

December 2014

**Four Year Rolling Review Report:
Institute of Environmental Science
and Research (ESR)**

Report from the Review Panel



ACKNOWLEDGEMENTS

The Review Panel wishes to extend its thanks to the Board, CEO, the executive and staff of ESR for their positive, open and responsive co-operation with, and input into the Review. Stakeholders including sector agencies, customers, collaboration partners and other science and research organisations willingly provided their time for interviews. This input was extremely valuable in formulating the Review findings.

The Panel would also like to acknowledge the support provided to the Review by staff at the Ministry of Business, Innovation and Employment.

The Panel wish to acknowledge the recent appointment of the Chief Executive and some members of the executive and hope the findings in this report provide a useful independent perspective on the organisation as the new leadership of ESR plans for the next four years.

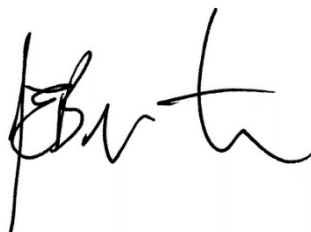
The Panel believes having rolling four-year reviews of the CRIs is a useful initiative in focusing attention on the longer-term performance and capacity of these Crown-owned companies. We hope that this report will assist ESR to succeed over the next four years, and that the report provides appropriate support for the Ministry and Government in its decision making.



Philip Barry
Chair



John Ashby



Jenn Bestwick



Ian Fitzgerald

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1. EXECUTIVE SUMMARY

Cabinet has agreed to evaluate the performance of each Crown Research Institute (CRI) against its Statement of Core Purpose. These reviews are intended to provide Ministers with assurance on the operational effectiveness of the CRI in delivering outcomes that benefit New Zealand, an assessment of governance effectiveness, financial viability and sustainability, together with identification of opportunities and barriers to success.

Two evaluation reviews are being undertaken each year and the cycle of reviewing the seven CRIs will be completed every four years. The Institute of Environmental Science and Research Limited (ESR) is the fourth CRI to undergo such a review.

A panel of four independent reviewers with experience in governance, corporate finance and economics, food science and organisational review undertook the review between October and December 2014. The panel reviewed a significant amount of documentation provided by ESR and met with the Chair, Board, Chief Executive, executive management and several science personnel together with a number of customers and other external stakeholders.

The Statement of Core Purpose for ESR states that “ESR’s purpose is to deliver enhanced scientific and research services to the public health, food safety, security and justice systems and the environmental sector to improve the safety and contribute to the economic, environmental and social wellbeing of people and communities in New Zealand.” The Statement of Core Purpose further elaborates on the key outcomes, scope of operation and operating principles for ESR and it is against all these that the panel makes its report.

ESR is a trusted and respected provider in the two core areas of its business: forensic sciences and public health. These two areas provide over 60% of ESR’s revenue. Three of ESR’s other four areas of operation - water quality, food safety, and social sciences – operate in quite crowded spaces with many competing government organisations providing similar or related services. In addition ESR operates the National Centre for Radiation Services (NCRS).

The panel found many positive features of ESR including:

- a passion for science and New Zealand amongst its workforce, some of whom have international standing;
- the Board initiated a Strategy Refresh and the strategy is being executed and monitored actively;
- the new CEO is moving quickly on organisational structure and appointments; and improving relationships internally and externally;
- improvements in the company’s financial controls and reporting; and
- the company is moving to improve margins on its key contracts.

The organisation, however, faces many challenges. Its relationships with some of its clients are fragile, the company's financial performance has been deteriorating over the last 4 years and it has experienced high turnover in its senior management, including having had two new chief executives since 2011.

The panel has identified four key issues for ESR as detailed below.

1. Strategic direction

ESR's Board is to be commended for recognising the need to turn the organisation around, for appointing a new, highly capable CEO and for developing, with outside help, a well-articulated Strategy Refresh. Taking ESR's organisational form and structure as given, the Panel considers the Strategy Refresh is heading in a positive direction with implementation based on three phases of strengthening the core, driving growth initiatives and achieving a step change as an appropriate approach. The Panel observes that the key financial ratios remain below the shareholders' expectation and the company's exposure to two key customers, whilst slightly improved, has not significantly changed by the end of the plan period. The Panel has concerns around whether the strategy goes far enough in terms of aligning the business with a single purpose, raising sufficient revenue from its core operations and considering alternative means of reducing costs, in particular overheads, coupled with the reliance on growth from commercial revenues.

2. Customer centricity

ESR is generally very good at the science-services delivery level. There are however significant gaps at a strategic level in its dealings with its key clients and some key senior level relationships are in need of repair. The Strategy Refresh acknowledges this issue and the Panel understands the organisation is taking steps to develop its customer engagement approach and capability, an initiative that is being monitored by the Board through its monthly reports. The key challenges facing the company are to better "understand its client's world"; to demonstrate the value-add it provides so its clients are prepared to fund the services they demand on a sustainable basis (including ESR having the capacity to respond to unforeseen events); and to move to a trusted strategic partner status.

Despite various commitments made in recent Statements of Corporate Intent (SCIs), Māori engagement does not appear to have been a priority for the company.

3. Internal engagement

ESR's key asset is its people. The company has many highly motivated staff, including a talented and energised group of young scientists. There appears, however, to be level of disconnect between the senior management team (SMT) and staff, in part perhaps because of the high turnover amongst the SMT in recent years. The latest staff engagement survey (undertaken in October 2013 (results available early 2014) revealed that staff appear to identify with their own units rather than ESR as a whole. It also indicated that some staff don't see corporate overheads as adding sufficient value. There have been some improvements in internal communications recently but continued efforts will be required to

close the gap. The new SLT has recognised the importance and need to ensure ESR staff are on board with the strategy and the need to ensure SLT and staff are connected and has identified a number of initiatives to improve connection and engagement.

4. Delivering results

In each of its last three SCI's ESR has forecast a sharp improvement in its financial performance over the term of the SCI. The reality however has been ESR's return on equity has deteriorated in each of the last three years. By conventional economic value added (EVA) measures, ESR made a negative contribution of around negative \$4m in 2013/14. Recent results indicate ESR is on track for an improving financial performance in the current financial year but the challenge is to lift the organisation's financial performance to a new level on a sustainable basis. The recent renegotiation of its contract with a major client is a significant step in this direction but ESR still has a significant way to go before its core operations are adding economic value in a sustainable fashion.

s9(2)(b)(ii)

s9(2)(b)(ii)

Overall, the panel believes that ESR is operating below its potential. The Board, new CEO and SMT recognise this and have a real opportunity to improve the organisation's customer centricity, the level of staff engagement and to enhance its strategy further. The panel believes that the appointment of the new CEO provides an exciting opportunity for bringing new dimensions to its level of service delivery and to improve the robustness and financial performance of the organisation. The key challenges for the Board and the new CEO are to determine and communicate a unifying vision, to take its staff, customers and other stakeholders with them; to focus on its core businesses and ensure they are viable; and to address issues of scale and sustainability.

2. REVIEW CONTEXT

The 2010 Crown Research Institutes (CRI) Taskforce reforms are an integrated suite of changes designed to increase the impact and benefit of the CRIs to New Zealand. Central to the reforms is the intention to increase the CRIs' focus on collaboration with, and efficient technology transfer to the sectors and key stakeholders they serve.

Each CRI has adopted a Cabinet-approved Statement of Core Purpose (SCP) which reflects this focus and clearly articulates the purpose, expected outcomes and strategic role for the organisation. To ensure CRIs continue to increase their contribution to New Zealand's economic, social and environmental well-being, the CRI Taskforce also recommended, and Cabinet agreed [CAB Min(10)43/5C refers], that the government evaluates the performance of each CRI against its SCP through a process of independent rolling reviews.

It has been agreed with the Minister of Science and Innovation that two reviews will be undertaken each year. Given the cycle of reviewing the seven CRIs will be completed every four years, these reviews will be known as the four-year rolling reviews. These reviews are described as rolling for two reasons: firstly, because they are designed to review each CRI successively, and secondly, because they will draw on an aggregation of performance-related information that is already routinely generated to inform the matrix of monitoring and assessment processes established around the CRIs.

Purpose of the review and this report

The purpose of these reviews is to provide shareholding Ministers with insights on where each CRI's performance can be improved and assurance on where the CRI is operating effectively in delivering outcomes that contribute to New Zealand's economic, social and environmental well-being. The reviews will include an assessment of governance effectiveness, financial viability and sustainability as well as an identification of opportunities and barriers to success. Findings from the reviews will also support CRI Boards in their governance role. This report is the outcome of the fourth such review, that of ESR (the Institute of Environmental Science and Research). The review was undertaken between October and December 2014.

Scope of the review

As outlined in the Terms of Reference for the review (Appendix 1), each CRI's SCP provides the scope of enquiry for the four-year rolling review. The review is expected to evaluate the CRI's performance and progress in delivering to the purpose, outcomes, scope of operation and operating principles in its SCP. There will also be some consideration of the likely durability of outcomes in the current economic and environmental context. The reviews are expected to evaluate factors that influence the CRI's overall success in contributing to its SCP outcomes now and into the future.

On an annual basis, each CRI, in collaboration with its key stakeholders, measures and evaluates its impact on its respective sectors. The independent Panel undertaking the four-year rolling review is not expected to duplicate this work. However, based on the measures and assessment

generated by the CRI, the Panel should evaluate how well the CRI is contributing to the outcomes in its SCP and assess the quality of the measures used to inform that assessment.

The Terms of Reference for the review have the following as out of scope:

- how science reviews are undertaken by the Science, Skills and Innovation Group; rather the science reviews themselves may be sourced as an informational input into this project;
- measuring the performance of the CRI in delivering against individual contracts; rather the Panel will evaluate how the CRI manages its contracts overall; and
- measuring the CRI's science quality; rather the Panel will evaluate how well the CRI is monitoring, measuring and improving science quality.

The Review Panel and processes

Panel members were appointed to ensure an appropriate mix of experience in governance, corporate finance and economics, senior management of science organisations and organisational review. The Panel membership was Philip Barry (Chair), John Ashby, Jenn Bestwick and Ian Fitzgerald. Brief biographies for the Panel members are attached as Appendix 2.

The Panel reviewed and disclosed to ESR any potential conflicts of interest that members may have in relation to this process (refer Appendix 2). There were no direct conflicts identified. Relevant indirect issues were managed by the Chair throughout the review process.

The Panel was appointed by the MBIE in September 2014 and it convened on 5th October 2014. Panel members were then provided with a range of background materials from both MBIE and ESR. The information from ESR was based on an information request and further information was provided throughout the period of the review. The full list of information provided to the Panel through the review is detailed in Appendix 3.

In undertaking the review, the Panel sought to be:

- future focused: while taking account of the performance over the last 4 years, the majority of effort was spent on understanding the position of ESR for the future;
- independent: working closely with ESR and MBIE but remaining independent of both to ensure the Panel's report reflects a genuinely independent assessment;
- objective: the Review sought to be objective and as much as possible evidence-based. The Panel remained open minded throughout and relied on evidenced-based analysis in reaching its findings;
- interactive: the Panel consulted with members of the ESR Board and senior management team intermittently throughout the review and ESR had the opportunity to see and comment on matters of factual accuracy in the draft report before it was finalised;
- confidential: the Panel, respecting the candour and openness of all who participated in the review - including external stakeholders - undertook methods to preserve confidentiality and ensure no statements in this report are directly attributable to individuals or specific organisations;

- efficient: the Panel aimed to be efficient in their engagements with ESR and keep time commitments and other costs to a minimum; and
- respectful: the Panel was respectful at all times of the heartfelt views and perspectives of contributors to the review.

The Panel met with the Chief Executive Officer (CEO) and the Senior Management team together with some of the third-and fourth-tier science staff and younger scientists over 5 days at the Porirua, Auckland and Christchurch sites. The Panel met separately with the Board of ESR and held meetings or teleconferences with a number of external stakeholders, both domestic and international over 4 days. The full list of those the Panel met with, or spoke to, is provided as Appendix 4.

The Panel discussed its preliminary findings with the ESR Board at its meeting on 9th December 2014. A draft report was provided to both MBIE and ESR for comments on matters of accuracy on 12th December 2014, and the final report was provided to MBIE and ESR on 19th December 2014.

3. REVIEW FINDINGS

How well is ESR delivering against its SCP?

Context for the assessment

Within the context of its SCP a CRI's performance is measured against two key deliverables:

1. the impact of its research in relation to economic, social or environmental benefits for New Zealand; and
2. the financial performance of the CRI.

The table below provides the Panel's assessment of ESR's performance against its SCP. This assessment is in the context of a number of over-arching themes relating to ESR's operating environment, namely:

- ESR provides science services largely to government departments and in relation to its two main areas of activity (forensic and public health science) is the sole provider with the capability and/or accreditations required to do so;
- ESR's total funding from the government has risen 8% over the last four years, with most of the growth occurring from the acquisition of the National Radiation Laboratory which was rebranded as the National Centre for Radiation Services (NCRS) after the acquisition. Contract revenues from ESR's core government clients (Health, Police, Customs, MPI) have been under pressure as part of the government's fiscal constraint;
- ESR's areas of research do not generally align with the criteria for many of the Vote : Science and Innovation research grants;
- ESR is responsible for holding and maintaining a number of national collections and databases;
- much of its science services are public goods in nature;
- ESR holds research and science capability that is unique in the New Zealand context. Reduction or loss of this capability would likely result in increased reliance on, but potentially reduced availability of, overseas capability ;
- ESR is widely acknowledged as being different to the other CRIs in its role and function within the science system;
- ESR is largely focused on applied science services, with much of its work informing operational and policy decision making by other government departments and agencies;
- ESR is amongst the smaller CRI's; and
- ESR has the lowest level by percentage and amount of core funding of all of the CRIs, with 13% of its revenue comprised of core funding.

In recent years ESR's financial performance has been below expectations and deteriorating. In response to this the organisation has developed a renewed strategy, the Strategy Refresh, and is starting to implement the changes contained in that document. The Panel has reviewed the document and its observations are made both in relation to past performance and in the context of ESR's planned strategic direction.

ESR's SCP	PANEL PERSPECTIVE OF CURRENT PERFORMANCE
<p>Purpose: ESR's purpose is to deliver enhanced scientific and research services to the public health, food safety, security and justice systems and the environmental sector to improve the safety and contribute to the economic, environmental and social well-being of people and communities in New Zealand.</p>	<p>The Panel makes the following observations:</p> <ul style="list-style-type: none"> • the purpose is wide, which risks ESR spreading itself too thinly across too many areas of activity and losing its focus on its core business; • ESR provides enhanced science services in its core areas of public health, surveillance and security and justice where it has focus and critical mass that benefit the New Zealand public sector and New Zealand generally; • the lack of public funding through the science system for a number of areas included in its purpose has impacted on its ability to deliver on the research elements of its core purpose; • ESR's activities are steered strongly towards the scientific services element of its purpose. This is largely driven by requirements of its key stakeholders; and • other than in its core areas of forensic science and public health, ESR has limited critical mass to deliver enhanced scientific and research services.
<p>Outcomes: ESR will fulfil its purpose through the provision of research and scientific services and the transfer of technology and knowledge in partnership with key stakeholders, including government, industry, the community and Māori, to:</p> <ul style="list-style-type: none"> • safeguard the health of New Zealanders through improvements in the management of human biosecurity and threats to public health; • increase effectiveness of forensic science services applied to safety, security and justice investigations and processes; • enhance protection of New Zealand's food-based economy through the management of food safety risks associated with traded goods; and 	<p>The Panel makes the following observations of ESR's performance against its stated outcomes:</p> <ul style="list-style-type: none"> • ESR has capability within its organisation in monitoring and managing human biosecurity and threats to New Zealand's public health, although low levels of investment in research to support development of science services may impact negatively on its ability to do so in the future; • ESR provides high integrity, effective and independent forensic science services to a range of government organisations aligned with its SCP and has developed capability and technologies that are respected and sought after internationally; • ESR has some capacity to provide scientific services to manage food safety risks although, its limited investment in research has the potential to hinder significant research contributions in this area; • ESR has limited scale and capability in the areas of water and bio wastes and is attempting to contribute and compete in areas of research and science where there are a number of other organisations operating at greater scale; and

<ul style="list-style-type: none"> improve the safety of freshwater and groundwater resources for human use and the safer use of bio-wastes. 	<ul style="list-style-type: none"> ESR has developed a science strategy with input from both the external Strategic Science Advisory Panel (SSAP) and its internal Strategic Science Team (SST) to provide clarity on how ESR will fulfil its purpose of research and scientific services in its areas of operation and is yet to incorporate it into its Strategy Refresh.
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<p>Scope of operation:</p> <p>To achieve these outcomes, ESR is the lead CRI in the following areas:</p> <ul style="list-style-type: none"> forensic science services; harm prevention from drugs and alcohol; surveillance of human pathogens and zoonotic diseases; domestic and export food safety in partnership with the regulator and industry; impacts of the environment on human health, including groundwater, fresh and drinking water quality and safe bio waste use; and integrated social and biophysical research to support decision making in the environmental, public health and justice sectors. radiation Safety services and regulatory support <p>ESR will work with other research providers and end-users to contribute to the development of the following areas:</p> <ul style="list-style-type: none"> assessing and responding to chemical, biological, radiological and explosive events and environmental threats, including adverse human impacts on natural resources; biosecurity and freshwater management; and climate change adaptation and mitigation. 	<p>The Panel makes the following observations in relation to ESR's scope of operations:</p> <ul style="list-style-type: none"> in its two largest areas of operations, namely forensic science and public health science, ESR is in many cases the only CRI providing research and science services and therefore the lead by default; in other areas such as water quality and food safety ESR exists alongside other CRIs, research organisations and universities (who arguably have greater scale) and attempts to collaborate where appropriate. Noticeably, ESR has had a relatively low involvement in the National Science Challenge collaborations to date despite appearing to have relevance to a number of the challenges from its SCP; ESR has established strong and enduring relationships with its main client organisations where it is often providing extensive science services developed from original applied research. It is a respected and trusted provider of research and science services in these areas; the nature of ESR's science capability and operations means that in certain areas there is limited interface with other domestic research providers (e.g. in the area of forensic science) and hence the collaborations are either limited in nature or largely with international research and science organisations; and the Panel has not seen activity in relation to climate change adaptation and mitigation.
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<p>Operating Principles: ESR will:</p> <ul style="list-style-type: none"> • operate in accordance with a SCI and Business Plan that describes how ESR will deliver against this SCP and describes what the shareholder will receive for their investment; • meet its obligations as a Crown Company and remain financially viable, delivering an appropriate rate of return on equity; • develop strong, long-term partnerships with key stakeholders, including government, industry and Māori, and work in partnership with them to set priorities for research and service delivery that are well linked to the needs and potential of its end-users; • maintain a balance of research and scientific services that both provides for the near-term requirements of its sectors and demonstrates vision for their long-term benefit; • transfer technology and knowledge from domestic and international sources to key New Zealand stakeholders, including industry, government and Māori; • develop collaborative relationships with other CRIs, universities and other research institutions (within New Zealand and internationally) to form the best teams to delivery its core purpose; • provide advice on matters of its expertise to the Crown; • represent New Zealand's interests on behalf of the Crown through contribution to science diplomacy, 	<p>The Panel observes the following:</p> <ul style="list-style-type: none"> • ESR has refreshed its strategic plan in response to the performance challenges the organisation has faced in recent years; • the recently appointed CEO has identified a number of the key operational challenges that face ESR and has commenced a recruitment programme to strengthen the senior management team. Furthermore, he has been active in his engagement with key clients and has taken steps to improve communications with staff to build greater engagement; • ESR has not been achieving the required rate of return on equity (RoE) in recent years and its financial performance has been deteriorating significantly. Its Strategy Refresh document considers these issues however the Panel has concerns that ESR's forecast financial position is based on ambitious commercial revenue targets and despite this, the projected improvement in RoE does not achieve sustainable levels by the end of the SCI period; • ESR has not historically achieved adequate margins on its core research and science activities; • ESR in general, builds and maintains effective and enduring relationships with its key stakeholders at the science services delivery level. However, the early stage of development of its customer centricity approach means it is yet to embrace and embed the shift to strategic partnering with its key clients to the level required to transition its relationships. The organisation has identified this and is currently working to improve its focus on customer service as part of its Strategy Refresh; • ESR has placed limited emphasis on partnering with Māori. While the organisation has undertaken some projects with Māori communities, in general, the organisation does not have a strong focus on culture of relationships and partnering with Māori despite having developed its Vision Mātauranga strategy. The Panel considers this is a gap in ESR's operations and inconsistent with its SCP; • ESR appears to struggle to attract adequate funding to support research activities. While the organisation is supportive of research activity to the extent it can, the Panel observes there is the potential for the quality and relevance of ESR's science services to deteriorate if it does not adequately invest in research to support its core science activities; • ESR has historically had limited experience of commercialising innovation and is seeking to address this going forward. It has however been relatively successful at technology transfer to its key stakeholders in its main areas of operation;
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<p>international scientific issues and/or bodies as required;</p> <ul style="list-style-type: none"> • seek advice from scientific and user advisory Panels to help ensure the quality and relevance of its research and scientific services; • establish policies, practices and a culture that optimises talent recruitment and retention; • enable the innovation potential of Māori knowledge, resources and people; • maintain its databases, collections and infrastructure and manage the scientific and research data it generates in a sustainable manner, providing appropriate access and maximising the reusability of data sets; and • seek shareholder consent for significant activity beyond its scope of operations. 	<ul style="list-style-type: none"> • ESR operates as an applied science organisation, accordingly, ESR's orientation tends to be towards its client stakeholders. This supports the development of strong client relationships, however, the applied nature of the science and relatively low level of research activity tends to isolate ESR from the wider research community; • ESR has established a Strategic Science Advisory Panel (SSAP) comprised of international researchers. The SSAP reports to the Board of ESR and provides independent advice on scientific matters. The Panel observes that this function could be better utilised by the organisation to support and provide independent input into ESR's science strategy; and • ESR does not currently have a talent management strategy. The organisation's Strategy Refresh anticipates addressing this gap.
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4. MATTERS IMPACTING ON ESR'S ABILITY TO DELIVER AGAINST ITS SCP

4.1. Governance performance

Governance framework

The Panel members' experience is that effective Boards are able to provide good governance when they:

- ensure that the organisation has clarity and unity of purpose;
- are forward looking and focussed on value creation through, regular analysis of what drives organisation value, debating alternative strategies, and where management is helped to look beyond the immediate day-to-day issues;
- meet their obligation to protect and maintain value by holding management to account through monitoring of meaningful key performance indicators and compliance obligations; and
- work with management to ensure the organisational culture is aligned with the strategic objectives and there is effective staff and stakeholder engagement.

Effective governance also requires the Board to:

- be able to operate as a highly functional work group that has a diversified range of capabilities and sensibilities and is able to operate within a climate of trust and candour; and
- deliberate about its own processes and performance (within the environment and context in which it operate) through regular self-review.

Board self-assessment

The starting point for the Panel's assessment of governance performance was to consider the most recent self-review undertaken by the Board in April 2014 (that utilised the Institute of Directors Better Boards online assessment tool). The Board concluded that in terms of the Institute of Directors' "The Four Pillars of Governance Best Practice" that it:

- added value by leading the development of ESR's purpose, goals and strategies;
- had an effective governance culture;
- held management to account; and
- maintained effective compliance.

It is clear from the Panel's review of various Board papers and minutes that over the past two years the Board, led by the Chair, has proactively taken a number of steps including initiating the Strategy Refresh, challenging and testing a number of key business cases submitted by management, undertaken ongoing monitoring (via various Board subcommittees) and maintained a sense of collegiality and openness among Board members.

However, given the range of internal and external challenges facing ESR discussed elsewhere in this report the Panel was puzzled by the relatively positive results of the Board's self-assessment. These challenges include: major changes in the senior management team; ongoing low levels of staff engagement; repeated concerns expressed by Board members about the quality of reporting; dissatisfaction being expressed about ESR's performance by the senior management of key customers; and the organisation's poor financial performance.

Clarity and unity of purpose

The Board and senior management team have proactively sought to provide clear messages to staff and stakeholders about the Strategy Refresh through the recent rebranding and use of the new tagline for ESR "The science behind the truth".

The Panel makes the following observations:

- the two main science units in ESR each have clear sense of purpose however, these units operate essentially as semi-autonomous business units with some but limited synergistic benefit;
- s9(2)(b)(ii)
- the rationale behind the Strategy Refresh does not appear to be well understood by staff; and
- the advice received from SSAP in April 2014 relating to the Strategy Refresh has not yet been incorporated.

It will be critical to the successful implementation of the Strategy Refresh that the Board and senior management continue to take action to ensure that the organisation has clarity and unity of purpose.

s9(2)(b)(ii)

Future focus

The Panel notes the steps taken by the Board to lead and engage with senior management to develop the Strategy Refresh over the past two years. This has been a major undertaking for both the Board and senior management and demonstrates that the Board has actively considered its future.

While the Panel notes the Board's reasoning to undertake a Strategy Refresh rather than a more comprehensive strategy direction development process, the Panel believes it is important that alternative strategies are continued to be considered and/or tested with stakeholders. This forward-looking imperative comes in part from the way long-term economic, technological, and demographic trends are radically reshaping the demands of applied science. As the new senior

management team grapples with the immediate challenges of delivering services to customers, it's more vital than ever for the Board to provide strategic leadership that remains abreast of what's on (or coming over) the horizon and to ensure the Board has a structured process for regularly studying the external landscape.

Protecting and maintaining value

A critical role for any Board is its ability to hold management to account to ensure informed, effective and independent oversight of the implementation of the agreed organisational strategy. The Panel's review of various Board papers and minutes show active oversight by directors through:

- regular management reporting, including a monthly report from the CEO and a monthly financial and operational update;
- evidence of good processes, including standing agenda items, matters arising to enable the Board to keep track of action and a forward Board calendar including future non-standard agenda items;
- evidence that the Board's sub committees (Audit & Risk, Remuneration) meet regularly; and
- Health and Safety has been a standing Board Agenda item since December 2013.

Both directors and senior management stated that they believed that the quality of reporting and discussion at Board meetings has steadily improved over recent months.

Over the past two years, the Board has considered a number of important business cases submitted by senior management and maintained an active oversight of the implementation of key change programmes such as STARLIMS. The outcome of this activity by the Board has however, been inconsistent. For instance:

- in late 2012, it became evident that there were difficulties with the implementation of the STARLIMS programme. The Board took decisive action to commission an independent review and the subsequent appointment of an experienced programme director to ensure completion; while
- in 2013, an independent review of an ESR initiated acquisition proposal was critical of the quality of the benefits analysis and the significant transition risks given the adverse relationship issues between ESR and the owner of the acquisition target.

4.2. Strategic direction

Context for Panel assessment

ESR has recently completed a Strategy Refresh (July 2014). As previously noted, the refresh was initiated by the Board in response to its concerns relating to ESR's deteriorating financial position. The strategy document was prepared with the assistance of an external advisor, with input from ESR personnel at all levels and has been adopted by the Board. Progress on implementation is also being closely monitored by the Board. In addition, the major themes form the basis of the Statement of Corporate Intent (SCI) 2014-19, which has been accepted by the Shareholder.

ESR's strategic direction

The Strategy Refresh document demonstrates that ESR:

- understands the challenges and performance issues it has experienced in recent times;
- understands that the organisation needs to make some fairly significant changes to address in particular, the financial viability challenges it is experiencing;
- has developed a strategy that builds upon the organisation's capability and delivery strength and focuses on growth across all areas of science service delivery;
- has a programme of initiatives that under-pin the delivery of the Strategy Refresh; and
- aligns with the applied nature of the science approach within ESR.

Early successes in the FY14/15 indicate that:

- ESR has successfully negotiated a six year contract renewal with one of its key clients that aligns with a more fully-costed model over time and allows for an acceptable margin by the end of the contract; and
- commercialisation of STRmix is in-line with budget targets for the period.

Panel observations of the effectiveness and strategic fit of the Strategy Refresh

The Panel makes the following observations on the content and direction of the Strategy Refresh document and associated documentation and discussions.

Clarity of purpose and alignment

The Panel understands the Strategy Refresh document is an evolution of the strategy established under the previous senior management team rather than a fundamental review of the purpose and strategic direction of ESR. While the Panel understands the rationale for this approach, it is not convinced that the Strategy Refresh provides a sufficiently clear, considered and compelling vision for ESR and its role in the science and innovation system (as discussed in section 4.1 above).

The Panel remains unconvinced that the scope of ESR's activities demonstrates sufficient alignment and leverage to be considered cohesive and deliver significant synergy benefits to the organisation. s9(2)(b)(ii)

Medium-term financial viability

Analysis of the financial forecasts indicate that the projected returns on equity (ROE) for the organisation are ambitious and do not appear to be sustainable towards the end of the period

covered by the Strategy Refresh (discussed further in section 4.3 of this report). The Board believes that there will be longer term benefits beyond 2019 but these have not been modelled.

Strategy Refresh pillars

Some particular challenges the Panel observes regarding the Strategy Refresh document pillars include:

Pillar 1 - strengthen the core

A central strategy to this part of the Strategy Refresh is to grow commercial revenues across its areas of activity. The Panel observes that only 30% of the forecast growth in revenues is in ESR's two largest areas of activity, namely Forensic Science and Public Health with the remaining 70% coming from its Food, Water and NCRS areas. s9(2)(b)(ii)

The Panel also observes the Board has considered Business Cases on RPV, WDT and STRmix each of which forecast growth in revenues. The Panel acknowledges ESR has taken steps to restructure its Food, Water and NCRS teams in 2014 s9(2)(b)(ii)

Financial viability of major contracts

ESR has experienced an erosion of its cost and margin recovery on a large proportion of its core business over time, resulting in under-recovery and loss of profitability on its major contracts.

s9(2)(b)(ii)

The Panel considers that at the very least, ESR should negotiate contracts that achieve cost recovery, including the cost of capital that acknowledges the risk profile of the services contracted.

Furthermore, the nature of the contracts makes limited acknowledgement of the need for further research to support development of science service delivery in the medium term. This represents a risk to the organisation and New Zealand through underinvestment in applied research and science in ESR's core areas of operation leading to a gradual erosion of capability.

Expanding down the science complexity scale

ESR sees its traditional areas of science services being eroded through increased technology up-take and development by other science service providers. Part of ESR's proposed response is to

grow its revenues and services by moving down the science complexity scale into the more commoditised end of the science spectrum.

s9(2)(b)(ii)

Funding for research

ESR has historically had both a relatively low level of core funding and little ability to seek contestable research funding from Vote Science and Innovation. This is largely due to the non-alignment of its areas of core science with research grant criteria (particularly in the areas of forensic science and parts of health research).

ESR has however been successful in attracting research funding from international and other New Zealand sources to support its research activities (e.g. from HRC, Centers for Disease Control and Prevention, and the National Institute of Justice(USA)). However, many of the research projects funded do not attract overhead (or full-overhead) funding which results in the organisation having to apply core funding to support overhead costs. The Panel acknowledges the benefits to ESR of such international work through achieving significant reputational advantage and through increased job satisfaction for key research personnel.

The strategy does not appear to address finding better ways to achieve the funding of research in the areas of forensic science and public health which the Panel considers represents a substantial gap in the strategy.

The role of science

The Panel observes that the Strategy Refresh largely seeks to address the organisation's management and financial challenges but is relatively silent on how the organisation intends to remain relevant from a science strategy perspective. This feedback has also been provided to the organisation by the organisation's external SSAP. ESR's internal Strategic Science Team is responding to the SSAP's report and developing a science strategy that documents how ESR will foster and retain research and science capability and outcomes that supports achievement of its SCP.

The SSAP has met 5 times over the last 3 years and in its latest report July 14 noted that "the quality of science is good" but, it held concerns about its sustainability and the lack of reference to science in the Strategy Refresh. With science at the core of ESR, this was a surprising finding. The SSAP made a series of very clear recommendations to improve stakeholder engagement, external relationships, science capabilities, areas of focus and evaluating results. The Panel considers it desirable that management consider and update the strategic priorities and work plan in accordance with these recommendations.

Pillar 2 - drive growth

Property assumptions

The Strategy Refresh indicates ESR appears to be considering reducing the number of different sites it operates from in the medium term and in doing so releasing capital value and avoiding associated capital expenditure. s9(2)(b)(ii)

Revenues from commercialisation

As noted above, the Strategy Refresh places considerable reliance on ESR's ability to generate revenues from commercialisation activities. The Panel acknowledges the promising start of commercialisation of ESR's STRmix technology and acknowledges that to date STRmix is meeting its revenue targets. It also endorses the initiative to bring in experienced commercialisation partners, however, the Panel holds concerns that projected returns and timelines may prove to be too optimistic (discussed further in section 4.5).

Pillar 3 - achieve step-change

Health and human genomics

The Strategy Refresh states ESR anticipates playing a lead role in the development of capability in health intelligence and surveillance and human genomics. This aspect of the strategy was further explored through the interview process. The Panel does not have a view on how well placed ESR is to achieve this but is concerned at the level of investment and uncertainty regarding return profiles from pursuing this direction.

The Strategy Refresh document acknowledges that New Zealand is not in a position to be a global lead in this area but relies on New Zealand adopting a "fast follower" approach. In discussions with key stakeholders, there appears to be no common view to date on what approach New Zealand should take and hence to what extent funding or investment is likely to be forthcoming. For ESR to make significant progress in this area will require the organisation to lead the development of strategic partnerships with other science and research providers. The Panel considers this represents a significant risk to this aspect of the Strategy Refresh and suggests that ESR needs to better understand the wider New Zealand direction before any major investment is made.

4.3. Financial performance and viability

Background financial performance

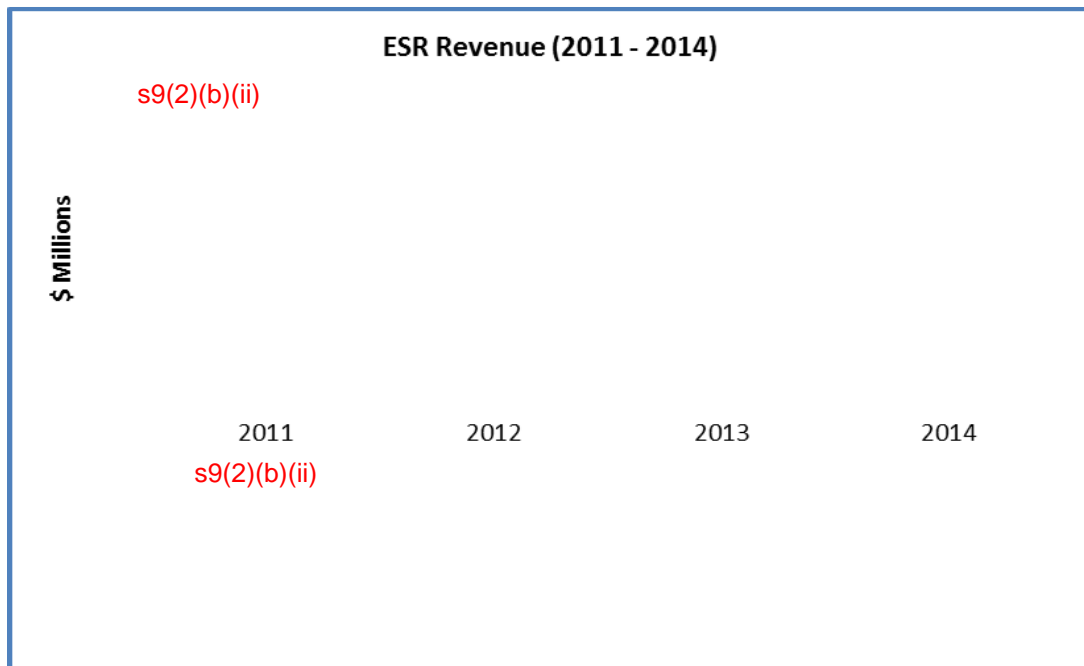
From 2010 to 2014 ESR's revenue grew by 16% to \$61.8M (largely by acquisition), however EBIT fell from \$4.25M to \$(0.74)M in the same period.

ESR Financial Performance	2011	2012	2013	2014
Revenue	\$ 54.1	\$ 58.5	\$ 62.1	\$ 61.8
EBIT	\$ 3.6	\$ 2.6	\$ 1.7	-\$ 0.74
Return on Equity	9.5%	6.5%	3.3%	-1.4%
EBITDAF/Revenue	15.1%	13.1%	11.8%	7.9%
Revenue Growth	-2.3%	8.3%	6.1%	-0.6%

Operating margins fell from 17% to 8% with labour recovery (margin per FTE) down from \$26k to \$13k.

[Notes : revenue is corrected for FRST subcontracting deducted prior to F14; NCRS acquisition added \$5.5.M pa revenue from Dec 2011]

ESR derives over 80% of its revenue from the Crown (s9(2)(b)(ii)). Over the past 4 years the level of commercial and other revenue has grown from 14% to 20% of total but, the balance is still heavily weighted to the Crown customers.



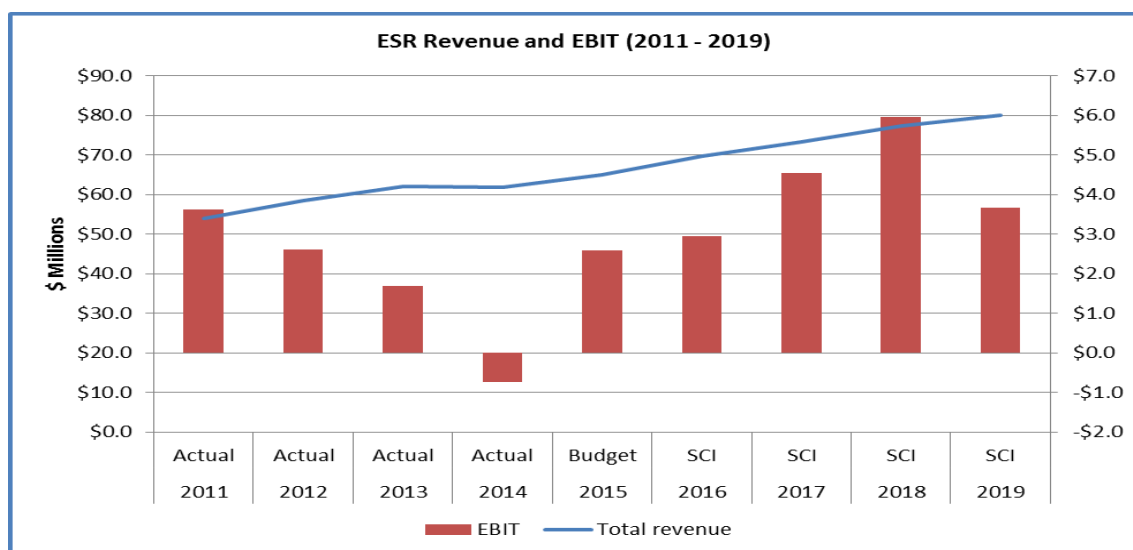
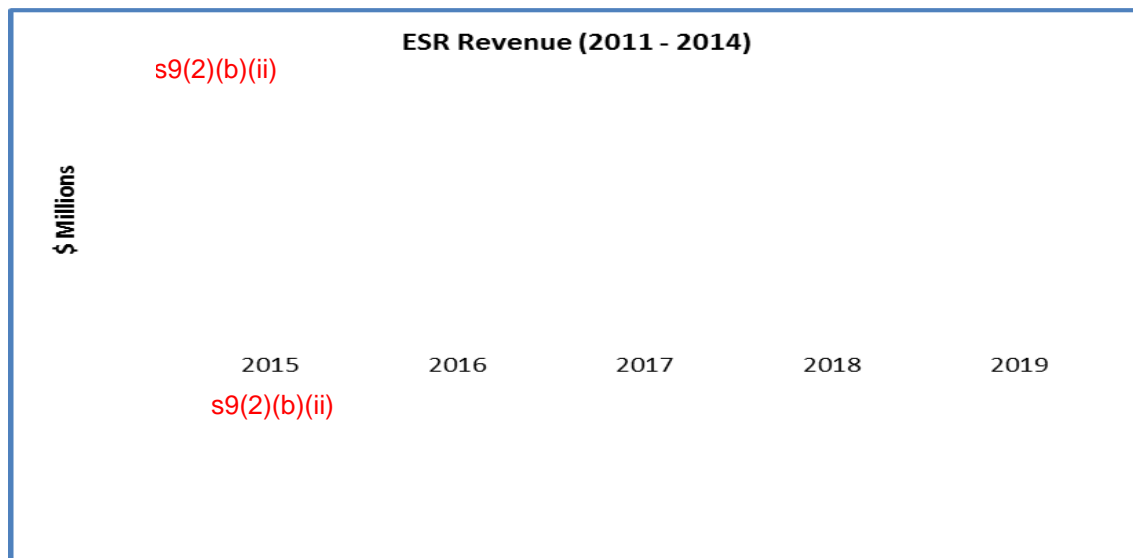
Financial planning

Successive forecasts show a reasonably steady revenue forecast but with regular reductions in profit projections for forward years. This history of downgrading profit estimates makes capital investment difficult.

NPAT	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
Actual	3,223	2,375	1,261	(553)					
SCI 13/14					1,910	2,142	3,697	5,056	3,458
SCI 12/13				1,061	1,886	2,580	3,927	4,557	
SCI 11/12			1,091	1,684	2,826	3,185	3,944		
SCI 10/11		2,919	3,162	3,424	3,709	4,213			
SCI 09/10	2,762	3,558	3,892						

Budget and SCI

The current SCI projects steady growth in revenue and like all the four previous SCIs, forecasts a substantial turnaround in profit. The majority of the improvement is forecast to come from growth in commercial revenues and improved margins.



Current initiatives to improve margins include:

- s9(2)(b)(ii)
- product commercialisation projects for STRmix, and Rapid Point Viewer (RPV) are underway with experienced commercialisation partners;
- a new initiative for workplace drug testing (WDT) has been approved, staff recruited and capex committed;
- management is investigating options for property rationalisation;

- planning is underway for other key contract renegotiations in the new year;
- cost savings of \$1M have been identified and mostly actioned; and
- international funding has been obtained in some discrete areas.

The Panel observes ESR is forecasting key financial ratios (e.g. RoE) to improve over the first four years of the current SCI period, but to fall off again towards the end of the SCI period (due to the sale and leaseback of the Porirua site) and remain below acceptable returns (either shareholder or commercial levels). Based on this SCI, there remains a question about ESR's ability to generate sustainable returns outside its core Crown customer base.

ESR Financial Performance	2011	2012	2013	2014	2015	2016	2017	2018	2019
Revenue	\$ 54.1	\$ 58.5	\$ 62.1	\$ 61.8	\$ 65.1	\$ 69.8	\$ 73.4	\$ 77.3	\$ 80.1
EBIT	\$ 3.6	\$ 2.6	\$ 1.7	-\$ 0.74	\$ 2.6	\$ 3.0	\$ 4.5	\$ 6.0	\$ 3.7
Return on Equity	9.5%	6.5%	3.3%	-1.4%	4.8%	5.1%	8.2%	10.2%	6.4%
EBITDAF/Revenue	15.1%	13.1%	11.8%	7.9%	13.1%	13.2%	14.7%	16.4%	12.9%
Revenue Growth	-2.3%	8.3%	6.1%	-0.6%	5.3%	7.3%	5.2%	5.2%	3.7%

Based on reviewing the SCI and associated financial information, the Panel observes ESR is still in an exposed position at the end of the SCI period with a concentrated customer set, a heavy reliance on Crown revenue and with returns which have improved but are still below the cost of capital. Furthermore, the commercial growth model creates internal stress, but is not demonstrated to make a material difference to ESR's performance.

s9(2)(b)(ii)

The Panel further questions whether in the event that the Strategy Refresh does not deliver the performance improvements sought, what is the organisation's "plan B" to achieve improved scale, overhead recovery and acceptable returns?

Year-to-date performance

As at November 2014 the YTD revenue and profits were slightly behind budget but ahead of prior year. Revenue is \$1M behind budget with the gap being mainly in commercial revenue.

Management currently forecast the full year to meet budget overall with some differences between divisions. The full year forecast shows \$1.9M NPAT from \$66M sales which if achieved will be a significant improvement on last years \$(0.6)M NPAT from \$62M sales.

Balance sheet

There was a comprehensive Balance Sheet Review (Dec 2012, Martin Jenkins) which made in-depth comments on ESR's strategy, risk, financial viability and gearing. Little has changed since that review, and the findings from the Balance Sheet Review are generally consistent with the Panel's views. The main observations from that Review are:

- the organisation has a heavy reliance on a small customer base with downward pressure on margins;
- ESR has ageing infrastructure, particularly property, and IT systems requiring substantial capital reinvestment (\$41M 2015-2019);
- “business as usual” is unlikely to be sustainable, hence the emphasis on developing new business streams and step changes in scale; and
- the 5 year forecast was too heavily reliant on merger/acquisition activity so rated as high risk. This has been moderated in the latest Strategy Refresh.

Property

ESR has a number of major property decisions pending, the strategy contemplates relocating to release \$6M and avoid a further \$27M capex on building and earthquake remedials over the next 5 years, although this is negative to earnings. s9(2)(b)(ii)

Organisational overheads

The level of overheads incurred by the organisation was a recurring theme during the Review, with several staff and stakeholders observing that ESR appears to carry a high level of organisational overhead that contributes little clear benefit to the science services delivered by the organisation. A number of science staff and stakeholders commented on the negative impact of overheads on the volume of research and science services able to be undertaken by the organisation. Some of this is perception due to overhead classification, with half the overheads relating to occupancy, but the costs are real and they impact on the competitiveness of research bids and commercial activities. s9(2)(b)(ii)

Reporting

The Panel notes the quality of reporting has improved under the new CFO with management reports now providing greater transparency and relevant information. There are now clear management reports including KPIs and progress reports against the 20 key initiatives identified in the Strategy Refresh. Board reports are clear with segmentation and contribution analysis. As noted above, overheads as reported seem high at \$20M vs \$65M sales, and ideally would be split (e.g. Occupancy, IT, Management) and allocated to the business units every month to encourage a greater level of understanding and clearer pricing signals.

Pricing

The company has \$42M of long-term assets and no debt. ESR has not been covering its cost of capital for many years. As a result, it has on this measure been subtracting from rather than adding value. The Panel estimates that in Economic Value Added (EVA) terms, ESR made a return of around negative \$4M in 2013/14. ESR's true economic position may be more transparent to its customers if it reported on such an EVA (or some similar capital pricing) basis.

ESR has a narrow set of major customers with whom it has established relationships. These historical relationships and the high reliance on the resultant revenues appear to have led to some reluctance to negotiate on commercial terms. ESR's core contracts (New Zealand and international) are considered to be making inadequate margins with ESR's overall projected financial recovery based on upsides from commercialisation of intellectual property and/or technologies created in pursuit of those contracts. This is both risky and unrealistic, due to the delays and high failure rate typically associated with "start-up" activities. It would be preferable to recognise the true cost of doing business and reflect this fully in negotiations with core customers so that the core is profitable. ESR has recognised the issue s9(2)(b)(ii)

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IT project management

The STARLIMS Sunrise (Environmental Health) implementation project ran severely over time, and over budget (by more than 100%). It is not clear to the Panel whether and to what extent the installed functionality has been compromised, and whether the next stage could be accelerated to deliver the intended gains. Management indicated they have learned from the Sunrise experience and that the forensic science STARLIMS implementation will be better managed. The Panel considers it positive that the organisation is intending to use external project management for the forensic science implementation and suggests the organisation may wish to consider what form project governance may take to ensure the project is delivered on time and on budget.

Risk management

ESR has established processes in place for risk management including health and safety. The Panel has seen evidence of meetings, risk assessments and regular review, but these have not been tested in any depth by this review.

From the Panel's interviews, disaster recovery appears to be a potential gap. The Wellington facilities have a relatively low seismic rating and are at risk in a major seismic event, but many of its functions are not duplicated elsewhere. Also, the Wellington facilities house reference collections of national significance. While decisions about the facilities are to be taken in the context of the broader organisational direction and performance, the Panel considers a more robust plan for disaster resilience and recovery is required.

4.4. Organisational health

A key component of the Strategy Refresh is to *Strengthen the Core* by investing “in the right mix and calibre of people, infrastructure, systems and processes while optimising productivity, improving customer orientation and performance”. To support the implementation of the Strategy Refresh, five human resource initiatives are being undertaken in the next twelve months. They are:

- drive performance by operationalising the strategic goals. Senior management now report monthly to the Board on progress being made with the implementation of the Strategy Refresh;
- make key appointments. The appointments of the General Manager People and Communication and the Commercial Manager have been completed. Recruitment of the General Manager Health, and General Manager Environmental Science has commenced;
- commence implementation of a staff engagement programme. Following the appointment of the General Manager People and Communication this programme will commence shortly;
- commence implementation of a customer centricity programme for staff. An external advisor is working with managers on developing this programme; and
- commence a programme to strengthen leadership capabilities. Following the appointment of the General Manager People and Communication this programme will commence shortly.

Leadership and management

The Panel observes ESR has experienced considerable turnover amongst its senior management team in the last couple of years. With a new CEO appointed in July, the organisation is now under the leadership of its third CEO in five years and of the current 9 senior managers, only 2 have been in the organisation for more than 18 months.

The key leadership and management challenges ESR faces are to:

- recruit and get a new senior management team up to speed while maintaining support for and momentum in implementing the Strategy Refresh;
- mobilise the organisation to meet the performance expectations of its Board and shareholder;
- reduce its reliance on a few government contracts whose revenues are not increasing in line with inflation (as discussed in section 4.3) and/or address the under-recovery associated with those contracts through shifting the relationships to one of strategic partner;
- become more customer-centric and understand more deeply its customers’ needs (discussed further in section 4.6);
- unite the organisation; and
- change the balance between the customer-facing parts of the organisation and corporate overheads. The Panel observes that over time the CEO may wish to rebalance the senior

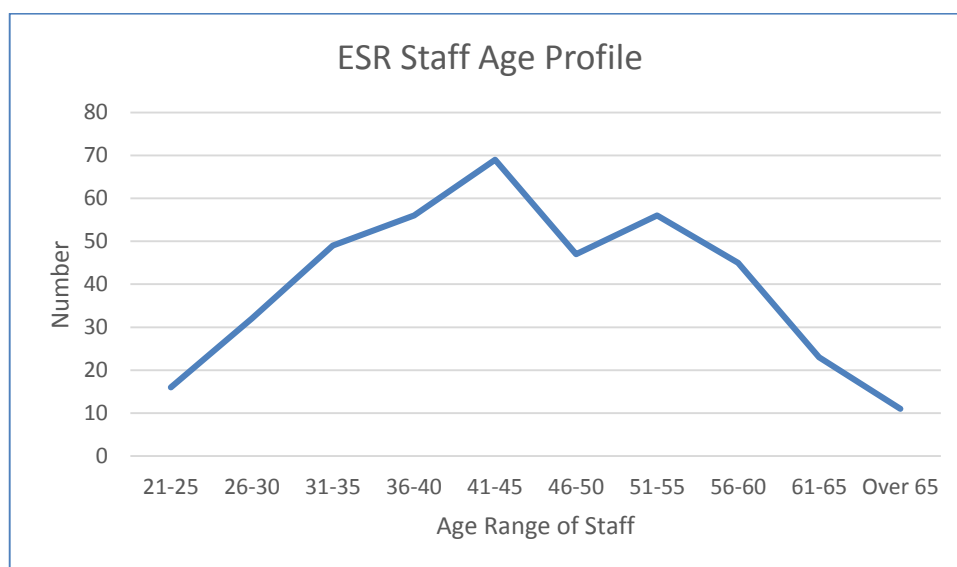
management team which currently has the same number of managers from corporate services as there are managers responsible for delivering services to clients.

ESR science capability

Staff profile

ESR has a relatively stable and mature scientific workforce with staff turnover in science teams ranging from 4%- 9% pa in recent years. This contrasts with Corporate and Financial Services staff turnover rates in excess of 20% and almost a complete turnover of the senior management team in the last eighteen months.

Approximately 65% of ESR's staff is female and the average age of ESR's staff is approximately 45 years old.



During the Panel's discussion with younger scientists it was evident that one of the great strengths of ESR is that it has such a group of very capable, intelligent and motivated scientists in its capability pipeline.

Organisational health

ESR is essentially a people intensive business and its long-term success is dependent on its staff:

- having a strong sense of involvement and alignment with ESR's vision and purpose;
- having clear accountabilities where roles are understood; where there is effective performance management; and personal ownership of outcomes; and
- being motivated through meaningful values; effective leadership; career opportunities; and rewards and recognition.

A view consistently expressed to the Panel during interviews was the strong commitment, passion and pride which staff have in their work. The majority of staff would appear to identify themselves first and foremost as scientists operating within distinct units or disciplines.

However, ESR does not appear to have a sufficiently clear and unifying sense of collective purpose to garner strong engagement with the organisation as a whole. As a consequence, there does not appear to be any real sense of organisational culture as it relates to being a member or employee of ESR other than within each business unit.

The October 2013 staff engagement survey revealed an organisation that is quite disjointed. Furthermore, science staff who typically see themselves as career staff seemed remote from the SMT, who are seen as more transient and therefore less committed to the organisation. Many of the science staff interviewed expressed the view that they are disappointed by the higher rate of staff turnover within the senior management and wider corporate team and commented that it makes them question the loyalty and commitment of that team to the organisation. The Panel was concerned by the strong sense of “us and them” that appears to be evident between SMT and wider corporate team and the science staff. A number of science staff commented positively on some of the communication initiatives being introduced by the new CEO, however, the Panel considers that building a stronger sense of involvement and alignment amongst all staff is likely to be a major and time-consuming challenge for the senior management team over the next twelve months.

A recent example of the disengagement observed by the Panel was the apparent disconnect between management and the science staff over the organisation’s new branding and tagline. The Panel received several comments from the science staff regarding discomfort with the proposed brand positioning and tagline.

The new CEO understands that effective change leadership requires recognition that change has a strong human dimension and that it is critical to remain open to the emotional expression of the people involved. The use of a weekly newsletter by the CEO to talk directly to staff is a useful tool. The newly appointed General Manager People and Communication will play a critical role in assisting both senior management and the Board to respond to the human dimension of change.

The CEO understands he will need to commit a significant amount of time and effort to mobilise the senior leadership across the organisation into a high performance team over the next twelve months. In addition to the standard “forming, storming, norming” phases the senior leadership will urgently need to work with staff to:

- enable them to align the purpose of “good science” with ESR’s wider organisational objectives;
- gain the trust of staff that as members of the senior management team they have a strong sense of “stewardship of ESR” and that the implementation of the Strategy Refresh will add sustainable value to ESR; and
- provide sufficient information to the Board to give it confidence that the change leadership is effective.

In addition, the members of the senior management team will also need to concentrate on mobilising their own teams to ensure there are clear plans and accountabilities to implement the Strategy Refresh.

4.5. Vision Mātauranga

ESR's SCI states that the organisation intends to:

- build on its reputation for collaboration with Māori by further incorporating Vision Mātauranga concepts into its research and operational activities in environmental health and forensic science;
- develop a Māori Innovation Strategy;
- engage with Māori to understand how ESR's expertise and surveillance activity can help to identify and address factors that cause health and well-being inequalities between Māori and non- Māori;
- develop a framework for engagement with Māori; and
- build internal capacity to engage with iwi and Māori business.

The Panel notes that ESR commissioned an independent report in 2013 to provide advice to the organisation on how ESR can respond and deliver tools, products and services to Iwi and Māori businesses.

Recommendations from the report include the establishment of a new role of Māori Business Development Manager. This role has not been recruited and the role does not appear in the current organisational chart. Discussions indicate ESR is not currently intending to create this role but instead has allocated responsibility for Māori business development to the Commercial Manager role

The Panel found it hard to detect commitment from the senior management team to progress the Vision Mātauranga at this time. There is no evidence that the organisation has progressed the implementation of the recommendations.

Discussions with the Board indicated in the past ESR has had both Māori Development Managers and Māori researchers but does not currently have any roles dedicated to the development of engagement and involvement of Māori, nor does it currently have capability in the area of working with Iwi organisations and business development with Māori. The Board reports that the previous management struggled to recruit appropriately skilled and experienced personnel in this area in the past, despite being asked to do so by the Board.

ESR reports it has developed and implemented protocols for dealing with culturally sensitive issues within its research and science services activities. The Panel has not reviewed the appropriateness of these protocols. ESR reports these are embedded across all areas of the organisation and are based on a co-management philosophy with Iwi.

While ESR has reportedly had some positive projects with Māori organisations and businesses in the past, this has been based on commitment by individual science teams or scientists. The Panel considers ESR's broader reputation as a partner for Māori is at risk if it fails to make progress on the matters outlined above.

Given ESR's areas of core activity and the issues faced by Māori in relation to the justice and health systems, the Panel considers ESR has significant opportunities to work more proactively with and for Māori in the future and that it needs to commit to developing its capability to achieve this.

4.6. Commercialisation, collaboration and economies of scale

Commercialisation

The expected ROE for CRIs is placing ESR under pressure to achieve greater returns on its activities. This coupled with the high reliance on government contracts, where departments and agencies are operating in an environment of doing “more for less” is driving ESR to adopt strategies to diversify and reduce its dependency on crown funding.

Whilst staff across the organisation understand the need to improve returns and to enhance the organisation’s financial viability, they are less confident about how this can be achieved within existing structures and science frameworks. There is a significant tension between the desire to do “good science” and the need to provide what the customer is prepared to pay for. Furthermore, ESR does not have a strong track record in responding and adapting to market signals in a timely and efficient manner. s9(2)(b)(ii)

From the Panel’s discussions with staff, ESR is a potent source of innovative ideas in its areas of science but has little experience in commercialisation. An organisation like ESR is highly unlikely to have the skills or the balance sheet to attempt end-to-end commercialisation on its own, so needs to work with trusted partners if it is to be successful in this area. The appointment of a commercial manager is seen by many in the organisation as an essential step forward. The partnership with established commercialisation organisations (whilst a relatively new collaboration) appears to have been positive, bringing strong early-stage commercialisation expertise to the table and in doing so increasing the chances of success. ESR has generated some high potential ideas already and has the potential for more activity albeit the lead times may be greater than anticipated based on the currently visible pipeline.

If it is to be successful, the senior management team and science leaders need to consider how best to manage multiple commercialisation opportunities without distracting staff from the core business. Running early stage commercial projects (e.g. STRmix) within a service delivery organisation risks blurring accountabilities, and the Panel considers it would be more common to run the start-up under dedicated management, drawing on specialist expertise when needed.

One task for management is to establish protocols for protecting, valuing and licensing technology and an understanding with the shareholder regarding how royalties will be distributed. One suggestion raised with the Panel is that royalties go back into a “science fund”, at least in the early years to support investment in research within the organisation.

All the documented research indicates that commercialisation has long lead times, high upfront investment, and low rates of success. In the Panel’s view, ESR seems to be placing excessive reliance on profit forecasts for its two commercialisation opportunities given the international evidence around commercialisation returns.

Apart from a small number of science collaborations, the company seems to have ruled out international revenue growth. The Panel questions whether there could be more opportunities available from commercialising and licensing applied science internationally, perhaps in conjunction with already established partners or sister companies.

Collaboration

The CRI Taskforce 2010 identified that CRIs needed to increase their rate of collaboration between CRIs and with other science bodies. The model of competition for scarce funding discourages co-operation and encourages isolated silos, requiring management to actively engage and lead collaborative efforts. This is referenced in the Strategy Refresh, but seems to be minimal in focus and warrants a structured program and SMT oversight. The potential for increased opportunities through collaboration seems very high.

Scale

s9(2)(b)(ii)

4.7. Client and wider external relationships

By comparison with other CRIs, ESR's client base is relatively small with a significant concentration on a small number of large, predominantly government clients.

Interviews with key client stakeholders indicate that in general ESR's science teams maintain highly effective and customer-focused relationships at the "grass-roots" level. Clients reported high levels of satisfaction with the quality of services delivered by ESR science and service personnel and the manner in which they were delivered. Timeliness and responsiveness appear to be valued within ESR and clients expressed high levels of satisfaction with their engagement with the respective ESR teams in this regard. Universally, stakeholders expressed confidence in both the capability and relationship with the scientists they are working with.

A common theme and one that has implications for ESR's future revenues is that all government clients indicated there is unlikely to be any significant increase in the price or volume of work in the foreseeable future.

Point of differentiation

An aspect of ESR's value proposition to client stakeholders is that ESR is a science services organisation with high levels of international accreditation (or other applicable standard or mandate) across its operations. For some client stakeholders, this is a critical criterion for service

provision and they place a great level of importance on the authority and integrity associated with this component. This is compounded by the perceived value of ESR's active research programme. Client stakeholders appear to acknowledge the critical linkage between ESR's research activities, the on-going development of its science services and the capability of its science teams, however they do not necessarily see it as their responsibility to pay for the research or development costs associated with the science services they wish to procure. The Panel observes that this creates a dilemma for ESR given its limited ability to attract significant research funding from other sources.

Client engagement

Many stakeholders expressed concerns about the high level of turnover at the management level in recent years and perceive there is a disconnect between the leadership of ESR and the science teams (as previously discussed). For many of the client stakeholders, this is a cause for concern and creates a degree of uncertainty regarding the stability of the organisation on which they are seeking reassurance.

ESR's growth strategy is highly dependent on successful relationships with existing customers. The Panel observes that ESR needs to improve its engagement with customers at the strategic level if it wishes to retain confidence. Feedback from ESR's clients indicates that for it to add greater value to its clients, the organisation needs to operate at a more strategic level in its relationships with clients, seeking to better "understand its client's world", embark on longer term joint planning discussions, understand its clients' needs, and foster better exchanges between itself and its clients (by, for example, regularly seconding staff between itself and its key clients).

Niche provider to large government clients

The Panel observed that for a number of ESR's main contracts with government client stakeholders, ESR is by far the smaller party, providing a relatively small and discrete range of science services into a large Ministry or other agency. The Panel observes that a number of challenges arise from this dynamic that require the parties to be able to understand each other's perspectives and viewpoints in order to be able to operate in a way that represents value for both organisations.

5. CONCLUSIONS

In conclusion, the Panel commends the Board and Senior Leadership for recognising the challenges facing ESR and developing strategies it believes will address the performance issues facing the organisation.

The new CEO and wider senior leadership appear to be getting to grips with the issues and developing plans to give effect to the Strategy Refresh.

The Panel however, has concerns that the Strategy Refresh will potentially not resolve the underlying issues facing the organisation, namely:

- the lack of unifying clarity of purpose and alignment across the organisation;
- the reluctance of some of ESR's major clients to fund research to support innovation in its core science services and retention of its science capability;
- its high reliance on government contracts where the signals indicate a sinking lid on procurement of science services; and
- the significant overhead structure carried by the organisation.

Furthermore, the Panel has concerns that ESR is placing great emphasis on commercialisation of its intellectual property and technology despite having limited experience, capacity and/or track record in successful commercialisation and a relatively skinny pipeline of potential product. Whilst the Strategy Refresh documents this issue, the Panel considers significant implementation risk remains.

The Panel is concerned that ESR appears to be adopting a high risk strategy based on achieving substantial growth in non-core areas of science delivery and commercialisation of products and yet its medium-term return projections do not appear to have addressed the fundamental financial viability issues facing the organisation.

ESR's modelling also assumes that ESR will successfully compete in lower level commoditised science services against other providers who don't have the same overhead structures or workforce structures.

The Panel considers that ESR has a critical task to unify its organisation and close the gap between its scientists and management. Consequently, the Panel believes that the new senior management team will need to give priority to addressing a number of significant people and culture challenges including:

- creating a stronger sense of organisational unity;
- building greater trust with and engagement by staff; and
- creating clear accountabilities and a greater sense of ownership for the implementation of the Strategy Refresh.

The work required to achieve the required cultural alignment is sizeable and has the potential to result in slippage to other initiatives outlined under the Strategy Refresh plan. This increases the risk to the organisation and may have negative impacts on ESR's planned recovery.

The Panel is pleased to see that ESR is prioritising becoming a more customer-focused organisation and observes that in terms of focus for this, the priority for improvement is in its strategic relationship management and stakeholder engagement rather than in the day-to-day delivery of science.

The Panel also considers ESR needs to progress its thinking relating to implementing its Vision Mātauranga.

In conclusion, the Panel considers the critical task for ESR's Board and CEO is to determine and communicate a compelling and unifying vision and purpose for the organisation that builds upon the organisation's strength in its core science capabilities and embodies an operational structure that achieves sustainable returns. The Panel is not confident based on the information reviewed that the Strategy Refresh document goes far enough in this regard but acknowledges that the further development and operationalisation of the strategy may achieve this under the leadership of the new senior management team. However, in the event that significant progress towards sustainability is not forthcoming, the Panel considers that ESR may need to consider other opportunities to improve operating and overhead efficiencies and that these should be considered ahead of long-term property commitments being entered into.

The Panel acknowledges that the timing of the review is during a period that the organisation is under new senior management and making significant changes to its operating model in response to the recent challenges. The Panel also observes that stakeholders consider ESR delivers substantial value through its science service delivery and are supportive of the early engagement approach with the new senior management.

APPENDIX 1 – REVIEW TERMS OF REFERENCE

BACKGROUND

The 2010 CRI Taskforce reforms are an integrated suite of changes designed to increase the economic impact and benefit from the Crown Research Institutes (CRIs) for New Zealand. Central to the reforms is the intention to increase the CRIs' focus on collaboration and efficient technology transfer and adoption with the sectors and key stakeholders it serves.

Each CRI has adopted a Cabinet approved Statement of Core Purpose which reflects this focus and clearly articulates the purpose, outcomes and strategic role for their organisation.

To ensure CRIs continue to increase their contribution to New Zealand's economic and social and environmental well-being, the CRI Taskforce also recommended, and Cabinet agreed [CAB Min(10)43/5C refers], that government evaluates the performance of each CRI against its Statement of Core Purpose through a process of independent rolling reviews.

It has been agreed with the Minister that since two reviews will be undertaken each year and the cycle of reviewing the seven CRIs will be completed every four years, these reviews will be known as the Four Year Rolling Reviews.

These reviews are described as rolling for two reasons: firstly, because they are designed to review each CRI regularly and secondly, because they will draw on an aggregation of performance-related information that is already routinely generated to inform the matrix of monitoring and evaluation processes established around the CRIs.

Some early design principles and ideas for the project scope were drafted in May 2011, but in light of the volume of work associated with the CRI Taskforce Reforms at the time, these were put on hold.

PURPOSE AND PRINCIPLES

Purpose

Cabinet agreed that shareholding Ministers evaluate the performance of each CRI against its Statement of Core Purpose, through a process of independent rolling reviews. The purpose of the four year rolling reviews is to provide shareholding Ministers with an independent assessment of each CRI's current effectiveness and future potential in delivering on the purpose and outcomes set out in its Statement of Core Purpose (SCP).

The reviews will provide shareholding Ministers with insights on where performance can be improved and assurance on where the CRI is operating effectively in contributing to outcomes that support New Zealand's economic, social and environmental well-being. The reviews will include an assessment of governance effectiveness, financial viability and sustainability as well as the identification of opportunities and barriers to success and alignment to government priorities. Findings from the reviews will also support CRI Boards in their governance role.

Principles

It is proposed that the design and undertaking of the four year rolling reviews will be informed by the following principles that were previously consulted on in July 2011.

The four year rolling reviews will be:

- future focused - drawing on past performance and an assessment of current strategic intentions to inform the evaluation of future potential and opportunities
- open and transparent – ensuring that there are “no surprises” for either CRIs, their key stakeholders or the Science and Innovation Group
- based on effective stakeholder engagement – ensuring engagement ‘fatigue’ is minimised
- efficient – ensuring compliance costs for gathering information is minimised
- independent – ensuring the Panel of experts bring a deep and balanced knowledge of science, economics and commercial imperatives
- sensitive to the need to ensure appropriate protection of commercially sensitive information.

PROCESS FOR REVIEWS

The Terms of Reference for the CRI four year rolling reviews were evaluated by a wide range of stakeholders in mid-2014, as agreed at the outset of the process. The document was modified in August 2014, prior to the 4th rolling review.

The rationale for this approach was to maximise the effectiveness of the review process by identifying opportunities for improvement in the design and process from the first three reviews that could be incorporated into the subsequent reviews.

There are four project phases associated with the implementation and evaluation of the reviews as follows:

1. Design evaluation methodology:
 - a. Draft terms of reference, evaluation framework and implementation plan.
2. Preparation of implementation for review:
 - a. Minister decides CRI,
 - b. Panel appointed by MBIE.
3. Implementation of review:
 - a. Panel conducts review
 - i. Reads background documents
 - ii. Interview CRI staff and stakeholders/end users
 - iii. Present findings to Board
 - iv. Review/feedback from MBIE/CRI prior to final report.
4. Process evaluated, redesign of review:
 - a. Feedback on process of the four year rolling review, incorporate into next review.

Process roles

The four year rolling reviews are being undertaken on behalf of the shareholding Ministers, who are the owners and recipients of the review reports.

The reviews will be undertaken by independent Panels – one for each review. It is anticipated one/two individual(s) will be appointed to both Panels to ensure consistency across both reviews.

The Deputy Chief Executive of the Science, Skills and Innovation Group will have oversight of the reviews on behalf of the shareholding Ministers and the Manager, Institutional Performance has responsibility for the day-to-day management of the review process.

Administration

As outlined in the principles above, the Science, Skills and Innovation Group will ensure compliance costs for gathering information for the review Panels is minimised. The Institutional Performance team has responsibility for collating preparatory information for the review Panel in collaboration with the CRI. This will comprise information already available to the Institutional Performance team as well as any relevant existing information identified through discussion with the CRI. The Institutional Performance team will ensure that the review Panels utilise all existing monitoring and performance reports where possible, including reports and assessments from industry user groups, science Panels and sector strategy groups, as well as stakeholder surveys to inform the review. In the event additional information may be required, the Institutional Performance team will agree expectations for this with the CRI in advance. A key contact person for the review should be selected from the CRI and the Institutional Performance team.

SCOPE

Each CRI's Statement of Core Purpose (SCP) provides the scope of enquiry for the four year rolling reviews¹. The review will evaluate each CRI's performance and progress in achieving the SCP, outcomes, scope of operation and operating principles. There will also be some consideration of the endurance of outcomes in the current economic and environmental context. The reviews will evaluate factors that influence CRIs' overall success in contributing to their SCP outcomes now and into the future.

Out of Scope

Every year each CRI, in collaboration with key stakeholders, measure and evaluate impact on their respective sectors. The independent Panel undertaking the four year rolling reviews will not duplicate this work. However, based on the measures and evaluation generated by the CRI, the Panel will assess how well the CRI is contributing to the outcomes in its SCP and will assess the quality of the CRI's measures used to inform that assessment.

The following is also out of scope:

¹ Reference to the term "social" outcomes in the CRIs' Statements of Core Purpose includes health and cultural outcomes.

- How science reviews are undertaken by the Science, Skills and Innovation Group; rather the reviews themselves may be sourced as an informational input into this project.
- Measuring performance of the CRI's delivery against individual contracts; rather the Panel will evaluate how the CRI manages contracts overall.
- Measurement of CRI's science quality; rather the Panel will evaluate how well the CRI is monitoring, measuring and improving science quality through interactions with the Science Advisory Panel.

Review Process

The process for undertaking the four year rolling reviews is as follows:

Order and timing of reviews

The reviews will be conducted every four years. The order in which CRIs are reviewed will be determined by the shareholding Ministers. The reviews are likely to involve the independent Panel for up to 15 days of document examination, interviews with the CRIs, key end-users and stakeholders. The Institutional Performance team (IP team) will ensure early communication with the CRIs to agree on expectations around documentation provision and interviews.

Panel membership

The Panel will comprise the minimum number of individuals necessary to ensure the appropriate mix of experience and knowledge is represented. It is anticipated that a Panel size of three-five will likely meet this requirement. Review Panel membership is not likely to be common for all reviews, however, Panel members will be individuals recognised as distinguished members of their professional community. The IP team will ensure appropriate steps are taken to manage any potential conflicts of interest.

Preparatory information for the review Panel

The IP team has responsibility for collating preparatory information for the review Panel. This will comprise information already available to the IP team as well as any relevant existing information identified through discussion with the CRI. The IP team will ensure that the review Panels utilise all existing monitoring and performance reports, including reports and assessments from industry user groups, the IP team, science Panels and sector strategy groups as well as stakeholder surveys to inform the review, where possible. In the event any additional information may be required, the IP team will agree expectations for this with the CRI.

Cost

The IP team will pay the review Panels for their work and associated expenses incurred by them. The IP team will also cover the cost of the secretariat to support the Panel.

Interviews by the review Panel

After reading the preparatory information, it is expected that the review Panel will visit the CRI to conduct interviews with the CRI Board and key staff as well as key external stakeholders (stakeholder list will be tested with the Board Chair in advance). The aim of the interviews will be to verify and explore the degree to which the CRI has performed against its SCP. It is also an opportunity for the Panel to discuss and understand the CRI's strategic response to challenges and opportunities.

Report draft and release

The review Panel will draft a succinct written report, which will be sent to the CRI to identify errors of fact and omissions. Following this, the Panel will finalise their report.

The CRI Board will be provided a copy of the final report before it is submitted to shareholding Ministers and are requested to provide an action plan (with timelines) in response to the final report. Then the final report together with the action plan from the Board will be submitted to the shareholding Ministers by the IP team. The Institutional Performance Team will monitor the CRI's progress against the action plan for the next 12 months.

The four year rolling reviews are subject to requests under the Official Information Act (1982). The Panel's final report and the CRI's action plan will be released publicly at <http://www.msi.govt.nz/get-connected/crown-research-institutes/>, although any commercial-in-confidence material will be withheld.

APPENDIX 2 – BRIEF BIOGRAPHIES OF PANEL MEMBERS

Philip Barry

Phil is a founding Principal of TDB Advisory Ltd, a boutique corporate advisory company. Phil has widespread and in depth expertise in corporate finance, economics, public policy analysis and regulatory reform.

Phil has chaired a number of taskforces and reviews in recent years, including the Parliamentary Appropriations Review Committee; the government's Technical Advisory Group on Air Quality Standards; and an independent business stock take of IRL. He also acted as lead consultant for MBIE on the recent CRI Balance Sheet Review project.

As a former Director at the Treasury and Advisor at the Department of the Prime Minister and Cabinet, Phil provided strategic advice and led the implementation of structural change and regulatory reform in significant parts of the New Zealand economy. During the mid-1990s, Phil served as Counsellor Economic in New Zealand's Permanent Delegation to the OECD in Paris.

Phil has an MBA in Finance and Accounting from the University of Rochester, New York and a BA Hons (1st class) in Economics from Victoria University, Wellington.

Phil served as Chair on the first two 4 Year Rolling reviews.

John Ashby

John is an independent professional director. He has a BE (chemical) and a BComm at Auckland University followed by extensive experience in manufacturing, business development and international food and beverage. John worked initially with Feltex New Zealand, followed by a successful international career with Director, CEO or senior executive roles with Whitbread UK, Lion Nathan, Kraft General Foods, Cerebos Greggs, Columbus Coffee, Bell Tea and Foodstuffs Auckland. John is currently deputy Chair of Asure Quality, and a director of Tasti Products, Integria Healthcare, Yealands Wine Group, Columbus Coffee, Groenz Group and a trustee of Medicine Mondiale

John has extensive experience in change management, FMCG, business growth and turnarounds; he advises a number of private clients in New Zealand and Australia on strategy and change and is a direct investor in several private ventures.

Jenn Bestwick

Jenn's skills include organisational responsiveness; customer and shareholder focused management; working with effective operating models; systems thinking; and setting and delivering strategy. Jenn has experience working with CRIs both as a client commissioning

research work and as a consultant advisor and reviewer. During 2013, Jenn worked extensively with Callaghan Innovation to review its science and research capability. Jenn is currently working with three CRIs as well as Lincoln University and Dairy New Zealand to develop science collaboration opportunities and specifications for the Lincoln Hub.

Jenn has held Board positions at the New Zealand Qualifications Authority, Southern Response Earthquake Services, Tourism New Zealand and Learning Media Limited as well as Board Chair for the Christchurch Polytechnic Institute of Technology. Jenn spent a number of years as Director of Strategic Consulting for KPMG and was also a contractor and General Manager of Strategy for Ngai Tahu Holdings Corporation.

Jenn holds a Bachelor of Laws with Honours from the University of Trent.

Ian Fitzgerald

Ian is an experienced company director and advisor specialising in resolving complex organisational problems and decision making. Ian is a Chartered Fellow of the Institute of Directors and has management experience in a wide range of areas including change management, financial management, banking, human resources, information technology, operational risk, legal, internal audit and public relations.

Ian has held senior roles in the public and private sectors. Ian's experience includes working at the Treasury and at the Department of the Prime Minister and Cabinet as well as 13 years with Westpac in a number of senior executive roles, both in New Zealand and Australia, including as Chief Economist and Chief Manager, Business Banking. In 1998 Ian established the Wellington based professional services and management consulting firm Burleigh Evatt.

Ian is current Chair of a major tourism company Real Journeys, a Waikato University Council member, a director of Timaru District Holdings and a former Chairman of Kiwibank Limited. Ian also currently acts as an independent member on a number of New Zealand Government Department Advisory Groups. These include MBIE's Immigration Vision 2015 Programme Board, the Joint Border Management System (JBMS) Executive Board (a joint Customs and Ministry for Primary Industry initiative) and is the independent Chair of the Ministry of Social Development's Simplification Programme.

Ian holds an MA (Hons) in Economics and a BA in Economics and Geography from Canterbury University.

ESR Panel – Possible Conflicts of Interest Declaration

Name	Conflicts
Phil Barry	<ul style="list-style-type: none">▪ Member of the Review Panel for NZ Genomics Ltd.▪ Founder/Director of TDB Advisory. TDB is advising MBIE on policies for funding indirect costs in science research▪ TDB is providing financial advice to the Lincoln Hub Establishment Board.
Ian Fitzgerald	<ul style="list-style-type: none">▪ Independent member of the MBIE Vision 2015 Programme Board.▪ Independent member of the Joint Border Management System (JBMS) Executive Board (a joint Customs and Ministry for Primary Industries initiative).
Jenn Bestwick	<ul style="list-style-type: none">▪ Associate at The Project Office (TPO). TPO is the Programme Director for the Lincoln Hub Science Infrastructure Programme of work.
John Ashby	<ul style="list-style-type: none">▪ Assure Quality Director. AQ has a very small client relationship with ESR, not significant and at management level not board.

APPENDIX 3 – LIST OF INFORMATION REVIEWED BY THE PANEL

DOCUMENT / INFORMATION
A. Understanding the business
1. Statement of Core Purpose
2. Statements of Corporate Intent from 2011 - current
4. Annual Reports
5. ESR Q4 Report to 30 June 2014
6. ESR Half Yearly Report Dec 2013
6. YE management accounts for the past 3 years and any reconciliation to the year-end financial statements.
7. ESR Balance Sheet Review 11 Dec 2013
8. ESR Stakeholder Survey 2013
9. Key Stakeholders list
10. ESR Organisation Charts
B. Business structure overview
1. Business Structure Overview - Forensic.
2. 2014 Human Resources Section
3. ESR Strategy Refresh 2014 - Summary
4. Resources engaged in Science
5. Resources engaged in core science
C. Management accounting process
1. ESR Audit Risk Committee Report 5 August 2014(a)
2. ESR Controls Report of the year ended 30 June 2013
3. Computer System Risk Management and Disaster Recovery
4. Latest review of the Company's Computer System
D. Financial & Investment information
1. Historic Management Accounts - Revenue
2. Expenditure Trends by major categories
3. Details on CoF
4. Forecast of Revenue for next 5 years
5. Key assumptions on 5 Year Forecast
6. Capex 2015
7. Capex Spend 5 Years to 2019
8. IP Register and Valuations
9. Historic SCI Financial Data

DOCUMENT / INFORMATION
10. ESR Core Funding Framework
E. Key governance documents
1. ESR Risk Register
2. Copy of the legal register - Contracts
F. Other Documents
1. KPMG Procurement and Purchasing Report 2012
2. KPMG Contract Management Report 2009
3. Deloitte Follow-up Procurement Review 2014
4. Procurement and Contract Governance Action Plan
5. Senior management responses to review undertaking
6. Measurement of how well ESR is monitoring and measuring science
7. End of programme Reviews – core funding annual summary
8. Studies of ER's contribution to economic growth
9. Comparison SCI measures against actual results 2010-2013
10. Utilisation rates across ESR
11. Desired outcomes of the Government that ESR is contributing to
12. Documents reporting on the assessment of outcomes, reviews or evaluations of outcomes
13. Summary of international sector partnerships
14. Panel Reports on Science Reviews for last two years
15. Information Management Policy
G. Personnel
1. 2014 Head count
2. ESR Gender and Age by Group
3. Staff satisfaction survey results.
4. Utilisation Rates of staff across the organisation
H. MBIE documents
1. Report of the CRI Taskforce
2. MBIE Vision Mātauranga
3. ESR bidding history
4. 2013 Letter of expectations from Minister
I. Additional documents requested by the Panel
1. Summary of international sector partnerships
2. Panel Reports on Science Reviews for last two years
3. Data use and access policy

DOCUMENT / INFORMATION	
4.	MBIE briefing to Minister on Strategy for meeting with Board in 2014
5.	ESR parts of MBIE quarterly briefings for last 12 months
6.	Ministers AGM briefing
7.	Sapere's review of ESRs proposal re IDC
8.	2014 ESR Science Strategy Draft
9.	ESR Māori Innovation Strategy by Charlotte Severne
10.	ESR Māori Development Strategy
11.	Martin Jenkins Balance Sheet Review Draft Report 2012
12.	Year Annual Turnover by Group
13.	Bedford ANZFSS Plenary 2010
14.	Health & Safety Plan 2014-15
15.	Monthly Board Reports – 12 months to Sept 2014
16.	WDT Overhead Recovery
17.	WDT Final Report – Board Meeting May 2014
18.	WDT Business Case Board report August 2014
19.	Senior Management exits at 21 November 2014
20.	Information Management Policy

APPENDIX 4 – LIST OF INDIVIDUALS INTERVIEWED BY THE PANEL

In the course of the review, the Panel met with the following ESR stakeholders:

AsureQuality	s9(2)(a)	Chief Executive Officer
		Chief Financial Officer
		Business Development Executive
Callaghan Innovation		Chief Financial Officer
Center for Disease Control (USA)		International Epidemiology & Response Team Lead
Department of Corrections		Senior Advisor National Systems
Environment Waikato (Waikato Regional Council)		Partnerships, Humanitarian and Multilateral Division
Massey University, Palmerston North		Vice Chancellor
Meat Industry Association		Innovation Manager
Ministry of Business Innovation and Employment		General Manager, People, Science and Enterprise Policy
		National Manager Environment & Society
		Manager International Relationships
		Principal Policy Advisor
Ministry of Foreign Affairs and Trade		Development Manager: Disaster Risk Reduction
Ministry of Health		Director of Public Health
		Business Manager Clinical Leadership, Protection & Regulation
		Team Leader, Compliance Management, Product Safety, Medsafe
Ministry of Primary Industries		Director, Strategy Systems and Science Policy (Acting)
		Deputy Director General, Change Management Programmes
		Director IDC and Response

s9(2)(a)

National Institute of Standards and Technology (USA)

New Zealand Customs

New Zealand Police

Office of the Prime Minister's Chief Science Advisory

Strategic Science Advisory Panel Member

Forensic Biologist, Biochemical Science Division Applied Genetics

Group Manager, Intelligence Investigations and Enforcement

National Drugs Intelligence Bureau Coordinator

National Forensic Services Manager

Prime Minister's Chief Science Advisor

Professor (Adjunct in Genome Sciences) University of Washington
