



Statement of Corporate Intent 2024-2027

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Aspects of this Statement of Corporate Intent may need revision depending on outcomes or progress from the Science System Advisory Group process.

Scion, Te Papa Tipu Innovation Park, Titokorangi Drive
Private Bag 3020, Rotorua 3046, New Zealand

Telephone +64 7 343 5899

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Chair and Chief Executive messages



New Zealand's leading research institute for forestry,
industrial biotechnology, and advanced manufacturing

We recognise that potential significant change is on the horizon for the science and innovation sector. This change is both needed and overdue, and Scion is well prepared to respond and help shape that change. This Statement of Corporate Intent is intended to convey how Scion can help grow the New Zealand economy, and take advantage of the risks and opportunities the country is facing. Early recommendations from the Science Sector Advisory Group could start to become clear as early as June this year, and so delivery of our intentions for the coming year may need to pivot as a result.

Our strategy is aligned to impact, and delivering return to New Zealand. New Zealand has no other way to lift productivity and sustainably grow the economy except through science and technology.

Scion is well-placed to support the Government's greater focus on delivering value for New Zealand. Our strategy has been developed in partnership with industry, and we strongly support the drive for increased private-sector investment in the science, innovation, and technology sector.

We have great partnerships with innovative companies at the start of their commercialisation journey, like Jooules and Cetogenix, to established industry players like Interpine and Timberlands, who have a laser-sharp focus on adding value to established forestry sector value chains.

Our continued commitment to supporting Māori in forestry through the impactful science and technology that only Scion can deliver is reflected in the enduring partnerships we are building with iwi, Māori enterprises, forest managers, landowners, and kaitiaki. With an excess of \$4.3 billion of assets in forestry under Māori ownership, we are poised to support Māori to achieve further economic growth from their forestry assets, while also contributing to their environmental, social, and cultural objectives.

We agree that New Zealand needs a thriving science, innovation and technology system that delivers growth for New Zealand's economy, environment and society by:

- driving innovation and accelerating the shift towards a knowledge-based, diversified economy.
- developing innovative solutions to emerging challenges such as climate change, biodiversity loss, and sociological change.
- adapting to, and making good of opportunities provided by, a rapidly evolving global research landscape.

We look forward to outcomes from the review process that the Government will be undertaking through the Science System Advisory Group and support its focus on delivering some 'quick wins' in the second half of 2024. We look forward to a science, innovation and technology system that is able to deliver greater benefit to New Zealand, enabled by a funding system better aligned to purpose and to an ability to invest alongside the private sector.

Dr Helen Anderson QSO
Chair

Dr Julian Elder
Chief Executive

Our strategy

Our purpose

As New Zealand's leading institute in forestry, industrial biotechnology and advanced manufacturing we drive innovation and growth to create economic value and contribute to beneficial environmental and social outcomes.




Creating a prosperous future

The global imperative to transition away from fossil fuels and petrochemicals to sustainable biobased alternatives is a huge opportunity for New Zealand. Our natural competitive advantage around growing sustainable biomass combined with Scion's world-leading science and technology expertise, linked to an emerging biotechnology and biomanufacturing sector, is a generational opportunity to create new levels of prosperity from this transformation.

Altogether, this means New Zealand has a globally unique value proposition. At Scion, we see this as doubly exciting as it would result in a mosaic of existing and new high-value economic activity across our regional, rural and Māori communities thereby increasing their resilience.

Imperatives, structure, and aspirations for New Zealand

Our strategy responds to critical imperatives for New Zealand. Our structure is aligned to clearly focus on impact, and our research enables the aspirational outcomes we seek.

IMPERATIVES	IMPACT AREAS AND PORTFOLIOS	ASPIRATIONS
<ul style="list-style-type: none"> → Grow New Zealand's export-led economy → Accelerate Māori economic development → Meet consumer demand for products that are sustainable and do not harm the environment → Respond to global trade changes and competition → Meet climate change commitments → Reduce environmental stress and land erosion and enhance water quality → Build more affordable homes in our cities and regions → Increase disposable household incomes → Protecting our forest resource 	<div>  <p>FORESTS AND LANDSCAPES To grow healthy, resilient forests primarily for their standing-forest benefits</p> <ul style="list-style-type: none"> • <i>Establishing indigenous forests</i> • <i>Restoration, protection and mauri o Te Waonui a Tāne</i> • <i>Designing forests - Mahi tahi whaihua</i> </div> <div>  <p>FORESTS TO TIMBER PRODUCTS Enhancing our production forest value chains, creating high-value timber products for Aotearoa New Zealand and the world</p> <ul style="list-style-type: none"> • <i>Trees to high-volume wood products</i> • <i>Trees to high-value wood products</i> • <i>Distinct value indigenous wood products</i> • <i>New value digital forests and wood sector</i> </div> <div>  <p>FORESTS TO BIOBASED PRODUCTS To replace petrochemicals and non-sustainable materials with products from trees and other biomaterials</p> <ul style="list-style-type: none"> • <i>High-value biorefineries</i> • <i>Bioproducts and packaging</i> • <i>Distributed and circular manufacturing</i> • <i>Integrated bioenergy</i> </div>	<ul style="list-style-type: none"> → A productive, prosperous and resilient low-carbon economy supporting high-value jobs and exports → New opportunities for sustainable regional economies and communities → Significant improvement in productivity and wellbeing → Healthy environments recognised as a key to resilience → Thriving and sustainable Māori economy → Net-zero emissions reduction target met through domestic action → Protect and grow the value of New Zealand's planted forests, including with more diverse forest types and management systems



The work that Scion delivers through our three impact areas will support key players in the new circular bioeconomy to deliver significant economic, environmental, and social outcomes for New Zealand.

New Zealand impacts enabled by Scion

Manufacturing sustainable marine biofuel from wood that can be blended directly with existing marine fuel is a \$600 million opportunity for New Zealand.



Shifting raw-log exports to high-value biochemicals and biomaterials could more than double the value of New Zealand's annual forestry exports, to \$12–\$19 billion.



Converting currently un-utilised woody residues, including slash and other biomass, to biofuel or bioplastics can replace \$2.5 billion of imports each year.



Double the productivity of our existing planted forests.



Industrial biotechnology and gene technology can unlock over \$2 billion per year in revenue by creating new product opportunities, with benefits to agriculture, environment and energy security.



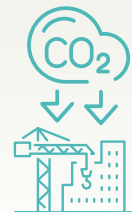
Develop innovative sustainable packaging to help take New Zealand's high-value exports to the world, growing and protecting market access.



Double the amount of CO₂-e removals by our future forests – indigenous as well as exotic – including on farmland.



Replacing 50% of New Zealand steel and concrete in buildings with advanced timber engineering to reduce 1 MT CO₂-e emissions every year.



Protect New Zealand's forests from fire, pests and diseases and grow healthy, resilient forests.



Support economic resilience by driving economic growth and employment in the regions.



Goals for the impact our research will enable

Each of our three Impact Areas will, by 2030, deliver research that will help achieve key impact goals on the pathway to delivering Scion's aspirations for New Zealand.

Forests and landscapes Impact Area 1	Forests to timber products Impact Area 2	Forests to biobased products Impact Area 3
20,000 hectares of highly erodible land planted with trees to enhance soil stability and protect against loss of livelihood	Increase annual growth of commercial forest, measured as Mean Annual Increment (MAI), by 20%	Enabling investment in new infrastructure, including three biorefineries, one of which is Māori owned
Major cities on track to achieve 30% tree canopy cover for the health and wellbeing of their populations	Increase wood processing by 3.5 million m ³ (25%)	\$20 billion sustainable GDP growth driven through existing and new companies
Seven million tonnes of CO ₂ -e is removed from the atmosphere by forests and forest soils	Export earnings from value-added wood products grow by \$300 million	Reduce CO ₂ -e emissions by 10 million tonnes
Enabling investment in forest and landscape ecological systems that enhance soil and water resources, biodiversity and landscape resilience, including three demonstrations, one of which is a transition forest and one Māori-led	Planting of diverse species and new genetic material increase to 20% of all planting	300 million litres of fossil feedstock replaced by biobased alternatives for the production of sustainable energy and materials
Forest health and protection of over 1 million hectares of existing permanent forest improved by adoption of three new tools that mitigate biotic/abiotic risk	Increase the use of domestic timber in construction by 25%, reducing emissions of 1 MT CO ₂ -e each year	Generate 2,500 new regional jobs which support the circular bioeconomy

Our key customers

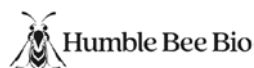
Our key customers and partners come from across the private sector, government, iwi/Māori, and the science, innovation and technology sector. We're open for business, and our revised stakeholder engagement strategy and tools are helping sharpen our customer focus, making sure we're working with the right people to drive innovation and economic growth for New Zealand. Our strategy has evolved in close partnership with more than 150 key stakeholders.

Scion has a long involvement with a wide range of stakeholders in the forestry industry, from nurseries to forest owners and managers, and wood processing and manufacturing (timber and pulp and paper) companies. Our research has underpinned the success of the industry and the sector continues to invest strongly in the work that we do. Close, mutually beneficial partnerships enable us to support the sector's business objectives.





My Native Forest



We're proud of the impact our work is having now



We are already making great progress towards our aspirations for New Zealand, including through exciting partnerships with the private sector

Our world-leading **wildfire and atmosphere research** is helping New Zealand prepare for a future with greater fire risk. We are using our fire and smoke modelling skills to develop new predictive models to help forecast the arrival of wind-blown pests and pathogens that threaten our primary industries.



We're using our **75 years of knowledge** gained from exotic forestry to help significantly reduce the cost of establishing native forests at scale.



Working with forestry industry partners we've developed an **AI-driven tool to automate forest inventory data** collected from satellite images. Our vision is to create a digital twin of New Zealand's forests to help grow the productivity of our \$40 billion plantation estate.



Industry partnerships using AI and advanced robotics will accelerate the development and propagation of high-value genetic resources for our plantation forests.



We are working with Māori-owned company AgriSea to design, build and commission **the world's first commercial seaweed nanocellulose biorefinery**, using waste products to create high value bioproducts and nutraceuticals for global export.



We are using advanced gene technology like CRISPR to be able to precisely modify tree genetics to increase forest productivity and create new biomaterials. **We have the only genetic engineering field trial in the country** (our wilding pines work) but could do more – in the lab as well as in the forest.



We've helped Ecogas launch New Zealand's **first commercial anaerobic digestion bioenergy plant** turning 75,000 tonnes of organic food waste into renewable clean energy and biofertilizer, creating over 50 new and high-paying jobs in Reporoa with plans to expand this to 30 plants across New Zealand.



We have worked with Christchurch-based plastics company EPL for the last four years on the use of biodegradable biopolymers in replacing plastics. **Their PolyNatural subsidiary has experienced over 80% growth** in the last 12 months.



Our strategy is driving our business planning



We have been developing and implementing new business planning tools to cascade our strategy through to business planning



Our 11 portfolios and their programmes were developed based on workshops (in person and online) with stakeholders, industry, government, hapū and business owners ensuring a focused research drive that will deliver impact and grow New Zealand's economy.

Each of our 11 portfolios have performance metrics that will be reported against in our quarterly and annual reports. For 2024 these are at a programme

level, and listed in Appendix 2. In future years, we will look to define performance measures at the portfolio level which will then be summarised to measure progress against the Impact Area goals and the overall impacts for New Zealand that Scion seeks to enable. These roadmaps were informed and co-designed with key stakeholders from central and local government, iwi/hapū, industry, researchers and members of the public. These deliverables are our current view of what our stakeholders, industry, government and iwi, need from Scion.

Te Papa Tipu Innovation Park



We are working to transform our Rotorua campus, Te Papa Tipu Innovation Park, and reimagine it as a world-leading, high-technology research hub. This will accelerate industry-science collaboration and co-innovation, optimise spatial efficiency and allow for new, innovative ways of funding innovation and capital development, and enhance public and community engagement. With the introduction of future state-of-the-art facilities, we are setting the stage to attract top-tier talent and nurture groundbreaking scientific innovation and commercialisation.

We already have more than 40 industry and government partners on-site, and as the planning moves to implementation we're expecting future partners to join us.

The campus transformation is being managed in stages with the first completed in 2020 with the construction of Te Whare Nui o Tuteata, our award-winning innovation hub. This investment was followed by the implementation of new technology and expansion of our research nursery, which is being implemented in three stages with stage two completed in early 2023.

We are working to repurpose buildings close to our heart. Currently three projects are being planned that will include developing concept designs to upgrade or replace our aging facilities, labs and workshops with adaptable facilities enabling us to continue delivering innovative science in a safe and healthy environment.

Capability planning – taking a ‘one Scion’ view to deliver impact

In 2023, Scion began the research group business planning process, focused on the development of a rolling, three-year science, capability, and infrastructure view for all of Scion’s research groups. These plans will support the delivery of our Impact Area goals and follow extensive stakeholder engagement into the development of our Impact Areas and portfolios, their ten-year portfolio logic maps and the development of our rolling three-year portfolio views.

We now have tools that allow us to get specific insight into the forward-looking company-wide resource and capability requirements. Once we have more clarity on government objectives and any proposed changes these tools will be used robustly to populate a holistic ‘one Scion’ plan of resources and capability needed (as modified over time).

The plan will enable:

- robust planning of our future capability and capacity requirements,
- the identification of our critical and core science capabilities, highlighting areas for specialised expertise,
- better capability alignment across research groups and externally, in turn, fostering greater science collaboration, and
- informed decision-making with a consolidated view across all Research Groups to effectively manage investment (recruitment) and streamline divestment actions.

In the year ahead we will deliver consolidated views on infrastructure requirements, external science collaborations and relationships – combined in the rolling update of the three-year plans.


The Scion biotechnology opportunity

Our work

The Government has signalled new legislation in 2025 to enable greater use of gene technologies, while continuing to ensure there remain strong protections for human and environmental health. We can see enormous potential from gene technology to expand the impact of our research programmes, from developing new tree varieties that could eliminate wilding spread from planted forests, and new trees modified for particular end-product uses, to the precision fermentation needed to grow the new bio-based materials and fuels our nation needs to accelerate the transition to a circular bioeconomy.

These technologies have the potential to dramatically accelerate New Zealand’s response to new pests and diseases in our forests. The potential use of RNA interference (RNAi) vaccines as a treatment to combat Myrtle Rust is already being explored, and similar technologies could be deployed to mitigate other pathogens in our forest tree species.

As New Zealand transitions to a circular bioeconomy we will need fast-growing biomass with physical and chemical properties tailored to particular end uses. Gene technologies could help us grow short-rotation tree crops with faster growth, or with wood properties that make it easier and cheaper to use wood in bioenergy and biomaterials.



Industrial biotechnology
and gene technology
can unlock over \$2 billion
per year in revenue by creating
new product opportunities,
with benefits to agriculture,
environment and energy security.

Ngā Hapū e Toru



We continue to work at strengthening our relationship with the tangata whenua of our Rotorua campus – Ngāti Hurungaterangi, Ngāti Taeotu, Ngāti Te Kahu (Ngā Hapū e Toru).

Since the signing of our Kawenata (Memorandum of Understanding) with Ngā Hapū e Toru in August 2022, we have agreed key focus areas on which we will partner and collaborate. These relate to matters of fundamental importance to Ngā Hapū e Toru, that is, the whenua on which our Rotorua campus sits, upholding the tikanga and values of this whenua, and the relationship with and representation of Ngā Hapū e Toru.

We have established regular reporting mechanisms which ensure regular and intentional engagement to progress the key focus areas and bring life to the Kawenata. The regular engagement also provides a mechanism to update the key focus areas as they are achieved, to set new targets for strengthening our partnership.

We continue to explore ways to further embed the Kawenata into Scion through, for example, building greater awareness within our organisation of the Kawenata mātāpono (principles) of Whakapapa, Kotahitanga, Rangatiratanga, Manaakitanga and tiakina te mana o te whenua.

BioInnovation Centre: Key infrastructure to accelerate new enterprises

While exciting collaborations are happening at Scion, we need help to accelerate more initiatives to deliver impact for Aotearoa New Zealand. A key gap exists in our bioinnovation system, which constrains the innovation needed for the transition to a circular bioeconomy. We are working with the private sector to establish a critical piece of missing infrastructure that will advance our work from its genesis in a Crown Research Institute (CRI) laboratory, into an investable proposition to be adopted by the private sector.

We can demonstrate industrial biotechnology for new materials, biobased chemicals, bioenergy and biofuels at laboratory scale but this is far short of what is needed to validate them and de-risk private sector investment. We are making good progress in partnering with the private sector on what we call the biopilot (BioInnovation Centre). It is similar to that found in New Zealand's Food Innovation Network which provides scale-up or



The Fraunhofer Center for Chemical-Biotechnological Processes CBP in Leuna

pilot infrastructure to de-risk the commercialisation phase, post laboratory. This would see an expanded network of open-access test bed and precommercial scale-up infrastructure, with a hub in Rotorua having the ideas, technology and equipment needed to transform bio-feedstocks into the new compounds and materials needed to pivot to a fossil carbon-free bioeconomy.

Te Ao Māori

Scion's strategy sets out a path to build science and research partnerships with Māori under a circular bioeconomy approach, with a focus on contributing to enhancing how Māori use, protect and restore their natural resources to realise their economic, social, environmental, and cultural opportunities and aspirations. The strategy also recognises how deeply Māori are woven into the national forestry estate – as landowners, forest managers, knowledge holders, kaitiaki, and as kin.



Scion's Indigenous trees for distinct value wood products portfolio leader Jonathon Kilgour (left) and resident carver Grant Marunui are partnering on research to innovate traditional carving practices.

Underpinning our Impact Area goals is Scion's commitment to:

- Build a relationship between Scion and Māori, recognising Māori as a critical partner in research, science and innovation, both as inter-generational kaitiaki of significant natural resources and mātauranga, and as owners and managers of commercial assets.
- Build enduring partnerships with whānau, hapū, iwi, Māori land entities, collectives and enterprises to enable their aspirations for their whenua, ngahere, taiao and indigenous taonga as they relate to the circular bioeconomy.
- Actively ensure that Māori have a voice across our Impact Areas. This includes co-designing and co-implementing research and development programmes to allow for Māori research aspirations to flourish. We strive to build a relationship of trust and respect with Māori communities and to create a shared understanding of our activities and their potential impacts.
- Recognise and value the distinctive characteristics, integrity and perspective of mātauranga Māori. This includes conducting our activities in a way that responsibly incorporates mātauranga Māori, Te Ao Māori and kaupapa Māori approaches into our methodologies, ensuring these approaches are always Māori-led, respected, and safeguarded.
- Build and maintain Scion's capability and capacity in priority areas for Māori, ensuring timely and effective delivery of Māori-centred science, research, innovation, and development, that support Māori to make informed decisions about the state and future of their whenua, ngahere, taiao and hāpori.
- Work together with Māori to co-create valuable research, data, and knowledge to inform future opportunities that deliver impact for Māori and Aotearoa New Zealand.
- Create new and innovative value chains, underpinned by a strong research and development programme, that supports Māori to be a critical player along the whole value chain.

Climate change obligations



Biochemicals and biofuels produced from trees are a new economic activity for New Zealand, making forestry waste streams a valuable commodity.

New Zealand has climate change targets and aims to achieve net-zero emissions of all greenhouse gases other than biogenic methane by 2050. By taking action we open the door to a vast range of economic opportunities enabled by new technologies.

New Zealand's first emissions budget period will end in 2025 and while projections are that the nation is broadly on track to achieve that budget, we will still need to deliver roughly 100 Mt CO₂-e of international emissions abatement by 2030 in order to meet our first Nationally Determined Contribution under the Paris Agreement.

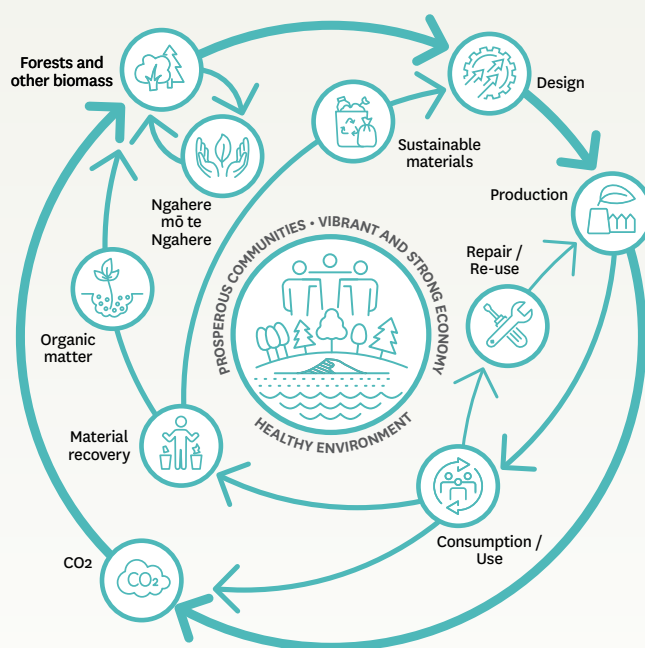
Our science can play a key role in seizing the opportunities that arise from climate action. Each of our research portfolios directly contributes to climate change mitigation ranging from how well forests store carbon to advanced processing of woody biomass into substitutes for fossil fuels.

The new circular bioeconomy

The world is transitioning away from a linear economy fuelled by fossil resources to one where biological resources support our production and consumption in a renewable cycle, where the end point of one activity is the starting point for another. This is the circular bioeconomy, and it's our vision for the future of New Zealand.

Centred around people and nature, the circular bioeconomy gets the most value out of renewable resources while minimising waste. It is an economic model that will see the environment, economy and communities prosper.

It's a vision with prosperous communities and healthy environment at its heart, and it offers enormous opportunity for New Zealand. We know that forests will be at the heart of a low-carbon, biological-based future New Zealand. We know too that forests will offset greenhouse gas emissions on a scale unmatched by any current technologies. And we know that renewable materials derived from trees will replace those from fossil fuels.



Our financials

Financial projections and performance

Scion's financial projections through to June 2027 are summarised in Table 1. Associated consolidated cash-flow and balance sheet details are presented in Tables 2 and 3. Financial performance indicators are included in Table 4.

The revenue projection for the year ending 30 June 2024 is reduced from current year results due to a projected drop in work that Scion is likely to be

contracted to do. The revenue drop has resulted in an associated reduction of projected costs across key areas including employee costs, non-science external services and operating costs. Conservative revenue growth has been projected for the year ending 30 June 2026 and beyond. There is an element of risk in all three years if we are unable to secure funding. We continue to experience ongoing capability challenges.

INCOME STATEMENT

	FY25 \$ in 000s	FY26 \$ in 000s	FY27 \$ in 000s
Total Gross Revenue	65,000	66,950	68,959
Personnel Costs	34,775	35,818	36,893
Other Operating Costs (excluding Interest)	24,876	26,269	27,506
Total Direct Expenditure	59,651	62,087	64,399
EBITDA	5,349	4,863	4,560
Depreciation & Amortisation	4,861	4,510	4,279
EBIT	488	352	281
Net Interest/Finance Costs & Non-Operating	273	292	310
Net Profit/(Loss) Before Tax	761	644	591
Restructuring Costs	-	-	-
Net Profit/(Loss)	761	644	591

Table 1: Projected income statement for the years ended 30 June 2025 to 2027.

CASHFLOW STATEMENT

	FY25 \$ in 000s	FY26 \$ in 000s	FY27 \$ in 000s
Net cashflows from operations	5,622	5,154	4,870
Net cashflows from investing activities	(6,000)	(5,000)	(5,000)
Net cashflows from financing activities	-	-	-
Net increase / (decrease) in cash	(378)	154	(130)
Opening Cash Balance	6,830	6,452	6,607
Closing Cash Balance	6,452	6,607	6,477

Table 2: Projected consolidated statements of cashflows for the years ended 30 June 2025 to 2027.

BALANCE SHEET

	FY25 \$ in 000s	FY26 \$ in 000s	FY27 \$ in 000s
Total Assets	68,312	68,371	68,334
Projected closing shareholder' funds	51,666	52,310	52,901
Shareholders' funds to total assets	0.76	0.77	0.77

Table 3: Projected balance sheet for the years ended 30 June 2025 to 2027.

FINANCIAL PERFORMANCE TARGETS

	FY25	FY26	FY27
Efficiency			
Operating Margin	8.2%	7.3%	6.6%
Operating Margin per FTE	18	16	15
Risk			
Quick Ratio	1.2	1.2	1.1
Growth / Investment			
Return on Equity	1.5%	1.2%	1.1%
Revenue growth	-3.5%	3.0%	3.0%
FTE			
Revenue per FTE	219	225	232

Table 4: Financial performance targets for the years ended 30 June 2025 to 2027.

Appendix 1.

Our people, processes and facilities

A key consideration, particularly in the current fiscal environment, is to balance affordability with the attraction and retention of our key talent. Cost of living pressures will make alternative career paths into the higher-paying private sector more attractive for staff with transferable skills.

A focus on competency

Scion has established a competency-based development and remuneration framework. This has provided a mechanism for meaningful career development discussions between staff and their managers, as well as a consistent tool to recognise staff contribution. The coming year will focus further on career planning and skill development closely aligned with our capability mapping process.

Leadership and development

Scion continues its commitment to leadership development by extending the Active Manager Programme (AMP) across our leadership cohort as well as those who have expressed a desire to grow their career in this direction.

Cultural renewal

With the focus on strategic and structural change in recent years, Scion has embarked on a significant cultural renewal. This has included a refresh of organisational values which are aligned to the delivery of strategy. Over the coming year this work will be implemented via various touchpoints throughout the employee life cycle such as recruitment, induction, leadership support and recognition.

Safety and wellbeing of all workers

Our health and safety team progressed several initiatives in 2023/24 including developing a contractor management process, establishing a critical risk framework including bowtie analysis of the nine critical risks at Scion, updated the field work and general health and safety manuals and systems of work. Utilising our in-house learning platform, we have developed chemical spill training and policy training including drug and alcohol and fieldwork training. We have been embedding safety differently through learning teams and changing the safety culture at Scion.

In 2024/25, we will focus on overlapping duties, especially tenants within Scion's gates, and how we safely work with tenants. Through auditing, the health and safety team will identify continuous improvement opportunities within Scion. Within the wellness area, the health and safety team is focused on developing a wellness program.

Facilities development

We need to continue to shape the environment that supports our work and enables our staff to succeed. This commitment drives us to pursue with the investment of leading-edge scientific equipment, facilities and workspaces and information technology systems. We have a legacy of buildings and other infrastructure that is at the end of their design life. We're looking at alternative funding mechanisms, in partnership with the private sector, to help create the world-class infrastructure needed to deliver our vision.

Collections and databases

Scion has stewardship of nationally significant databases and collections. We hold these on behalf of Aotearoa New Zealand. Two of these - National Forestry Herbarium database and xylarium database – are funded by MBIE through Strategic Science Investment Fund infrastructure funding. Others are funded through research investment.

We need to ensure that these collections and databases are preserved, maintained and enhanced through sustainable long-term investment. We are looking at alternative business models, including direct industry partnerships and user pays, so these important collections can be cared for on a more resilient basis.

DATABASE/COLLECTION	DESCRIPTION
National Forest Culture Collection & Database	An internationally registered living collection of almost 6500 fungal specimens (including a few bacteria and lichens) stored in culture. The collection supports diagnostics services and a broad range of fundamental and operational pathology research. Over 150 specimens a year are loaned to New Zealand and overseas researchers. The collection includes some pathogenic fungi from overseas, which are stored in a containment facility.
National Forestry Herbarium and Database	This nationally significant database and collection specialises in plants significant to plantations and indigenous forestry in New Zealand and includes a wide range of indigenous and amenity species.
National Forest Insect Collection	An internationally registered collection of forest insects from New Zealand and overseas containing about 150,000 specimens dating back to 1948. The collection supports diagnostics services for Forest Owners Association along with fundamental taxonomic research carried out at Scion and other organisations.
National Forest Fungarium & Database	An internationally registered forestry-focussed collection of almost 5000 dried fungal specimens and plant material containing fungi. The earliest collections date back to late 1800s from Sweden. The collection serves the same purpose as the culture collection.
National Forestry Library	The National Forestry Library contains publications, in a variety of formats, relating to forestry and wood processing research over >75 years. It represents the collected published heritage of forestry and related industries in New Zealand.
National Forestry Xylarium & Database	An internationally registered collection of wood blocks from all over the world and one of two (and the largest) xylarium, in New Zealand. About 8000 blocks of wood, representing about 4500 different species, provide an invaluable resource for wood anatomists. It is also a fascinating record of the diversity of the world's trees and their importance in human culture and history.
National Wood Performance Archive ('Graveyard')	Around 70 years of records of wood durability and performance across four sites in New Zealand, including the 'graveyard' on Scion's campus in Rotorua. The archive is the reference for standard and building code development, evaluation of wood products developed in New Zealand and overseas and establishment of durability classification for timber grown in New Zealand and overseas.
Permanent Sample Plot (PSP) Database	An internationally unique database of sites that are used to measure growth and development of plantation forest trees across New Zealand.
Tree Genetic Archive	A living collection of genotypes across a range of indigenous and exotic species for the purposes of gene conservation, archival history and germplasm resources.
Wood Mycology Culture Collection	A nationally significant fungal collection (mould and decay fungi) isolated from the leaky building syndrome and from other buildings and wood products across New Zealand. The collection of about 300 fungi support evaluation of wood products to be used in New Zealand buildings.

Table 5: Scion's databases and collections of national significance.

Appendix 2: Impact Areas goals

For further information on Impact Areas refer to our Strategy 2030.

Generic performance indicators

IA	Project	2030 IA Goals
IA1	Protect erodible land	20,000 hectares of highly erodible land planted with trees to enhance soil stability and protect against loss of livelihood
IA1	Enable city tree canopy cover	Major cities on track to achieve 30% tree canopy cover for the health and wellbeing of their populations
IA1	Sequester CO ₂ -e from the atmosphere	Seven million tonnes of CO ₂ -e is removed from the atmosphere by forests and forest soils
IA1	Invest in new forest and landscape systems	Enabling investment in forest and landscape ecological systems that enhance soil and water resources, biodiversity and landscape resilience, including three demonstrations, one of which is a transition forest and one Māori-led
IA1	Sustainable native forests for the future	Forest health and protection of over 1 million hectares of existing permanent forest improved by adoption of three new tools that mitigate biotic/abiotic risk
IA2	Increase commercial forest	Increase annual growth of commercial forest, measured as Mean Annual Increment (MAI), by 20%
IA2	Increase wood processing	Increase wood processing by 3.5 million m ³ (25%)
IA2	Grow export earnings	Export earnings from value-added wood products grow by \$300 million
IA2	Increase diversity of planting	Planting of diverse species and new genetic material increase to 20% of all planting
IA2	Increase domestic timber construction	Increase the use of domestic timber in construction by 25%, reducing emissions of 1 MT CO ₂ -e each year
IA3	Enabling new infrastructure	Enabling investment in new infrastructure, including three biorefineries, one of which is Māori owned
IA3	Sustainable GDP growth	\$20 billion sustainable GDP growth driven through existing and new companies
IA3	Reduce CO ₂ -e emissions	Reduce CO ₂ -e emissions by 10 million tonnes
IA3	Sustainable energy and material alternatives	300 million litres of fossil feedstock replaced by biobased alternatives for the production of sustainable energy and materials
IA3	Generate 2,500 new jobs	Generate 2,500 new regional jobs which support the circular bioeconomy

Table 6: Generic Performance Indicators

Programme performance measures

Within our three Impact Areas our 11 portfolios have established performance measures at programme level. We will report against these in our quarterly and annual reporting.

1.1 Establishing indigenous forests		
1.1.1	Indigenous Plant Production at Scale	Foster at least one partnership to co-develop a breeding programme for resilient indigenous forest trees in the context of future climates. By June 2025
1.1.3	Transitioning to Ngahere	Launch one demonstration plot to show the potential of complex multi-age, multi-species forest to maximise biodiversity and community resilience in a changing climate. By June 2026
1.2 Restoration, Protection & Mauri o Te Waonui a Tāne		
1.2.1	Kia Ora te Waonui - Ecological Wellbeing	Implement a pathway that enables Te Ao Māori capability, capacity, leadership and partnerships for active participation and knowledge application in ngahere ecosystems. By June 2025
1.2.2	Whakamaru Ngahere - Protect indigenous forests	Develop new research and tools that quantify and mitigate risks of new pest and pathogen establishment in indigenous forests. By June 2027
1.3 Designing forests - Mahi Tahi Whaihua		
1.3.2	Carbon Secure Forests	Contribute to New Zealand’s ongoing national and international carbon reporting obligations. By June 2025
1.3.3	Resilient Landscapes	Deliver at least one set of protocols to promote ecosystem resistance to re-invasion of wilding conifers. By June 2027
2.1 Trees to high-volume wood products		
2.1.3	Sustainable Forest Management	Develop a predictive forest hydrology model for water use, retention and release. By June 2025
		Develop economic and social evaluation metrics for ecosystem services benefit delivered by production forests. By June 2026
2.1.4	Managing Resilient Forests for Production and Wood Quality	Develop a predictive Red Needle Cast model for forest managers. By June 2025
		Deliver improved germplasm to increase radiata pine productivity, disease resistance and climate resisance. By June 2026
		Develop new treatment options to maintain forest health and resilience. By June 2027
2.2 Trees to high-value wood products		
2.2.1	Shaping future forestry, processing and built environments	Update value chain models to include its integrated social, economic and environmental value proposition for two alternative exotic species. By June 2027
2.2.2	Quality Performance and Innovation	Correlate three performance attributes of two exotic species (untreated and enhanced) to performance targets of key selected products. By June 2025

2.3 Distinct value indigenous wood products		
2.3.1	Indigenous forest-to-wood product paradigms	Develop at least one partnership with iwi and/or Māori to support establishment of indigenous forests at scale (note collaboration with IA1.1)". By June 2026
2.4 New value digital forest and wood sector		
2.4.1	Supply Chain Connectivity	Model the framework for a connected view of information flow in NZ forestry. By June 2025
		Utilise AI to mine data from operational sites (mills, processors, harvesting and skid sites) to identify efficiencies and new thinking. By June 2027
2.4.2	Intelligent Forestry Systems	Introduce an operational trial connecting nursery to planted forest with biodegradable RFID, GPS locations and log marker code generation. By June 2025
		Operationalise an advanced inventory platform with a minimum of planted exotic forest of New Zealand. This includes the most common exotic species including pinus radiata, eucalyptus, redwood and cypresses. By June 2026.
2.4.3	Precision Forestry at Scale	Map out a platform, incorporating simulation technology where possible, to help industry identify the right tree for the right location. By June 2027 By June 2027
3.1 High value biorefineries		
3.1.1	Indigenous Biomass based Biorefineries	Support a Māori-owned company to operate a biorefinery, at least at pilot scale, in New Zealand using Scion-generated IP. By June 2025
3.1.3	Alternative Sustainable Biomass based biorefineries	Work with industry to have at least one high-value biorefinery product tested in a commercial product. By June 2025
3.2 Bioproducts and packaging		
3.2.1	Bioplastics Made in New Zealand	Demonstrate at least one novel biotechnology process tailored for New Zealand companies. By June 2025
3.2.2	Compostable and Recyclable Packaging	Work with commercial partners to substitute petrochemical-derived packaging with sustainable alternatives for five commercially available products.
3.3 Distributed and Circular Manufacturing		
3.3.1	Distributed Biomass Conversion	Together with commercial partners complete at least one case study on the feasibility and viability of distributed or mobile biomass conversion. By June 2026
3.3.3	Modular and Circular Manufacturing	Develop and trial at least one scalable, modular bio-based product (re)processing technology with commercial partners. By June 2025
3.4 Integrated bioenergy		
3.4.1	Transport biofuels	Implement a commercialisation pathway for Scion's marine biofuel technology. By June 2025
3.4.2	Process Heat Bioenergy	Develop the technology and protect any suitable IP for the distributed production of biohydrogen from waste. By June 2027

Table 7: Programme Performance Measures

Appendix 3.

Measuring our performance

CRI generic performance indicators

Indicator name	Measure	Frequency	2022/23 Target	2022/23 Actual	2023/2024 Target	2024/2025 Target
End user collaboration	Revenue per full-time employee (FTE) from commercial sources	Quarter	\$60,377	\$67,276	\$51,326	\$69,384
Financial indicator	Revenue per FTE	Quarter	\$175,208	\$183,774	\$176,031	\$218,855
Research collaboration	Publications with collaborators (peer-reviewed publications from Scopus database)	Quarter	90	100	100	100
Technology and knowledge transfer excellence	Commercial reports per scientist FTE	Annual	>2.0	1.5	>2.0	>2.0
Science quality	Impact of science publications - mean citation score	Annual	3.5	5.08	4	4

Additional performance indicators

Indicator name	Measure	Frequency	2022/2023 Target	2022/2023 Actual	2023/2024 Target	2024/2025 Target
Stakeholder engagement	Relevant partners (number and %) that have a high level of confidence that Scion sets research priorities relative to their industry	Annual	>85%	95%	>85%	>85%
	Percentage of stakeholders who have engaged with Scion about their strategic direction	Biennial Annual	>90%	-	Establish benchmark	>50%
	Relevant end-users (%) who are likely or very likely to recommend working with Scion	Annual	>90%	53%	>90%	>90%
	Māori partners' relationship measures are 'very good' or 'improving' through customer survey (new in 2023)	Annual	-		Establish benchmark	>80%
Māori economic development	Partnerships (number (n) and value (\$)) established with Māori entities to support economic development through the forest industry	Quarter	n>15 \$2.5m	22 >2.5m	n>15 \$2.5m	n>15 \$2.5m
Accelerated commercialisation	Technologies in Scion's pipeline (number (n) and co-investment (\$)); projects that progress to the business case stage (case studies)	Quarter	n=25 and \$500,000, 2 cases to validation	n=21 and \$714,543; cases 4	n=14 and \$500,000; 2 cases to validation stage	n=14 and \$500,000; 2 cases to validation stage

Indicator name	Measure	Frequency	2022/2023 Target	2022/2023 Actual	2023/2024 Target	2024/2025 Target
Good employer	Staff engagement	Annual	>80%	59%	>80%	>80%
	Staff turnover	Annual	12%	13.9%	12%	12%
	Health and safety – serious harm events	Annual	0	0	0	0
	Staff diversity - % of permanent staff of Māori decent	Annual	>12%	7.3%	>12%	>12%
	Gender neutral – pay equity (median – total compensation unexplainable differences)	Annual	<5%	6.3%	0	0
Environmental footprint	Waste (new in 2023)	Annual	40% volume reduction from 2018/19 year	45% reduction in volume (Total weight 58 tonnes)	10% weight reduction from 2022/23 year	20% weight reduction from 2022/23 year
	Water (new in 2023)	Annual	Baseline year (1st year with new water meters installed)	69,040 m ³	5% reduction from 2022/23 year	25% reduction from 2022/23 year
	Carbon emissions (new in 2023)	Annual	Baseline year certified	2710 t CO ₂ -e	5% reduction from 2022/23 year	15% reduction from 2022/23 year

Table 8: Scion's performance monitoring scorecard indicators and measures.

Appendix 4.

Other matters required by the CRI Act 1992

Information to be reported to shareholders

Scion will provide information that meets the requirements of the:

- Crown Research Institutes Act 1992 (the Act);
- Companies Act 1993;
- Financial Reporting Act 1993;
- Crown Entities Act 2004; and
- New Zealand Institute of Chartered Accountants (NZICA) with regards to Generally Accepted Accounting Practice (GAAP).

The following information is made available to enable our shareholders to make an informed assessment of Scion's performance:

- A Statement of Corporate Intent (SCI) which sets out Scion's strategy for delivering against its core purpose and the company's financial and non-financial performance targets. The draft SCI is due not later than one month before the start of the financial year (31 May).

- An Annual Report containing sufficient information to allow an informed assessment to be made against the performance targets in the SCI. This report includes comments on our core business and how we communicate our science, financial statements (including audit report), and a report from the Directors to the shareholders. The Annual Report is to be provided within three months of the financial year ended 30 June. A public Annual General Meeting is to be held no later than six months after balance date and not later than 15 months after the previous AGM.
- A Half-Yearly Report containing unaudited financial statements (including comparatives of the same period in the previous year) and major highlights during the period. The Half-Yearly Report is due within two months of the first half of each financial year ended 31 December.
- A Quarterly Report containing information such as unaudited financial statements (including current quarter and year-to-date budgets and a forecast for the financial year ended 30 June). The Quarterly Report also includes financial performance measures and progress towards meeting non-financial performance targets. The Quarterly Report is currently requested within one month of each financial quarter ended 30 September, 31 December, 31 March, and 30 June.
- Any other information relating to the affairs of the company, as reasonably required by shareholders, under section 20 of the Act and section 45B of the Public Finance Act 1989.

Accounting policies

Scion adopts generally accepted accounting practice in New Zealand as prescribed by the External Reporting Board. The accounting policies for the measurement and reporting of financial performance, movements in equity, financial position, and cash flows are detailed in Scion's annual reports available at www.scionresearch.com

Dividend policy

In determining the amount of ongoing dividend (if any) recommended to be distributed to the shareholders, consideration will be given to:

- providing for capital investment requirements and consideration as to whether there is a need for capital injection from shareholders;
- Scion's working capital requirements;
- the ongoing financial viability of Scion, including the ability to repay debt;
- the need to comply with bank covenants;
- the obligations of the directors under the Companies Act 1993 and other statutory requirements;
- resilience against fluctuations in the demand for Scion's services;
- the need to ensure the maintenance of scientific capability through the provision of scientific technology, equipment and science capability building.

Any dividend would be paid within three months of the financial year-end.

Activities where shareholder compensation would be required

The Board would look to seek compensation from the shareholders in the following circumstances:

- Where the shareholders instruct Scion to undertake activities or assume obligations that would result in a reduction of the company's profit or net realisable value.
- Where the Board may consider undertaking strategic investments for the wider benefit of the New Zealand public, involving financial outlays beyond those incorporated within the company's Statement of Corporate Intent or financing capabilities.

No request for compensation is currently being sought from the shareholders. At this time no such investment has been identified, nor have any financial projections for such investment been included in Scion's 2024-2027 SCI.

Other matters specifically requested by the shareholder

There are no other matters that have been specifically requested by the shareholders.

Significant transactions policy

As required by section 13(1)(d) of the Crown Research Institutes Act 1992, neither Scion nor its subsidiaries will acquire:

- shares that give it substantial influence in or over a company; or
- an interest in any partnership, joint venture, or other association of persons, or an interest in a company other than in its shares; or
- settle, or be or appoint a trustee of, a trust except after written notice to the shareholding Ministers.

The Board will obtain prior written consent from shareholding Ministers for any transaction or series of transactions involving a 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.

The Board will obtain prior written consent for any transaction or series of transactions with a value equivalent to or greater than \$5 million involving:

- the acquisition or disposal, in full or in part, of shares or interests in a subsidiary, external company or business unit

- transactions that affect a company's ownership of a subsidiary or a subsidiary's ownership of another entity (provided that transactions which include 'drag-along' clauses that compel Scion to sell interests at a future date at the direction of the investors shall be valued at the time of the investment transaction)
- 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.

The Board will advise shareholding Ministers in writing before entering any transaction related to property and commercialisation activities below this threshold in accordance with notice requirements agreed between the Ministers and Scion from time to time.

Commercial value of the shareholders' investment

Section 16(3) of the Act requires the Scion Group to furnish an estimate of the current commercial value of the Crown's investment. The Scion Board is satisfied that the projected net asset position (or shareholders' funds) as at 30 June 2023 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 \$53.9 million.

Scion profile

New Zealand Forest Research Institute Limited	Trading as Scion		
Ownership	Crown owned entity (established under the Crown Research Institutes Act 1992)		
Head Office	Te Papa Tipu Innovation Park, Titokorangi Drive, Rotorua		
Postal Address	Private Bag 3020, Rotorua 3046		
Web address	www.scionresearch.com		
Governance	Shareholder-appointed Board: Dr Helen Anderson QSO (2018) (Chair); Brendon Green (2022); Greg Mann (2017); Stana Pezic (2017); Dr Jon Ryder (2016); Nicole Anderson (2023); Phil Taylor (2023); Kiriwaitangi Rei-Russell (2023); Future Director Zara Morrison (2023).		
Executive Management	Dr Julian Elder (Chief Executive), Shontelle Bishara (Te Toihau Māori / GM Māori Futures), Dr Henri Baillères (GM Forests to Timber Products), Dr Roger Dungan (GM Strategic Partnerships and Communication), Dr Florian Graichen (GM Forests to Biobased Products), Cameron Lucich (GM People, Culture and Safety), Dr Marie-Joo Le Guen (GM Science Services), Dr Tara Strand (GM Forests and Landscapes), Justine Wilmoth (GM Finance and Corporate Services)		
Staff	332 full-time-equivalent staff at three sites: Rotorua (293), Christchurch (37), Wellington (2), as at 30 May 2024		
Vision	Prosperity from trees - Mai i te ngahere oranga		
Core purpose	To drive innovation and growth from New Zealand’s forestry, wood product and wood-derived materials and other biomaterial sectors, to create economic value and contribute to beneficial environmental and social outcomes for New Zealand		
Values	Ingenuity, Collaboration, Excellence, Manaakitanga		
Reporting	Financial and non-financial performance against SCI targets is reported to the shareholders quarterly and to the public via a six-month and annual report		
Shareholders’ funds	Total book value of \$50.372 million at 30 June 2024		
Shareholdings			
	Company	Company type	Scion shareholding %
	Te Papa Tipu Properties Limited	A land holding subsidiary	100.00
	Biopolymer Network Limited	An incorporated joint venture	14.56
	Kiwi Innovation Network Limited	A limited company funded by MBIE and owned collectively by the CRIs, some universities and other public research organisations.	6.67
	Sala Street Holdings Limited	Holds Scion’s 50% share in both Terax (2013) Limited and Terax Limited Partnership	100.00

SCIENCE WORKING FOR AOTEAROA NEW ZEALAND

The Crown Research
Institutes (CRIs)
proudly work,
individually and
collectively, to create
a more prosperous,
sustainable and
innovative Aotearoa
New Zealand.



4,400
SMART AND
PASSIONATE PEOPLE

54
SITES ACROSS
AOTEAROA
NEW ZEALAND

6,000
SCIENCE PROJECTS
EACH YEAR

40
NATIONALLY
SIGNIFICANT DATABASES
& COLLECTIONS

