scenario modelling, risk assessment and horizon scanning – to inform evidence-based policy in the health, environment and justice sectors, and emergency preparedness and national planning

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In addition, the New Zealand Institute for Public Health and Forensic Science will collaborate in the following areas:

Food safety and health: Interfaces between food safety and human health, including foodborne disease and risk management, contaminants in drinking water, groundwater and freshwater systems, One Health approaches and cross-domain threats

Climate change: National mitigation, adaptation and resilience, including greenhouse gas emissions and carbon cycle, impacts on biodiversity across domains, climate-health research, environmental surveillance, and community resilience strategies

Biosecurity: Cross-domain and integrated approaches to biosecurity threats and biosystematics across environments, including pathogen detection, antimicrobial resistance monitoring, and biosafety through integrated One Health approaches

Environmental health and risk science: Investigating the impact of environmental hazards on human health, including contaminants in drinking-water, groundwater and freshwater systems, as well as safe biowaste use and exposure pathways for chemical, radiation and microbial risks

Science for policy and public good: Science for evidence-based and cross-domain policy, strategic foresight and international obligations

Social and systems science integration: Integrated approaches to social science, community engagement and policy development; bridging biophysical and social science

Collections and databases: Biosystematics, data curation, data sharing, and infrastructure

Supercomputing and advanced technologies: Digital infrastructure and data analytics including AI; a system-wide approach to development and use of advanced technologies, including via an Advanced Technology PRO

Vision Mātauranga: Enabling the innovation potential of Māori knowledge, resources and people

Building an effective science, innovation and technology system: Approaches to knowledge transfer, commercialisation, capability and infrastructure development

A shifting science sector – delivering to Government priorities for greater impact

With the shift of ESR from a Crown Research Institute to the New Zealand Institute of Public Health and Forensic Science Public Research Organisation, these services will continue to be provided based on the following principles:

- research in priority areas that have long-term economic, environmental and social impact
- stewardship for research and science services needed to inform key regulatory and policy decisions, while giving confidence to markets, government and the public
- facilitating clustering of knowledge bases and collaboration on large-scale opportunities to achieve technological breakthroughs that kick-start internationally competitive innovation ecosystems.

We will deliver this through:

- providing **national benefit** where ESR will aim to maximise its contribution to "NZ Inc", through delivering critical science services that:
  - support the stewardship of our public health and justice sectors, promoting a healthy and stable society and averting harm from communicable diseases, illicit drugs and unsafe food and water, and
  - advance opportunities for economic growth
- being **adaptable and responsive** by delivering Government priorities for science innovation and technology
- being **accountable** and transparent with appropriate cost recovery mechanisms

Impact – proactive genomics saves babies

Researchers from ESR and Awanui Labs Wellington are preventing bacterial outbreaks in neonatal intensive care units from escalating. On-site nanopore DNA sequencing now gives clinicians genomic information within 24-48 hours. This has enabled the early detection of several outbreaks, improving infection prevention and control practices, ultimately protecting vulnerable patients.

- delivering **rationalisation, alignment and coordination** by prioritising and avoiding unnecessary duplication and supporting consistency with other PROs
- **partnering** across universities and the science system and with private investors to build and co-invest in research capability, facilities and knowledge production.

Collaboration for impact – how we work with others

Making a difference for all New Zealanders through our health security and forensic science requires working closely with various partners including universities, government agencies and international collaborators. Throughout our transition period we will be shaping our organisational capability and systems to allow for greater participation and partnership (see page 24).

Building connections through data

ESR's approach to pandemic prevention, preparedness and response is crucially oriented around health data and digital technologies. Through timely, accessible and usable data plus leading-edge modelling techniques, we can better pre-empt and respond to critical public health challenges, supporting a more resilient and prepared health sector.

Māori partnership to uplift communities

Our science capabilities support iwi-led research, enabling innovative ways to protect taonga and data, ensuring the principles of manaakitanga and kotahitanga are interwoven through ESR's work. We will continue to explore opportunities to integrate mātauranga Māori to strengthen our impact with our iwi and hapū partners, delivering science that matters to and uplifts our communities.

Powerful international partnerships

Ongoing, strong relationship management is a crucial part of ESR's current and future work to build more collaborative international programmes. The value of this is exemplified by the ESR-led SHIVERS research programme which has attracted $60 million in external funding since 2012. SHIVERS research contributes to the Centers of Excellence for Influenza Research and Response network funded by National Institute of Allergy and Infectious Diseases, which provides

Forensic firearms laboratory, Mt Albert Science Centre.

an international research infrastructure to address influenza outbreaks. The SHIVERS research team is also partnering with Flu Lab, who support development of innovations to help eliminate the threat of influenza. In addition to delivering highly impactful science solutions and research outcomes, this enables our researchers to leverage existing international relationships and expand ESR's influence through engaging with experts worldwide.

Integrated science services and innovation

ESR is the sole provider of critical forensic services to the New Zealand Police and works closely with the New Zealand Customs Service on illicit substance screening. These partnerships are foundational to ensuring quality science enhances critical services for New Zealand and drives innovation for continual improvement. ESR's expertise continues to evolve at the leading edge of forensic science and informs forensic inquiry, systems and institutions both in New Zealand and internationally. These efforts aim to stay ahead of evolving criminal methods and to enhance investigative techniques. Examples include:

- working with the New Zealand Police on wide ranging forensic and drug investigative science including the Forensic Investigative Genetic Genealogy pilot
- peer reviewing good practice for law enforcement organisations
- forensic investigative training for organisations, such as the New Zealand Defence Force Joint Military Police Unit.

We have a significant role in preventing crime and reducing its impact by supporting law enforcement efforts with our expertise and collaborative initiatives, both in New Zealand and with our regional neighbours in Australia and the Pacific.

Impact – protecting our borders

ESR has partnered with New Zealand Customs Service for 10 years to detect drugs at border. We have analysed more than 17,000 samples, with an average of one in three resulting in the detection of an illicit drug, unapproved medicine or precursor chemical.

Impact – wastewater data empowers communities

Supported by the Public Health Agency and councils across New Zealand, ESR's wastewater analysis provides valuable information for public and decision-makers

- COVID in Wastewater dashboard had 291,000 views in 2024, and 17,000 unique visitors

Who we partner with

Working in partnership with like-minded organisations helps us to deliver long-term, sustainable solutions to safeguard the health and wellbeing of New Zealanders. We actively seek opportunities to engage with government agencies, CRIs/PROs, iwi, tertiary institutions and the private sector.

Our primary partnerships include:

- government departments and agencies, in particular:
  - Ministry of Business Innovation and Employment
  - Ministry for the Environment
  - Ministry of Foreign Affairs and Trade
  - Ministry of Health and Health New Zealand
  - Ministry for Primary Industries
  - New Zealand Customs Service
  - New Zealand Police
  - other CRIs/PROs
- laboratory network across New Zealand
- universities, including local and international institutions
- iwi and pan-Māori communities and mātauranga Māori experts
  - Pūhoro STEMM Academy
- local government, academic and research institutions and communities:
  - territorial authorities
  - non-governmental organisations and not-for-profit organisations
- international government agencies, research organisations and universities, such as:
  - Food and Agriculture Organization
  - Forensic Science South Australia
  - International Atomic Energy Agency
  - National Institutes of Health
  - National Institutes of Justice
  - St Jude Children's Research Hospital
  - United States Centers for Disease Control and Prevention
  - World Health Organization.

Our revenue is primarily from Crown funding to support the delivery of critical national services. This includes grant funding and service-level contracts with government agencies including the Ministry of Health, New Zealand Police, Ministry of Foreign Affairs and Trade and Ministry for Primary Industries. In addition, we gain revenue from commercial services through our STRmix™ products, supporting complex DNA analysis worldwide. We are developing a pipeline of further products and services to further diversify revenue streams at ESR and contribute to economic outcomes for New Zealand.

Our strategic approach

Strategic direction

The years ahead will see ESR transition into a health security and forensic science-focused PRO by realigning our strategic direction and activities.

To achieve this, we have developed an interim Statement of Core Purpose and revised our strategic framework to ensure ESR is able to successfully deliver on our primary role effectively and efficiently.

These changes focus on strengthening our health security and forensic scientific and research services, collaborations and infrastructure needed for New Zealand's public health and justice systems and to support future prosperity – to enable us all to benefit from a safer, stronger and better prepared New Zealand.

Advancing our impact framework

The shifts for ESR and New Zealand's science system are intended to strengthen our ability to make a tangible difference for all New Zealanders. As well as delivering critical science and research, we are focused on finding more effective ways to measure and report the impact of our work, including its contribution to New Zealand's economic resilience and economic growth.

A priority area in the next 12 months is to develop an impact framework that reflects our renewed focus as a PRO and aligns with our interim Statement of Core Purpose.

During this transition, our key performance indicators for 2025/26 continue from our Statement of Corporate Intent published in 2024/25, enabling progress to be tracked. We expect these to be revised, and the new framework implemented in line with the new PRO mandate.

Our strategic direction

Across our interconnected expertise areas of

Health Security

Forensics

Our work provides tangible impacts for all New Zealanders

New Zealand is safer, fairer and better prepared
Science and research for stewardship for the health and justice sectors

New Zealand prospers, with benefits for us all
Science and research for economic growth and resilience

Through delivering research and science services

Science for detection, protection and security
Data, intelligence and leadership to prepare, prevent and respond to current and future health and community safety challenges

Science for innovation
Leading edge research, and developing and commercialising new and innovative services, diagnostic tools and devices

Enabled by strengthening New Zealand's science infrastructure, ecosystem and capability

Transitioning to an effective Public Research Organisation
Contributing across the sector to reform science system to become more impactful, responsive and aligned with Government priorities

Science workforce for the future
Developing and supporting our current and future scientists and wider teams to advance capabilities and build an agile, collaborative and adaptable workforce

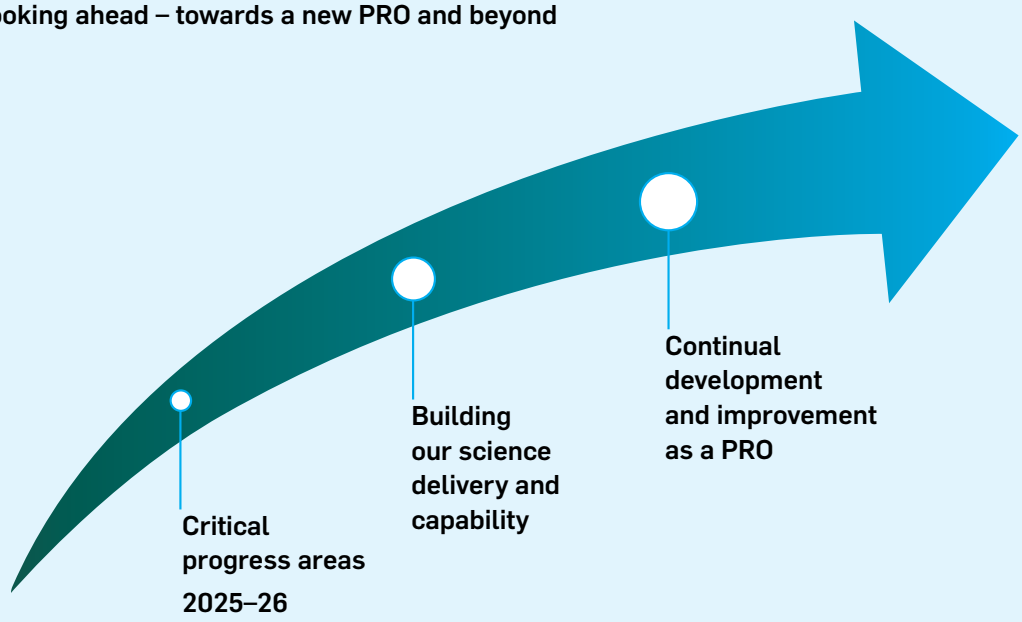
Partnerships for stronger science
We are a trusted partner and work collaboratively – internationally, across the sector and with Māori communities – to deliver and communicate our science and research to benefit New Zealand

Facilities and systems for success
Strengthening the underpinning digital systems, diagnostics equipment and facilities needed for leading-edge science and research

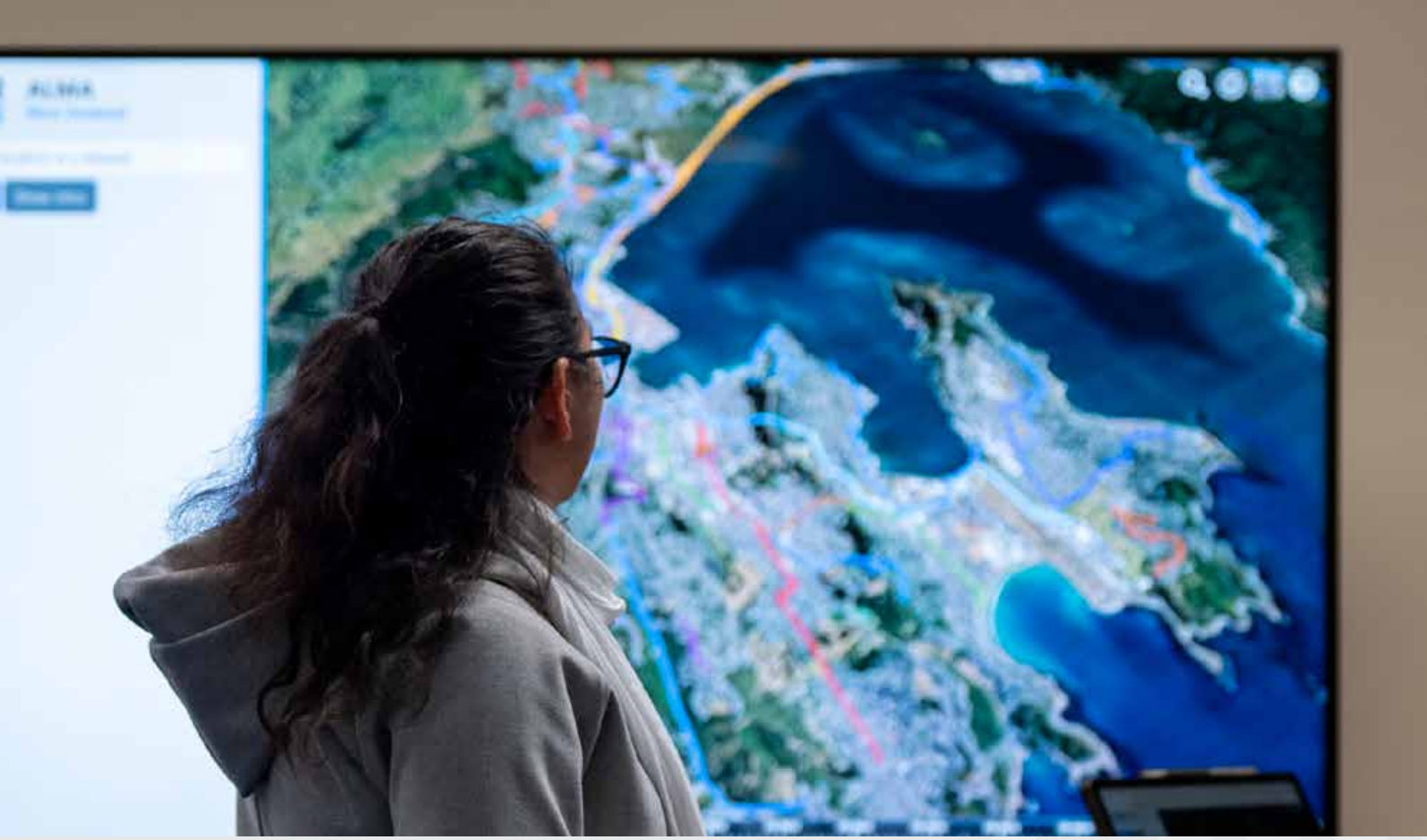
Reshaping our place in New Zealand's science system

- As a PRO, we will be a key science partner for the Government's public health and justice sector agencies, and a centre of excellence for health security and forensic science and research.
- We are ready to take on critical leadership roles and infrastructure needs as New Zealand builds its pandemic prevention, preparedness and response (PPPR) capability, and support the Government to deliver on its Public Health Surveillance Strategy.
- We are committed to delivering excellent science, insights and knowledge. Through our close partnership with the agencies we serve, we understand the needs of end users and decision-makers in these sectors – whether a public health practitioner, or front-line police or customs officer. With our expert leadership and specialist teams, we lead, advise on and deliver high quality services, including national reference laboratories for forensics and infectious diseases.
- Our services are informed by and continually improved through our applied research programme which in turn yields innovations in products and services that with broader commercial and economic benefits for New Zealand.
- We have excellent visibility of national and international research, along with a deep understanding of sector needs and productive partnerships with other research and forensic institutions in New Zealand and beyond. This allows us to actively utilise emerging, theoretical research to bring practical, actionable advancements where it is most needed.
- We are dedicated to science that benefits New Zealand/Aotearoa and focused on science that builds on international expertise and adds value here. This means contextualising science for New Zealand, and working in partnership with Māori to build, nurture and incorporate relevant mātauranga knowledge and insights and ensure the maximum impact from our collective work.
- Our efforts are ultimately aimed to deliver meaningful impacts for New Zealand – enabling us to prevent and respond more effectively to disease threats, reduce drug-related harm, support good justice outcomes in our courts, and uplift the wellbeing and prosperity of New Zealanders.

Looking ahead – towards a new PRO and beyond



Using the Lumi Nano device developed by ESR scientists to identify drugs.



Delivering our strategy

Delivering research and science services

ESR's science delivery encompasses science needed for New Zealand, now and in the future. This includes science for the effective 'stewardship' of New Zealand, ensuring critical services and support needed to protect and respond to the needs of our public health and justice sectors. It also means continually improving services through research and innovation, and progressing commercial opportunities.

Interwoven throughout our core pillars of health security and forensic science is our work to ensure ESR practices honour and acknowledge Te Tiriti o Waitangi and deliver impact for Māori.

The following sections outline our strategic direction and priorities as we advance our science delivery for New Zealand.

Science for detection, protection and security

Science for stewardship, so New Zealand is safer, fairer and better prepared

We deliver: Data, intelligence and leadership to prepare, prevent and respond to current and future health and community safety challenges

How we make a difference

ESR's science delivery aims at advancing scientific detection, surveillance, and protection capabilities, strengthening New Zealand's health security, justice system and safety.

Working in specialised research facilities, our multidisciplinary teams include epidemiologists, microbiologists, water quality scientists, toxicologists, geneticists, forensic scientists, chemists, data scientists, and bioinformaticians, who work collaboratively to safeguard public health and enhance forensic investigations.

We support national health security though early identification of food and waterborne pathogens, chemical and radioactive hazards, and infectious disease prevention. We provide the capability to effectively and efficiently respond to emerging treats by continuously improving surveillance techniques, laboratory testing and disease monitoring, including water quality and drug detection monitoring, quantitative microbiological risk analyses, supporting the safe and orderly use of ionising radiation. In partnership with the University of Otago, ESR co-hosts Te Niwha, the Infectious Diseases Research Platform, progressing research on infectious diseases and health responses.

Forensic technician working in DNA laboratory, Mt Albert Science Centre.

We are also involved in significant international research that helps protect New Zealanders from communicable diseases, such as the series of SHIVERS studies focused on influenza.

ESR leads in forensic scientific innovation, including DNA forensic analysis, toxicology and digital forensics. Our toxicology expertise and work to reduce drug harm supports pathologists and coroners, protects our borders from drugs and unregulated products and strengthens the criminal justice system of New Zealand. Our forensic science expertise guarantees science/evidence-based and independent forensic evidence that supports law enforcement investigations, court processes and crime prevention initiatives.

ESR works with Māori communities on projects of importance to them. Offshore, we work with Pacific nations to build capability across forensics, health and water safety projects.

How we will take this further

Strategic activity areas 2025–30

Supporting the implementation of the Public Health Surveillance Strategy

Supporting leadership of Pandemic Preparedness, Prevention and Response (PPPR)

Establishing the national lead public health laboratory

Enhancing options for expanding data and technology-enabled evidence and intelligence for harm and crime reduction and improved evidential outcomes

Building capacity to provide back-up forensics support to other jurisdictions

Extending and increasing our work in the Pacific

Science for innovation

Continually improving services and opportunities for economic growth, with benefits for us all

We deliver: Leading edge research, and developing and commercialising new and innovative services, diagnostic tools and devices

How we make a difference

ESR promotes scientific innovation through the application of cutting-edge technologies for rapid diagnostic tools and systems. Our priority areas include data science, intelligence analysis and predictive modelling to assist future-oriented decision-making, ensuring that New Zealand remains a leader in public health and forensic sciences.

We are at the forefront of knowledge in biological and forensic sciences. By extracting eDNA from mixed biological materials, we undertake rapid environmental monitoring and crime scene investigation. Our science for innovation helps us to improve diagnostics and monitoring, such as aptamers and sophisticated cellular systems, and leads us to the development of a pipeline of commercial goods based on emerging technologies.

We use metagenomics, a new method for DNA sequencing that allows us to analyse all the genetic material present in biological and environmental samples, to solve real world problems. Metagenomic sequencing enables improved and faster detection of pathogens, antimicrobial resistance genes, and microbiome alterations supporting faster responses

Lumi Drug Scan Attending World Police Summit May 2025 Dubai.

for public health activities. In wastewater-based epidemiology, metagenomics is used to identify bacterial and viral pathogens such as SARS-CoV-2, norovirus and antimicrobial-resistant bacteria, providing early warning of disease outbreaks.

We are proactively developing innovation and economic pipelines essential for achieving new commercial pathways, supported by robust commercial infrastructure. This allows us to deliver more impactful outcomes for communities nationally and internationally.

How we will take this further

Strategic activity areas 2025–30

Advancing data science insights, services and capacity, drawing on capability across ESR, strengthening delivery across science and research areas, and progressing partnership, consultancy and commercialisation opportunities

Expanding our forensic capability to extract eDNA from mixed biological samples

Developing next steps for our commercial DNA analysis services, STRmix™, and drug detection device LUMI

Growing a pipeline of commercial products based on current research under way in emerging technologies

Strengthening New Zealand's science infrastructure, system and capability

These goals are reflected in the enabling strategies for ESR in the following section. In the short term, we are focused on making the shifts required to transition to an effective PRO. At the same time, we are building the partnerships, developing the workforce and investing in the infrastructure and systems needed for future success. Encompassed within this is our ambition that every facet of our organisational capability and capacity to foster authentic partnerships, aimed at delivering meaningful outcomes for Māori.

These efforts aim to:

- **increase scale and depth of capabilities** within ESR and the other PROs
- **prioritise the highest impact science** that ESR can deliver in conjunction with the science, innovation and technology sector, our partners and communities
- **reduce fragmentation and duplication**, with improved focus on ESR's work programmes
- **increase responsiveness, transparency and accountability** through stronger ESR engagement with stewardship initiatives
- **pool common resources**, both within ESR and with other PROs and the wider sector
- **promote the role of science to develop a compelling impact story** by working with the science, innovation and technology sector to support economic growth and resilience.

Moving to a health security and forensic science PRO

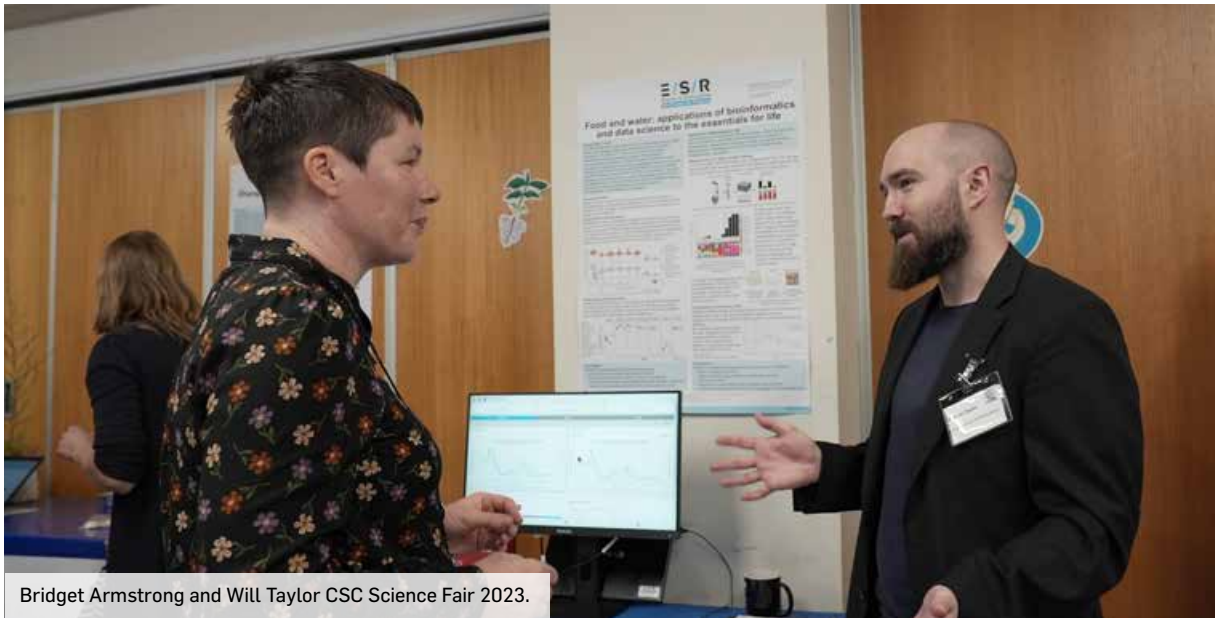
We will: Contribute across the sector to reform science system to become more impactful, responsive and aligned with Government priorities

Over the upcoming year, ESR will be moving from a CRI to a new PRO. This change is part of the wider reform of the science, innovation and technology system that will see increased efforts to harness the work of our talented scientists, while maximising the economic contribution to growing New Zealand's productivity. We are working with the Chairs and Chief Executive Officers of the other CRIs, alongside the Ministry of Business, Innovation and Employment (MBIE), to transition to PROs.

We expect this transformation will create a more agile organisation, with the scale and capability to deliver innovative science solutions, enabling opportunities for greater economic growth for New Zealand.

For ESR, this means we are refocusing activities to highlight our core pillars of health security and forensic science, strengthening our ability to deliver science and research that makes a difference to end users and the sectors they serve, and to support economic growth for New Zealand. This includes building our organisational capability and systems to encourage greater partnerships with Māori, which requires acknowledging and actively equipping ESR staff with tools, skills and understanding.

This transition will enhance our ability to deliver impactful, evidence-based science that meets national priorities and global challenges, ensuring a stronger, more resilient New Zealand.



Bridget Armstrong and Will Taylor CSC Science Fair 2023.

How we will take this further

Strategic activity areas 2025–26

Our transition priorities over the year will include:

Establishing a dedicated transition programme to guide ESR's change process, ensuring structured planning, resource allocation, and accountability with clear milestones and success indicators to track progress and ensure the transition remains on schedule. Aligned to this, our internal processes, governance structures, strategic, impact and operational frameworks will be reviewed and refined to support ESR's new role as a PRO

Communications to support our staff and stakeholders throughout the transition.
This includes actively engaging with government agencies, industry partners, iwi, and other research institutions to strengthen relationships and collaboration opportunities

Refreshing ESR's brand to reflect our new identity as the New Zealand Institute for Public Health and Forensic Science, or PHF Science. This will support our mission of delivering high-impact science for the public good emphasising trust, innovation and collaboration, and reinforcing ESR's leadership in health security and forensic science and research

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Actively participating in government-led and research-sector transition initiatives, ensuring alignment with the Government's national science priorities and develop innovation strategies by working collaboratively with other PROs, universities and public sector agencies to share expertise and best practices

Science workforce for the future

We will: Develop and support our current and future scientists and wider teams to advance their capabilities and build an agile, collaborative and adaptable workforce

Keen young scientists at Porirua Love Local expo.

Our skilled workforce drives innovation and knowledge creation, anticipating the challenges and opportunities that may arise. We focus on adaptability, resilience and forward thinking. Our role in shaping the future workforce is underpinned by actively engaging in the training of scientists for the future. We support the development and capability of our scientists, while encouraging students and new graduates, by providing research opportunities. This includes supervising students, taking on interns and participating in educational initiatives to nurture the next generation of scientific talent.

To achieve our research aspirations and maintain our service delivery, we are continuing to build a strong, capable workforce and to implement business systems and processes to meet the challenges of ESR's diverse work programme. ESR will thrive through being an engaging, inclusive place to work, where every person can be their authentic self, achieve their potential and be recognised and rewarded for their work.

Workforce development

By accelerating workforce development and providing formal career paths to support career development and workforce retention, we are building a workforce that is agile, collaborative and adaptable. ESR is focused on creating an environment that is rewarding and valued, and, as part of the science training system, helping to develop the workforce of the future.

Health, safety and wellbeing

We support our people to have a meaningful work-life balance, to proactively look after their physical and mental wellbeing, to increase their sense of belonging through employee-led networks and to seek professional support through our employee assistance programme.

We also encourage staff to participate in safety and wellbeing initiatives, which are important in growing ESR's health and safety and wellbeing programmes. This will bring about accountable, evidence-based change to ensure ESR's people are protected from harm and will embed robust and responsible practices across all areas of ESR's science and business areas.

How we will take this further

Strategic activity areas 2025–30

Increasing our focus on developing competent and confident leaders

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Accelerating workforce development by determining our aspirational culture and desired capabilities based on future science, partnership excellence and innovation needs

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Undertaking the actions outlined in ESR's Kia Toipoto Action Plan

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Supporting the Early Career Researchers group to develop a community within ESR for those at the beginning of their careers

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Deepening student and research collaboration with Pūhoro STEMM academy and universities to build the scientists of the future

To track our progress on workforce development, we have a series of metrics we monitor and report on including the following. These are reported in our Annual Report, as part of our Good Employer obligations:

- headcount and number of full-time equivalents
- staff turnover and leave
- employee breakdown, including ethnicity, average age and role classification
- promotions and secondments
- health and safety notifications, events and near misses.

Partnerships for stronger science

We will be: A trusted partner and work collaboratively productively across the sector to accelerate and communicate our science for New Zealand

Kiribati children.

ESR is committed to working in partnership as a critical means to maximise the talent, capability and resources across our science system.

Our partnership engagement will be designed with a focus on delivering benefit to our science, innovation and technology sector collaborators, as well as Māori communities, universities and other international partners. This will allow for us to continue to build open professional pathways that strengthen science capabilities and capacity, while enhancing ESR's reputation.

By evolving our capabilities and innovating our science, we are seeking to drive economic growth and resilience. by working with other science agencies to deliver better impacts for our strategic deliverables. Long term, we expect our shared investment to deliver innovative product solutions with potential commercial opportunities.

How we will take this further

Strategic activity areas 2025–30

Building our research and science future connectedness with universities by developing impactful initiatives and programmes with universities

Supporting the Government to meet its international obligations under various treaties and conventions

Engaging with international counterpart organisations including UK Health Security Agency and Australian Centre for Disease Control, and like-minded organisations across other jurisdictions

Exploring opportunities for collaboration with the justice sector internationally

Boosting our relationships with the Joint New Zealand Police–ESR Strategic Governance Group to enhance co-design and explore opportunities

Strengthening partnerships with iwi and other Māori organisations

Exploring international research funding opportunities, including Horizons Europe

Advancing partnerships to support ESR's work in the Pacific in areas including radiation safety, health security surveillance, and capacity building for health and justice sectors

Facilities and systems for success

We will: Strengthen the underpinning digital systems, diagnostics equipment and facilities needed for leading-edge science and research

To ensure ESR has the infrastructure facilities to deliver high-quality analysis and research, a property programme is in place to guide the redevelopment of our worksites. A new 3,850 square metre science facility is being constructed to replace end-of-life buildings at ESR's Kenepuru campus in the Wellington region with construction due to be complete in early 2027, and remaining site works (including remaining demolition and landscaping) concluding in 2028. With a building concept created through a joint process with Ngāti Toa Rangatira, and Green Star-accredited, the new building will include 1,500 square metres dedicated to laboratories and a forensic service centre. It will increase ESR's capability in emerging areas of science, technology and research, and facilitate multi-science collaboration.

We are improving internal business systems through strengthening areas including our enterprise resource systems, data and digital infrastructure, and decision-making support.

How we will take this further

Strategic activity areas 2025–30

Rebuilding Kenepuru Science Centre to provide agile laboratory facilities, enhancing our capability to function as New Zealand's lead public health laboratory

Developing an enterprise-wide portfolio work programme to align prioritisation and management of resources, along with investment and optimisation of our overarching portfolio of work to our long-term strategic direction

Strengthening project management using a portfolio, programme and project maturity framework to promote greater collaboration and increase delivery performance. Integrated and increased project management capability will underpin how we manage and deliver change to maximise value and impact

Using investment management, prioritisation and governance practices to support integrated decision-making and appropriate investment choices in our people, infrastructure and science

Investing in data platforms, to allow us to do more with our data including data warehousing, research databases, and a data lake where scientists can experiment with data. We are also investing in laboratory information management to further improve our responsiveness and ability to meet future public health needs

Section 2:

Our performance story

Our system-level performance

All CRIs across the science, innovation and technology system are monitored by the same set of performance measures. These measures provide a consistent view of performance across the CRIs.

The set of system-level metrics are noted in the table below.

Indicator	Measure	Reporting frequency
End user collaboration	Revenue per full-time equivalent (FTE) from commercial sources	Quarterly
Research collaboration	Publications with collaborators	Quarterly
Technology and knowledge transfer	Commercial reports per scientist FTE	Quarterly
Science quality	Impact of scientific publications	Annually
Financial indicators	Revenue per FTE	Quarterly

At the end of each quarter, ESR reports the results of each of measure to MBIE, who then presents the report to our shareholding Ministers.

Core system performance measures

Performance measure	Purpose	FY24 Actual	FY25 Forecast	FY26 Target
End-user collaboration: revenue per full-time employee (FTE) from commercial sources	Domestic and international commercial revenue targets for end-user collaboration (revenue per FTE from commercial sources) and the knowledge exchange indicator (commercial reports per FTE) reflect commercial research activity.	$167,264	$181,448	$162,761
Revenue per FTE	Amount of revenue per FTE.	$219,158	$244,314	$212,214
Research collaboration publications with collaborators	These refer to publications prepared in collaboration with authors at other New Zealand institutes and/or international authors.	81	≥85	≥85
Technology and knowledge transfer: commercial reports per scientists FTE	Technology transfer refers to the process of conveying results stemming from scientific and technological research to the marketplace along with associated skills and procedures. It is an intrinsic part of the technological innovation process.	0.18	≥0.39	≥0.39
Science quality: impact of science publications	Impact of science publications (measured using a web of science citations for the previous calendar year).	4.3	4.5	4.5

Our operational performance

ESR's work programme key performance indicators (KPIs) are aligned with its strategic focus areas and the specific impacts it is seeking to achieve. The KPIs document progress of ESR's strategic and operational work programme, and the expected performance on an annual level.

During the year, we will complete quarterly monitoring of the KPIs and report both to the MBIE and ESR's shareholding Ministers. The table below lists the metrics we will be monitoring and reporting on for 2025/2026.

Strategic focus area	Impact	Performance measure	Target 2025/26	Target 2024/25	Reporting frequency
To deliver greater impact with and for Māori and be a leading Tiriti- partnered Crown research institute	Increased Māori partnership, participation and leadership	Percentage increase in the number of iwi co-designed research project	≥ 20%	≥ 20%	Annual
		Percentage of Strategic Science Investment Fund funding allocated to projects led by and/or co-designed with Māori	≥ 20%	≥ 20%	Annual
Public health, emergency preparedness and response	Reduced mortality and impact on the health system from disease and contamination	Percentage of surveillance delivered to the health sector on time for all notifiable diseases	90%	90%	Annual
Data science collaborations with partners leading to funding applications	Collaborations with partners and funding applications	Number of new data science collaborations with local or international partners leading to funding applications	2	New	Annual
Building partnerships, both international and domestic	Enhanced aligned science capability to deliver innovative solutions with global reach	Percentage of international proposals funded[1]	30%	80%	Annual
		Percentage of external research bids successfully achieved	≥15%	≥15%	Annual

1 ESR submits a small number of international proposals. In 2024, the measure was moved from a number to a percentage. It was assumed that if five proposals were submitted, and four were approved for funding, then the success rate would be 80%. The projected success rate for this measure was revised in 2025 to 30% after reviewing the actual number of international applications submitted over the past two years. We note that 30% is a stretch target and any variance above or below will be noted in the Annual Report.

Strategic focus area	Impact	Performance measure	Target 2025/26	Target 2024/25	Reporting frequency
Diversified and stronger revenue streams	Diversified revenue sources on commercial terms that ensures financial profitability	Percentage growth in commercial revenue above FY25 Budget[2]	≥2.5%	≥5%	Annual
Accelerate workforce development and opportunities	A strong capable workforce that enables ESR to thrive and prosper	Annual Gallup Engagement result	≥3.9	≥3.9	Annual
		Annual Gallup Satisfaction result	≥3.6	≥3.6	Annual

2 The target for 2025/26 has been reduced to reflect the current economic climate. While the percentage growth is lower than the target for 2024/25, it represents over $2m growth in commercial revenue.

Systems and assurance

Risk and assurance

Provision of effiective risk management and assurance activity is critical to successfully delivering our strategy. In 2025/26 we will continue our surveillance of risks and their management and mitigation, in close consultation with the Board.

The important scientific work we do at ESR is accompanied by various risks and uncertainties. Taking appropriate risks is a normal part of doing business and, at ESR, we actively understand and manage our risk so we can successfully pursue opportunities and achieve our objectives. Risk and assurance are integrated at ESR and are about keeping people safe by following established policy, processes and guidance.

We have an enterprise-wide approach to risk management where day-to-day responsibility occurs at a strategic, operational and project level. The risk management framework is based on good practice, in line with the Australia/New Zealand Risk Management Standard (AS/NZS ISO 31000).

Our Board-led Risk and Assurance Committee meets four times a year to support the Chief Executive and help the Board discharge its responsibilities related to risk management, internal control, emerging environmental, social, and corporate governance issues and the financial accounting and reporting of ESR. The Risk and Assurance Committee also reviews coverage of the annual assurance plan, to ensure it is risk-based, before recommending it to the Board for approval.

Information technology systems, data security, governance and processes

Technology serves as the cornerstone in supporting much of the infrastructure and services essential for running a scientific institution like ESR. Investing appropriately in technological evolution is vital to ensure that ESR remains adaptive and responsive to emerging opportunities.

Developing and deploying data visualisation tools and dashboards, for example, enhances real-time surveillance and integrated decision-making capabilities, and e-infrastructure is crucial to bolster ESR's capacity for enhancing our genomics capability, enabling our adoption of AI and the development of AI-powered models, Likewise, the creation of new genomic datasets and pipelines, fortified by robust security and governance protocols, will yield benefits for the research, science, and innovation system. This includes improving data accessibility, fostering knowledge sharing and accountability, and enhancing ESR's scientific endeavours.

ESR supports these investments with robust prioritisation and oversight processes, including enterprise portfolio management, a project management office and software governance groups.

In recognising the paramount importance of system security, we also maintain a steadfast commitment to continuously enhancing resilience against cyber threats.

Data governance, data strategy and AI

ESR's approach to AI honours a commitment to ethical and safe practices, while pushing the boundaries leveraging cutting-edge AI research to deliver AI-powered services and products.

Our AI-powered digital twin, for example, can model the spread of infectious diseases and play a key role in pandemic prevention, preparedness and response. This same AI capacity is also being applied to model a range of other challenges New Zealand is facing, to support decision-makers to experiment into the future and solve tomorrow's problems today.

We have embedded a solid foundation including our governance structure, our Data Strategy, our learnings from being a signatory of the Algorithm Charter for Aotearoa New Zealand, our Responsible AI Framework, and the smart technologies we have adopted and developed. This foundation enables us to provide greater value through data for all New Zealanders, enabling us to reach further into the domains of health security and forensics. We will also deliver AI capability to improve our operational efficiency and effectiveness and the services we deliver. Plus, expand our AI-powered services and products to enable a stronger science system and generate new partnerships for ESR.

Sustainability and carbon reduction

At ESR, sustainability includes environmental, social, economic and cultural sustainability. To help identify our sustainability priorities, we committed to Agenda 2030 for Sustainable Development and the United

Nations Sustainable Development Goals. We engaged with staff and stakeholders about what sustainability issues were most important to them and where they believed ESR could have the most positive impact.

As part of our sustainability goals, we are working to reduce our organisational carbon footprint. This is focused on delivery initiatives to reduce our emissions profile across travel, waste, and energy use. The recently completed waste and power audits will form the work programme for ESR employees and sustainability volunteers to actively reduce ESR's carbon footprint.

We have worked with Toitū Envirocare, and after completing our carbon reduction baseline year audit for 2019, have now completed four years of Toitū Carbon Reduce Certification. The intention is to continue with annual audits for the upcoming year.

ESR has reviewed and renewed its commitment to become a more sustainably recognised company with an updated Sustainability Policy and Guidance documents, and plan to be transparent (via our website) on our sustainability journey.

We will continue to develop relationships with other government agencies and specialists to build on the all-of-government approach and will play our part in mitigating and responding to climate change.

Section 3:

Appendices

Appendix 1: Subsidiary

Subsidiary	Principal activity	Interest held (%)
STRmix	Forensic software that helps resolve complex mixtures of human DNA	**100**
ESR Charitable Solutions	Undertake research, education and training that advances scientific understanding and practical solutions to improve wellbeing in the domains of public health, health security and crime prevention in New Zealand	**100**

Appendix 2: Financial projections

Revenue

ESR's financial performance in FY25 is anticipated to be 4% lower than the previous financial year, mainly due to an anticipated decrease in revenue from services provided to the Ministry of Health and administered by the Public Health Agency in support of COVID-19 response efforts.

ESR projects reductions from Ministry of Health as well as other government contracts, commercial operations, and research as various project funding comes to an end through FY25.

Given the current fiscal environment and consistent with FY25, FY26 revenue has intentionally been budgeted at a conservative level, with no speculative unqualified revenue included in ESR's projections. This is considered an appropriate position with current pressures reducing certainty on future revenues. ESR does, however, hold a pipeline of potential future revenue sources not included in the budgeted numbers.

ESR is anticipating modest growth in revenues from FY27, reflecting improved research earnings, the more sustainable terms incorporated into core government contracts, and increase in commercial earnings underpinned by the projected sale of STRmix forensic DNA software locally and internationally. ESR also plans expansion of its Lumi forensic drug-detection hardware/software into international markets.

Note: reference to financial projections in this commentary exclude ESR's research revenues from the Te Niwha Infectious Disease Research Platform, which ESR administers, as these numbers distort financial metrics and comparison, particularly over FY24 and FY25.

Expenditure

Operating expenses are budgeted to decrease in FY26, driven particularly by the direct costs associated with revenue projects completed through FY25, as well as one-off organisational reduction costs implemented in FY25. These cost control measures were mainly associated with the reduction in the Ministry of Health COVID-19 response activity income.

To mitigate inflationary pressures on costs, the organisation is actively reviewing contracts to ensure adequate margins are achieved.

ESR continues to pursue opportunities for organisation-wide cost efficiencies, led by the Executive Leadership Team.

Depreciation and occupancy costs are forecast to increase in FY27 with the completion of the redevelopment of ESR's Wellington Region Kenepuru Science Centre.

Investment

Approval to proceed with the redevelopment of the Kenepuru Science Centre was received from ESR's Shareholding Ministers in January 2024, along with their approval to raise new capital via Crown equity injection as approved by Cabinet under a share subscription agreement. Solid progress is being made on the construction of the new building, with the facility expected to be completed and occupied in 2027.

Cash Flow

The Crown capital contribution noted above for the redevelopment of the Kenepuru Science Centre consists of $25 million, received in split payments across FY24 and FY25.

This funding, existing cash reserves and forecast operating cash flows are anticipated to be adequate to support the planned investment incorporated into this SCI, with some recourse to short-term debt facilities anticipated from FY26.

Risk

There is uncertainty associated with ESR's revenue and cost forecasts. Financial performance is also underpinned by the sustainability of terms under ESR's core government contracts. As well, there are funding pressures on commercial and research revenues from existing contestable and new sources of revenue.

Mitigation against these risks includes ESR having budgeted only qualified revenues in its current budget, as noted earlier. As also noted, ESR holds a pipeline of new revenue sources from increased investment in science capabilities and capacity and increased commercial revenues.

ESR will continue to actively monitor and respond to known and emerging financial risks.

Dividend

In determining surplus funds for distribution, the ESR Board will give consideration to factors including the organisation's medium- and long-term capital investment requirements.

As all available cash surpluses are required to fund the redevelopment of ESR's Kenepuru Science Centre, no dividend payments are projected to be made over this SCI period.

Financial performance indicators

The table below presents ESR's key financial performance indicators for the three-year period FY26-FY28.

Financial Performance Indicators	FY26 Budget	FY27 Forecast	FY28 Forecast
Revenue ($000s)	111,214	118,154	124,437
Revenue Growth	-6.8%	6.2%	5.3%
Revenue per FTE ($000)	212	223	233
Operating Results ($000s)			
Operating Expenses	111,965	116,779	122,329
Earnings Before Interest, Tax, Depreciation and Amortisation	7,006	10,332	13,424
Depreciation and Amortisation	6,719	8,957	11,316
EBIT	287	1,376	2,108
Net Profit after Tax	723	719	633
Total Assets	137,316	153,650	155,943
Closing Shareholders Funds	91,314	92,034	92,666
Capital Expenditure % to Revenue	41.8%	20.6%	10.8%
Liquidity			
Quick Ratio (Acid Test)	1.0	1.0	1.0
Profitability			
Return on Equity	0.80%	0.78%	0.69%
Return on Total Assets	0.2%	0.9%	1.4%
Operating Margin	6.3%	8.7%	10.8%
Operating Margin per FTE ($)	13,400	19,500	25,100

Financial Performance Indicators	FY26 Budget	FY27 Forecast	FY28 Forecast
Operational Risk			
Profit Volatility	17.0%	20.0%	31.3%
Growth/Investment			
Capital Expenditure ($000)	46,453	24,372	13,391
Capital Renewal	6.9	2.7	1.2
Dividend	-	-	-
Financial Strength			
Gearing (Debt*/Debt and Equity)	12.5%	23.3%	23.7%
Equity Ratio (Equity/Total Assets)	66%	60%	59%
Cash reserves ($m)	3.7	4.0	3.9
Debt* ($)	10.0	25.0	26.0
* Lease liabilities			

Appendix 3: ESR Policy and Procedure Statement

Accounting policies

A summary of our accounting policies is included in our Annual Report. The current Annual Report can be found on the website:

www.esr.cri.nz/news-publications/2024-annual-report

Dividend policy

The Board will notify the shareholding Ministers, within three months of the end of each financial year, of:

- the amount of dividend (if any) recommended to be distributed to shareholding Ministers the percentage of tax-paid profits that the dividend represents; and
- the rationale and analysis used to determine the amount of the dividend.

In determining surplus funds for distribution, the Board each year will give consideration to:

- the organisation's medium- and long-term capital investment requirements;
- the organisation's projected profitability and cash flows;
- the ongoing financial viability of the company, including its ability to repay debt;
- the ability of the organisation to react to revenue shocks outside its control, and still maintain and enhance the capability of its people and facilities; and
- the obligations of the Directors under the Companies Act 1993 and other statutory requirements.

Before making a decision on payment of a dividend, the Board will consider the above factors and consult with the shareholders.

Significant transactions policy

The Board will obtain the prior written consent of shareholding Ministers for any transaction or series of transactions involving full or partial acquisition, disposal or modification of property (buildings, land and capital equipment) and other assets with a value equivalent to or greater than $10 million or 20% of the company's total assets (prior to the transaction), whichever is the lesser.

The Board will also obtain prior written consent of shareholding Ministers for any transaction or series of transactions with a value equivalent to or greater than $5 million or 30% of the company's total assets (prior to the transaction) involving:

- acquisition, disposal, or modification of an interest in a joint venture or partnership, or similar association;
- acquisition or disposal, in full or in part, of shares or interests in a subsidiary, external company or business unit;
- transactions that affect the company's ownership of a subsidiary or a subsidiary's ownership of another entity; and other transactions that fall outside the scope of the definition of the company's core business or that may have a material effect on the company's science capabilities.

Appendix 4: Matters required by the Crown Research Institutes Act 1992

Ratio of shareholders' funds to total assets

ESR's forecast ratio of shareholders' funds to Adjusted Tangible assets is:

Subsidiary	2024/25	2025/26	2026/27
Equity ratio	0.68:1	0.66:1	0.60:1

Activities where shareholder compensation is required

Where the Government wishes ESR to undertake activities or assume obligations that will result in a reduction of the organisation's profit, or net worth in terms of investment in research, the Board will seek compensation sufficient to allow the organisation's position to be restored.

No requests for compensation are currently under consideration.

Other matters specifically requested by the shareholder

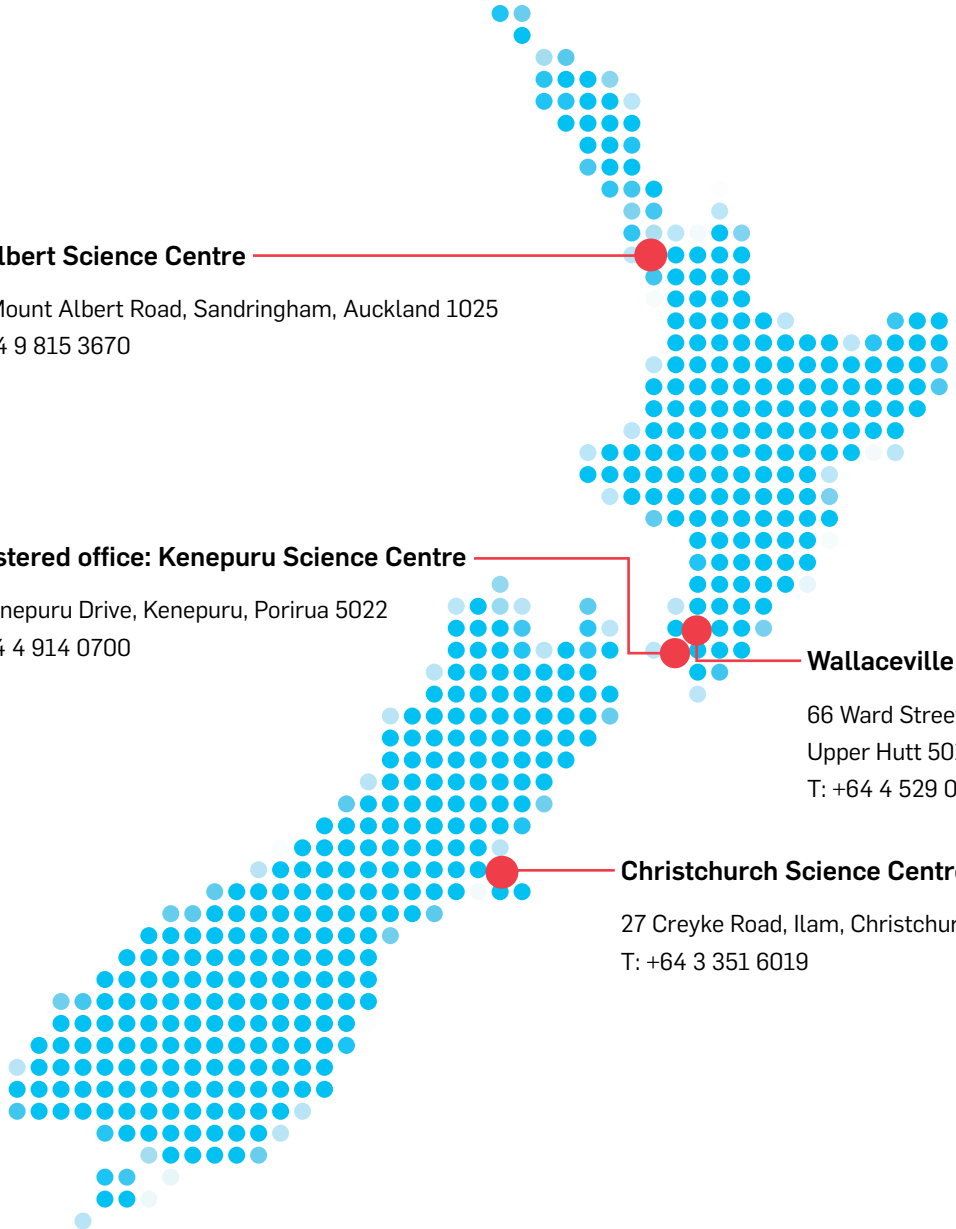
Section 16(3) of the Crown Research Institutes Act 1992 requires ESR to furnish an estimate of the current commercial value of the Crown's investment.

ESR's Board has conducted a review of the commercial value of the Crown's investment in the company. In this regard, the Board is satisfied that the net asset position (or total shareholders' funds) as at 30 June 2024 is a fair and reasonable indication of the commercial value of the Group. The net asset position, as shown in accordance with the company's accounting policies for 30 June 2024, was $73.033 million.

Directory

www.esr.cri.nz

ESR's science centres are located in Auckland, Wallaceville and Kenepuru (Wellington region) and Christchurch.



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