

REANZ

STATEMENT OF PERFORMANCE EXPECTATIONS 2015/16

# RESEARCH AND EDUCATION ADVANCED NETWORK NEW ZEALAND LIMITED

## STATEMENT OF PERFORMANCE EXPECTATIONS 2015/16

MAY 2015

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MILLISECONDS  
AWAY FROM THE  
REST OF THE  
WORLD

REANNZ

# INTRODUCTION



THIS STATEMENT OF PERFORMANCE EXPECTATIONS IS SUBMITTED BY THE BOARD OF DIRECTORS OF RESEARCH AND EDUCATION ADVANCED NETWORK NEW ZEALAND LIMITED (REANNZ), PURSUANT TO THE CROWN ENTITIES ACT 2004. IT SETS OUT THE SERVICE EXPECTATIONS FOR REANNZ FOR THE PERIOD 1 JULY 2015 TO 30 JUNE 2016.

## STATEMENT OF RESPONSIBILITY

REANNZ's Board is responsible for the prospective financial statements and statement of performance expectations contained in this document, including the appropriateness of the assumptions underlying them. It is also responsible for internal control systems, which provide reasonable assurance as to the integrity and reliability of financial reporting.

**PROF. JOHN RAINE**  
CHAIR

**JIM DONOVAN**  
DEPUTY CHAIR

21 May 2015

# WHAT WILL REANNZ DELIVER IN 2015/16?



## OUR OUTPUT

REANNZ has made strong progress over the last three years growing revenues, improving sustainability, restructuring staff, building capability, and completing the upgrades of our national and international networks. However, because advanced networks must prioritise performance over profitability in order to support research, REANNZ operates where there is a market failure and needs continued financial support.

REANNZ receives a \$4 million per annum government grant, through a funding agreement with the Ministry of Business, Innovation and Employment that expires on 30 June 2017. At this time, it is assumed that the REANNZ members will fund this \$4m shortfall from 2017 so that REANNZ remains a sustainable organisation and can enter into long-term commitments such as an anchor tenancy on a second international undersea cable. As the withdrawal of Crown funding from 2017 will significantly impact the cost-effectiveness of REANNZ services for members, the organisation will review its funding, business model, and ownership structure in 2015/16.

In 2014, a \$15M Crown Grant was received for the purpose of securing anchor tenancy on a secondary international cable. If the build of the cable goes forward during the next financial year, \$6.75M will be recognised as revenue.

The details of the expected revenue and proposed expenses related to this output can be found later in the document, in our forecast financial statements.

We define an advanced research, education and innovation network as follows:

An advanced research, education and innovation network offers researchers, educators, students and innovative businesses access to a cohesive global fabric of advanced networking capabilities that encourage collaboration and enhance the competitiveness of the New Zealand economy. It includes infrastructure and services that meet the unique and evolving needs of the research, education and innovation communities, including:

- A purpose-built national-scale network providing a reliable (99.9% available) high-speed backbone with sufficient burstable bandwidth to handle the most demanding science applications.
- Cost-effective high-speed international connections to 117 other International Research and Education Networks.
- An engineering emphasis on lossless transport and guaranteed end-to-end performance.
- Network-based services that leverage the existing infrastructure to deliver affordable applications that encourage collaboration and timely access to data. In the commercial market, these services are often cost-prohibitive, or simply unavailable.
- New and existing last-mile network connections to the campus edge of its members, their collaborators, content providers, exchange points, compute and data storage, and the scientific instruments that members and their collaborators use.

# OUR STRATEGIC INTENTIONS



AT THE HIGHEST LEVEL, OUR STRATEGIC INTENTION IS TO CONTRIBUTE TO GROWING THE NEW ZEALAND ECONOMY, AND THEREFORE TO DELIVER GREATER PROSPERITY AND OPPORTUNITY FOR ALL NEW ZEALANDERS. THE FOLLOWING DIAGRAM SHOWS OUR OUTPUTS, IMPACTS AND OUTCOMES, AND HOW WE MEASURE OUR ACHIEVEMENT AGAINST THOSE GOALS.

Our network, and the other tools and services we provide to our members, allow data-intensive research to be conducted, enhance collaboration between members and their international peers, and allow users to undertake their work more effectively and efficiently. These are crucial attributes for a high performing and globally competitive research, education and innovation system. In turn, New Zealand's research, education and innovation system

makes a key contribution towards improving New Zealand's economic performance. An advanced network is particularly critical for a small, geographically isolated country like New Zealand, as it allows New Zealand-based researchers to participate in global science collaborations and large-scale science initiatives. This plays a key role in attracting and retaining high-level science and research talent for New Zealand.



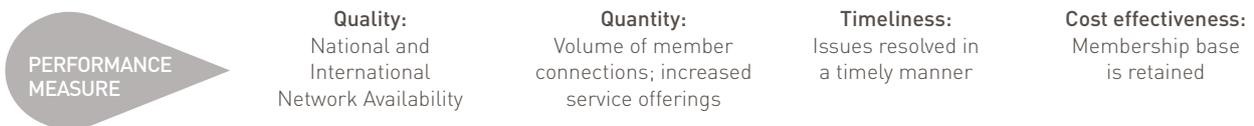
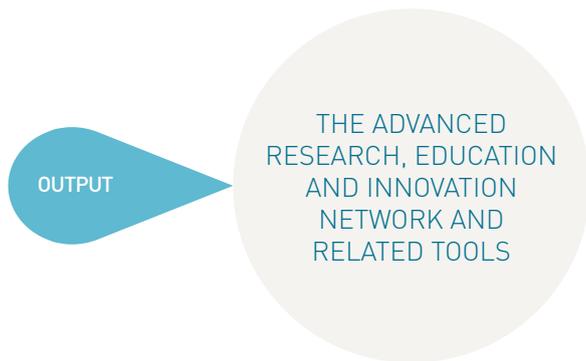
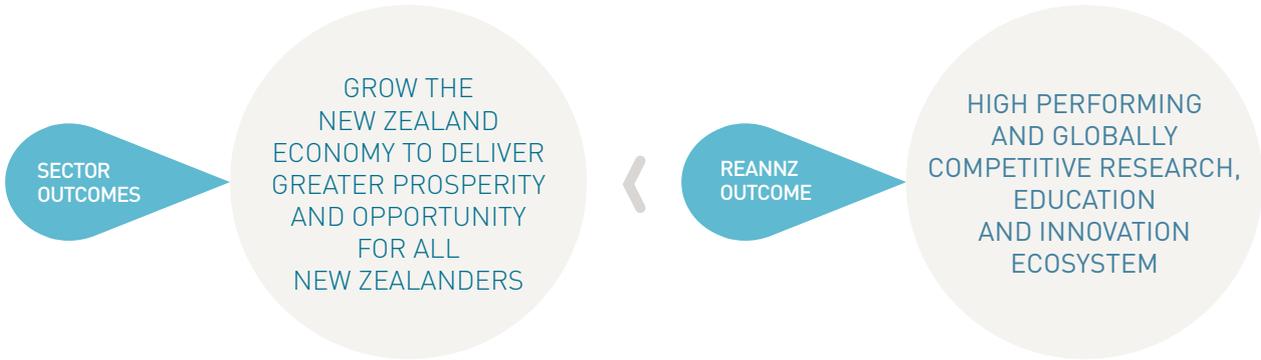
To be the essential networking resource of the Research and Education community



A New Zealand where transformative ideas flourish and the exchange of knowledge is completely unconstrained by physical location, ensuring our nation's prosperity and wellbeing



To provide cutting edge network services, unparalleled infrastructure and ground-breaking tools that enable collaboration and accelerate education, science and innovation



# ASSESSING OUR PERFORMANCE



Our suite of performance indicators tracks trends in our high-level outcomes. As a high performing and globally competitive research, education and innovation system, our indicators measure the impacts we are making, and the quality, quantity, timeliness and cost-effectiveness of our output, the advanced network as well as related tools and services.

REANNZ will drive performance improvement through building leadership and staff skills, and will continue its investment in business systems and processes that improve efficiency and effectiveness.

## TRACKING OUR OUTCOMES

REANNZ is one of many contributors to the outcome of a high performing and globally competitive research, education and innovation system. For this reason we track trends in this outcome using external, publicly available indicators of the performance of New Zealand's research education and innovation system, but we do not forecast specific changes in the trend indicators.

OUTCOME	TREND INDICATORS
High performing and globally competitive research, education and innovation system	Progress in the OECD's "Comparative performance of national science and innovation systems", OECD Science, Technology and Industry Outlook, published every two years
	New Zealand's ranking for university-industry collaboration in RandD in the World Economic Forum global competitiveness index is maintained
	New Zealand's ranking for capacity for innovation in the World Economic Forum global competitiveness index is improved

## FORECASTING AND MEASURING OUR IMPACTS

### IMPACT: RESEARCHERS ACROSS ALL FIELDS ARE ABLE TO CONDUCT DATA-INTENSIVE RESEARCH

A number of science initiatives with large data requirements are being conducted that could not occur without the reach, reliability and speed of an advanced network. Examples include high performance computing applications in research, for example climate and geological science, facilitated by the National eScience Infrastructure project (NeSI), gene sequencing services through New Zealand Genomics Ltd (NZGL), and radio astronomy data analysis related to the international Square Kilometre Array (SKA) project. All of these involve scientific instruments that generate massive datasets. These datasets need to be transported quickly and accurately from the instruments to hosting or processing centres, and to collaborating scientists performing the research.

Indications of the amount of data intensive science occurring are represented by the amount of data flowing over the network, as well as our users assessment of the need for the network.

ABLE TO CONDUCT DATA INTENSIVE SCIENCE AND RESEARCH	ACTUAL 2012/13	ACTUAL 2013/14	ESTIMATE 2014/15	FORECAST 2015/16
Total traffic flows increase	+28% 6.75 PB <sup>1</sup>	+46% 9.87 PB	+67% 16.5 PB	+28% 21.12 PB

Increases in the total amount of traffic flowing over the network indicate more science is being conducted. This suggests REANNZ is enabling more and more scientific applications. Globally NREN (National Research and Education Network) traffic growth is still impressive – averaging between 30-50% annually.

REANNZ expects total growth in traffic of 28% over the next year, significantly less than the last two years as traffic levels out and becomes closer to global averages<sup>2</sup>. Much higher growth in 2014 and 2015 was largely the result of better than expected uptake of our commodity Internet service and many sites upgrading to 10Gbps from 1Gbps (including the Warkworth Radio Telescope).

	ACTUAL 2011/12	ACTUAL 2012/13	ACTUAL 2013/14	ESTIMATE 2014/15	FORECAST 2015/16
Users consider the REANNZ network valuable or essential to their work	75% (43% essential, 32% valuable)	76% (44% essential, 32% valuable)	94% (69% essential, 25% valuable)	80%	>80%

This indicator suggests users could not perform their work without the network platform REANNZ provides. In 2014, we saw a large increase in our users' perceived value of the REANNZ network (even though REANNZ nearly doubled the number of people asked to take the survey) with a record 94% considering the network essential or valuable to their work. We expect to maintain a result over 80% in the coming and following years.

<sup>1</sup> Petabytes (PB). One petabyte is equal to 1,000 terabytes or 1,000,000 gigabytes.

<sup>2</sup> Cisco Visual Networking Index predicts: 'Overall, IP traffic will grow at a compound annual growth rate (CAGR) of 23 percent from 2012 to 2017.'

## IMPACT: COLLABORATION BETWEEN SCIENCE, INNOVATIVE BUSINESS AND EDUCATION SECTORS IS ENHANCED

Collaboration takes many forms: it can be as simple as having a conversation over a video conference, or as complex as the multistep process of turning one scientist's research project into a commercial product. REANNZ enables these collaborations by providing connectivity and the tools to make collaboration easier and more effective.

International and national traffic is an indirect measure of the amount of collaboration enabled by REANNZ. In 2013/14, REANNZ upgraded the national and international networks, increasing our available capacity and our ability to scale that capacity cost effectively to meet the increasing demand from our members.

ENHANCED COLLABORATION	ACTUAL 2012/13	ACTUAL 2013/14	ESTIMATE 2014/15	FORECAST 2015/16
International traffic volume	1.23 PB	+95% 2.4 PB	+107% 4.96 PB	+35% 6.7 PB
National traffic volume	5.52 PB	+35% 7.47 PB	+55% 11.54 PB	+25% 14.43 PB

Increasing amounts of traffic flowing through our network most likely indicate that more collaboration with both national and international participants is taking place. REANNZ has experienced exceptional growth over the last few years as upgrades were put in place. From next year we expect this to moderate to nearer to 25-35% annual growth, in line with mature networks internationally.

## IMPACT: USERS HAVE VALUE FOR MONEY ACCESS TO CONTENT AND TOOLS NECESSARY TO EFFICIENTLY PERFORM THEIR WORK

Many of the services required by the REANNZ community are cost-prohibitive (or simply unavailable) on the commercial market. Today, such services include schedule-able bandwidth, on-demand multi-domain circuits, flexible traffic engineering, IPv6 service and performance parity, and active multi-domain performance monitoring. These are networking features that are required by members in addition to core network bandwidth. As a not-for-profit company that acts in the best interests of its community, REANNZ is able to provide those services that would otherwise be unavailable or unaffordable on the commercial market. This combination of very high network performance and reliability, and additional services offerings, provide a cost-effective package that ensures members are retained as REANNZ clients.

COST EFFECTIVE ACCESS TO CONTENT AND TOOLS	ACTUAL 2012/13	ACTUAL 2013/14	ESTIMATE 2014/15	FORECAST 2015/16
Subscriptions to services increase	+21%	+111%	+68%	+20%

This measure demonstrates our ability to take cost out of the sector and deliver services that are relevant to our members. This measure compares the number of members subscribed to REANNZ services at the start of the year, with the number of members subscribed to REANNZ services at the end of the year. The large increase in 2013/14 and 2014/15 were the result of REANNZ introducing new services, such as eduroam™ and content caching, to the community that achieved considerable uptake.

## MONITORING OUR OUTPUT

REANNZ benchmarks and monitors the performance of our network on the dimensions of quality, quantity, timeliness and cost effectiveness.

### QUALITY

The quality of our service can be measured by the reliability of the network.

	ACTUAL 2011/12	ACTUAL 2012/13	ACTUAL 2013/14	ESTIMATE 2014/15	TARGET 2015/16
National network availability	99.99% 12 month rolling average	99.96% 12 month rolling average	99.99% 12 month rolling average	99.9% 12 month rolling average	99.9% 12 month rolling average

	ACTUAL 2011/12	ACTUAL 2012/13	ACTUAL 2013/14	ESTIMATE 2014/15	TARGET 2015/16
International network availability	99.65% <sup>3</sup> 12 month rolling average	99.87% 12 month rolling average	99.93% 12 month rolling average	99.9% 12 month rolling average	99.99% 12 month rolling average

National and international network availability measures the reliability of the network. Downtime includes faults and other connectivity or hardware outages, but excludes planned maintenance outages. 99.9% network availability is standard for research and education networks internationally. Our goal is to maintain this high level of reliability. REANNZ aims for network reliability to be as high as reasonably possible, given the need to balance the costs associated with each magnitude increase in network reliability.

The REANNZ network is monitored with a suite of real-time, operational performance monitoring tools. These tools include perfSONAR (Performance focused Service Oriented Network monitoring ARchitecture), developed specifically for monitoring high through-put, high-performance networks, as well as AMP (Active Measurement Project), developed by the WAND network research group at the University of Waikato. We currently use these tools diagnostically and operationally, to pick up quality issues in real time. As the perfSONAR deployments are just now nearing completion, we do not yet have the robust recording and reporting systems that would enable us to provide reliable reporting of network quality using these tools. Over the coming year we will mature our use of these systems. Next year we expect to be in a position to incorporate a network quality measure that reflects aspects of network quality such as latency and packet loss.

<sup>3</sup> During 2011/12 some hardware in our Los Angeles PoP suffered an unplanned outage.

## QUANTITY

The number and size of our member network connections demonstrates the quantity of the services we provide. Adding new services is another measure of providing an increasing quantity of services to our members.

	ACTUAL 2012/13	ACTUAL 2013/14	ESTIMATE 2014/15	TARGET 2015/16
Volume of member connections	178 Gb	+46% 259 Gb	+73% 449 Gb	+25% 561 Gb

The volume of member connections is a calculation based on the number of member connections to the network and their size. The more members, and the larger the size of their connection, the more use our network supports. The quantity of service we provide will grow as our members increase the size of their connections to meet increased demand, as they implement second connections to our network for resiliency, and as we add new members and connect new sites to the network.

This measure reflects the capability that REANNZ supports, rather than actual usage or traffic growth. Traffic or usage is expected to grow at 25% per annum, as our members better utilise their current connections to the network. As this growth is realised, the size and/or number of connections members need to perform their science will increase and this measure will grow, albeit more slowly over time as it takes members who upgraded from 1Gbps to 10Gbps time to grow their traffic needs above 10Gbps.

NEW SERVICES ADDED	ACTUAL 2013/14	ESTIMATE 2014/15	TARGET 2015/16
Service offerings increase	4 new service offerings available to market	1 new service offering available to market	3 new service offerings available to market

REANNZ is participating in a global programme that will result in cloud applications, specifically for the RandE sector, available to its members. These additional service offerings help ensure our members have the tools and resources necessary for New Zealand to remain competitive in the global marketplace. It is expected that before the end of 2015 REANNZ will be able to offer members a new cloud based video conferencing service. Other cloud services, including the federated identity management service Tuakiri, are expected to be available to members by next year.

## TIMELINESS

MEMBER SURVEY OF HELPDESK USERS	ACTUAL 2012/13	ACTUAL 2013/14	ESTIMATE 2014/15	TARGET 2015/16
% of users considering issues to be resolved in a timely manner	92%	84%	80%	80% <sup>4</sup>

The speed at which we identify and resolve faults and other network performance issues is not only a measure of the quality of our customer service, but also a measure of the timeliness of our network management activity. The REANNZ helpdesk logs incident reports from users, and our service manager actively monitors the network for performance issues. Although we have target resolution times agreed with our suppliers, the true test of our timeliness is our members' opinion of our responsiveness to their issues.

<sup>4</sup> Our target of 80% of responses resolved in a timely manner represents an appropriate balance between responsiveness and the cost of resourcing to increase responsiveness. Falling below this target would indicate that we had not adequately resourced the helpdesk facility.

## COST EFFECTIVENESS

REANNZ assesses the cost effectiveness of our network for our members, and for New Zealand as a whole.

The cost effectiveness of the REANNZ network for our members is best demonstrated by retaining our core membership base. If we were not cost effective and providing valuable networking solutions, alternative suppliers would enter the market, and we would lose members.

COST-EFFECTIVENESS FOR MEMBERS	ACTUAL 2012/13	ACTUAL 2013/14	ESTIMATE 2014/15	TARGET 2015/16
REANNZ maintains its core membership base	8/8 Universities 8/8 CRIs 12/18 ITPs 2/3 Wananga	8/8 Universities 7/7 CRIs 1/1 ATI 11/18 ITPs 1/3 Wananga	8/8 Universities 7/7 CRIs 1/1 ATI 11/18 ITPs 1/3 Wananga	8/8 Universities 7/7 CRIs 1/1 ATIs <sup>5</sup> 11/18 ITPs 1/3 Wananga

REANNZ addresses a niche market that commercial networks cannot - the provisioning of the unique services that meet the needs of science, research and education. Comparisons of cost with commercial telecommunications providers are misleading, as not only is our network designed to support time sensitive and bursty traffic flows, but the network has other performance attributes, such as low latency and jitter, which commercial networks cannot economically provide. Performance is more valuable to our members than maximising utilisation or profit.

The withdrawal of Crown funding from 2017 will significantly impact the cost-effectiveness of REANNZ services for members.

<sup>5</sup> Callaghan Innovation, a REANNZ member, is an Advanced Technology Institute (ATI).

# EXPECTED REVENUES AND PROPOSED EXPENSES



## OUTPUT: THE ADVANCED RESEARCH, EDUCATION AND INNOVATION NETWORK AND RELATED TOOLS

	2015/16 \$ 000
<b>REVENUES</b>	
Crown Income	10,750
Network Income	8,138
Other Income	3,443
<b>TOTAL INCOME</b>	<b>22,331</b>
<b>EXPENSES</b>	
Amortisation and Depreciation	2,128
Network Expenses	8,214
Operating Expenses	5,689
<b>TOTAL EXPENDITURE</b>	<b>16,031</b>
<b>SURPLUS/(DEFICIT)</b>	<b>6,300</b>

# PROSPECTIVE FINANCIAL STATEMENTS



## RESEARCH AND EDUCATION ADVANCED NETWORK NEW ZEALAND LIMITED PROSPECTIVE STATEMENT OF COMPREHENSIVE REVENUE AND EXPENSE

FOR THE YEAR ENDING 30 JUNE

FORECAST 2015 \$000		2016 \$000	2017 \$000	2018 \$000
<b>REVENUE</b>				
4,000	Crown Income*	10,750	9,250	3,000
8,004	Network Income	8,138	8,377	12,623
2,447	Other Income	2,906	3,364	3,835
545	Interest Income	537	587	468
<b>14,996</b>	<b>TOTAL REVENUE</b>	<b>22,331</b>	<b>21,578</b>	<b>19,926</b>
<b>NETWORK EXPENSES</b>				
1,559	Depreciation and Amortisation	1,918	2,084	2,744
1,111	Employment Expenses	1,511	1,661	1,789
5,201	Network Operating Expenses	6,703	7,798	10,031
<b>7,871</b>	<b>TOTAL NETWORK EXPENSES</b>	<b>10,132</b>	<b>11,543</b>	<b>14,564</b>
<b>7,125</b>	<b>GROSS SURPLUS</b>	<b>12,199</b>	<b>10,035</b>	<b>5,361</b>
<b>LESS: OPERATING EXPENSES</b>				
36	Audit	39	41	42
186	Depreciation and Amortisation	210	182	184
119	Directors Fees	122	126	130
1,633	Employment Expenses	2,595	2,676	2,759
(2,794)	Foreign Exchange Gain/Loss^	913	767	460
774	Other Operating Expenses	1,150	960	988
403	Professional Services	456	380	391
134	Operating Leases	140	149	149
170	Travel Expenses	274	282	291
<b>661</b>	<b>TOTAL OPERATING EXPENSES</b>	<b>5,899</b>	<b>5,561</b>	<b>5,394</b>
<b>6,464</b>	<b>NET SURPLUS/DEFICIT</b>	<b>6,300</b>	<b>4,474</b>	<b>(33)</b>
-	Other Comprehensive Revenue and Expense	-	-	-
<b>6,464</b>	<b>TOTAL COMPREHENSIVE REVENUE AND EXPENSE</b>	<b>6,300</b>	<b>4,474</b>	<b>(33)</b>
	<i>*\$15M grant for second international cable recognised as follows:</i>	<i>6,750</i>	<i>5,250</i>	<i>3,000</i>
(2,453)	<i>^FX (gains)/losses arising from NZ\$15M held in USD Escrow account</i>	<i>1,104</i>	<i>859</i>	<i>490</i>

**RESEARCH AND EDUCATION ADVANCED NETWORK NEW ZEALAND**  
**PROSPECTIVE STATEMENT OF FINANCIAL POSITION**

AS AT 30 JUNE

FORECAST 2015 \$000		2016 \$000	2017 \$000	2018 \$000
<b>CURRENT ASSETS</b>				
5,826	Cash and Cash Equivalents	6,663	8,046	1,729
17,453	Funds Held in Escrow*	9,599	3,491	–
3,106	Receivables and Debtors	3,485	5,316	5,957
10,000	Investments	11,000	11,000	11,000
494	Prepayments	753	605	641
472	Prepaid Network Expenses**	472	752	2,245
<b>37,351</b>	<b>TOTAL CURRENT ASSETS</b>	<b>31,972</b>	<b>29,210</b>	<b>21,571</b>
<b>CURRENT LIABILITIES</b>				
1,111	Accounts Payable and Accrued Expenses	1,170	1,482	1,740
170	Employee Entitlements	170	170	170
3,460	Income in Advance	3,675	5,163	5,626
6,750	Deferred Income^	5,250	3,000	–
83	GST Payable	287	506	579
39	Derivative Financial Instruments	39	39	39
<b>11,613</b>	<b>TOTAL CURRENT LIABILITIES</b>	<b>10,590</b>	<b>10,360</b>	<b>8,154</b>
<b>25,738</b>	<b>NET CURRENT ASSETS</b>	<b>21,382</b>	<b>18,850</b>	<b>13,417</b>
<b>NON-CURRENT ASSETS</b>				
14,052	Property, Plant and Equipment	13,154	12,634	13,713
1,609	Prepaid Network Expenses^^	7,914	12,439	16,760
<b>15,661</b>	<b>TOTAL NON-CURRENT ASSETS</b>	<b>21,068</b>	<b>25,073</b>	<b>30,473</b>
<b>NON-CURRENT LIABILITIES</b>				
8,250	Deferred Income^	3,000	–	–
306	Derivative Financial Instruments	306	306	306
<b>8,556</b>	<b>TOTAL NON-CURRENT LIABILITIES</b>	<b>3,306</b>	<b>306</b>	<b>306</b>
<b>32,843</b>	<b>NET ASSETS</b>	<b>39,143</b>	<b>43,617</b>	<b>43,584</b>
<b>PUBLIC EQUITY</b>				
16,001	Share Capital	16,001	16,001	16,001
16,842	Accumulated Surplus	23,142	27,616	27,583
<b>32,843</b>	<b>TOTAL PUBLIC EQUITY</b>	<b>39,143</b>	<b>43,617</b>	<b>43,584</b>
17,453	* NZ\$15M grant for second international cable in USD denominated account. Includes FX gains and losses	9,599	3,491	–
15,000	^ Remaining portion of grant for second international cable	8,250	3,000	–
	** Current prepaid initial costs for second international cable to be amortised over 25 years	–	300	600
	^^ Non-current prepaid initial costs for second international cable to be amortised over 25 years	6,750	11,700	14,100

**RESEARCH AND EDUCATION ADVANCED NETWORK NEW ZEALAND**  
**PROSPECTIVE STATEMENT OF CASH FLOWS**

FOR THE YEAR ENDING 30 JUNE

<b>FORECAST 2015 \$000</b>		<b>2016 \$000</b>	<b>2017 \$000</b>	<b>2018 \$000</b>
<b>CASH FLOWS FROM OPERATING ACTIVITIES</b>				
<b>CASH WAS PROVIDED FROM (APPLIED TO)</b>				
4,000	Grant Revenue	4,000	4,000	–
7,897	Network Income	8,151	8,390	12,637
589	Interest Received	537	587	468
1,951	Other Income	2,780	3,246	3,726
(2,362)	Net GST	332	333	609
(8,707)	Payments to Suppliers and Employees	(12,834)	(13,163)	(14,164)
(2,082)	Prepayments for Network Connectivity	(6,750)	(5,250)	(8,013)
<b>1,286</b>	<b>NET CASH FLOW FROM OPERATING ACTIVITIES</b>	<b>(3,785)</b>	<b>(1,857)</b>	<b>(4,737)</b>
<b>CASH FLOWS FROM INVESTING ACTIVITIES</b>				
<b>CASH WAS PROVIDED FROM (APPLIED TO)</b>				
(842)	Purchase of Plant and Equipment	(1,319)	(2,102)	(4,610)
(15,000)	Funds Deposited in Escrow*	6,750	5,250	3,000
(5,000)	Funds Transferred to Term Deposits	(1,000)	–	–
<b>(20,842)</b>	<b>NET CASH FLOW FROM INVESTING ACTIVITIES</b>	<b>4,431</b>	<b>3,148</b>	<b>(1,610)</b>
<b>CASH FLOWS FROM FINANCING ACTIVITIES</b>				
1,283	Realised Gain on Foreign Currency	191	92	30
<b>1,283</b>	<b>NET CASH FLOW FROM FINANCING ACTIVITIES</b>	<b>191</b>	<b>92</b>	<b>30</b>
<b>(18,273)</b>	<b>NET INCREASE/(DECREASE) IN CASH HELD</b>	<b>837</b>	<b>1,383</b>	<b>(6,317)</b>
24,099	Cash at Beginning of the Year	5,826	6,663	8,046
<b>5,826</b>	<b>CASH AT END OF YEAR</b>	<b>6,663</b>	<b>8,046</b>	<b>1,729</b>
Represented by:				
<b>5,826</b>	<b>CASH AT BANK</b>	<b>6,663</b>	<b>8,046</b>	<b>1,729</b>
(15,000)	* <i>Grant for second international cable</i>	6,750	5,250	3,000
	^ <i>Payments for second international cable to be made as key construction milestones are met</i>	6,750	5,250	3,000

## NATURE AND PURPOSE OF PROSPECTIVE FINANCIAL STATEMENTS

The prospective financial statements above have been prepared to the best of our knowledge and belief as an indication of REANNZ's future financial performance. Actual financial results achieved for the period covered may vary from the information presented, potentially in a material manner.

The purpose of the prospective financial statements is to inform readers of this Statement of Performance Expectations of REANNZ's best estimate of its future financial performance at the date of publication, and to comply with REANNZ's specific reporting and disclosure obligations. The statements may not be suitable for other purposes.

## STATEMENT OF SIGNIFICANT ASSUMPTIONS

The prospective financial statements have been prepared on the basis of the following value for money principles:

- REANNZ will maximise the public good outcomes for New Zealand by reinvesting in products and services which deliver further value to members, and
- REANNZ will build sufficient cash reserves to maintain and improve network infrastructure to meet growing demand without Crown support beyond the committed \$4 million annual contribution to 2017.

### Revenues

REANNZ expects network revenue to remain steady, increasing with inflation annually up to 2017. The Crown Funding Agreement is expected to continue for two more years, in accordance with the contracted term. Network revenue from members will need to increase by \$4 million after 2017 to for the organisation to remain sustainable.

REANNZ continues to explore opportunities to grow and improve its product and service offering to members. Revenues and costs from a growing managed services portfolio have been included in the forecasts. New opportunities will be included in REANNZ's forecasts as business cases are developed and the exact nature and scope of new services are known.

### Network Expenditure

During 2013/14, REANNZ procured and implemented two new network services to replace the existing supply of national and international connectivity. These new contracts have allowed REANNZ to deliver on its strategic objective to continue to meet the increasing bandwidth needs of its membership, without increasing the cost base of those services.

Surpluses are forecast for 2015, 2016 and 2017 as we transition to new international connectivity arrangements. We expect to return to breakeven in 2017/18 once the new international service is at full capacity.

REANNZ is also an anchor tenant on a new submarine cable system. The initiative supports the government's policy objective of encouraging a new submarine cable to New Zealand for the purpose of telecommunications market competition, and secures REANNZ's growing international capacity needs over the long term at affordable prices.

The surpluses generated by REANNZ in 2015 and 2016 are crucial to REANNZ's position as an anchor tenant on a new cable. The accumulation of \$10 million in reserves by the close of 2015 will be required for REANNZ to participate in project. REANNZ is also the vehicle for Crown support of the new submarine cable, through the allocation of a \$15M grant received from Vote Communications. The Crown grant will be recognised as revenue in line with key milestone payments made during the construction of the cable. Two payments are due during the 2015/16 financial year. The new cable is anticipated to be ready for service by the end of 2017, when the Crown grant amortisation and on-going costs associated with the cable begin.

Should a new cable opportunity not come to fruition in the medium term, REANNZ will need the accumulated surpluses to procure alternative international connectivity supply at the expiry of the existing service in 2019. We will continue to work with the Ministry of Business, Innovation and Employment over this time as we explore the alternatives that may be available to REANNZ.

### Forward Cash Projections

REANNZ owns and operates infrastructure to deliver its advanced network products and services. As with most infrastructure-based businesses, REANNZ operates on medium-to-long term infrastructure investment cycles.

To support the periodic investment in this infrastructure, REANNZ’s business model requires the accumulation of cash reserves. The following graph shows REANNZ projected cash balances over the coming ten year period, including:

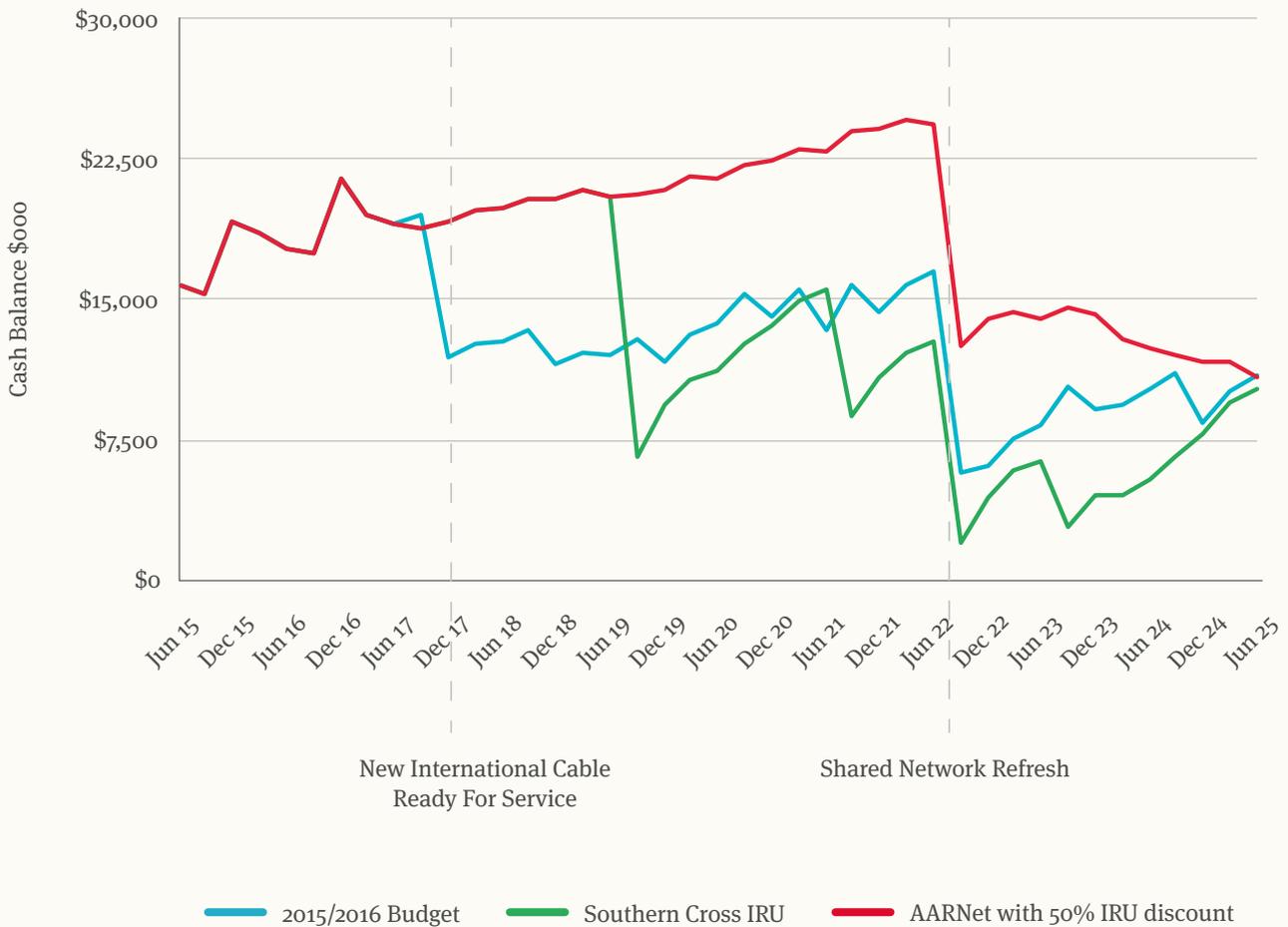
- a new international cable is forecast to be ready for service in the 2018 financial year, and
- the national network will require renewal in 2022/23, as the useful life of the infrastructure and the associated operating agreements expire.

The red and green trend lines show the cash balances under alternative international connectivity supply options should the new international cable opportunity not go ahead.

This forecast assumes increased membership fees will replace the \$4M per annum Crown grant when the funding period ends in FY2017. The replacement of the Crown funding in some form is imperative for the business to be sustainable.

Because international capacity agreements are denominated in U.S. dollars, REANNZ remains sensitive to exchange rate fluctuations, and mitigates this risk where possible by entering into forward exchange contracts with the New Zealand Debt Management Office.

10 YEAR CASH FORECAST



# NOTES TO THE PROSPECTIVE FINANCIAL STATEMENTS



The reporting entity is Research and Education Advanced Network New Zealand Limited (“REANNZ”), a Crown entity as defined by the Crown Entities Act 2004 and a New Zealand incorporated company. As a Crown entity, REANNZ’s ultimate parent is the New Zealand Crown.

REANNZ’s primary objective is to establish, own and operate a high-speed data network for the research and education sector. As such, REANNZ’s aim is to provide services to the public, rather than make a financial return.

Accordingly, REANNZ has designated itself as a public benefit entity (“PBE”) for the purposes of New Zealand generally accepted accounting practice (“NZ GAAP”).

## **BASIS FOR PREPARATION**

### **Statement of compliance**

The prospective financial statements have been prepared in accordance with Crown Entities Act 2004 and with generally accepted accounting practice in New Zealand (NZ GAAP).

The External Reporting Board of New Zealand (XRB) released a new accounting standards framework that established the financial standards to be applied to entities with statutory financial reporting obligations. REANNZ previously reported under the New Zealand equivalents to International Financial Reporting Standards (NZIFRS RDR) and is required to report under PBE Accounting Standards with effect from reporting periods beginning on or after 1 July 2014.

These prospective financial statements comply with PBE Accounting Standards, which includes PBE FRS 42 Prospective Financial Statements.

REANNZ elected to report in accordance with Tier 2 PBE Accounting Standards with reduced disclosure requirements and is eligible to report as a Tier 2 reporting entity on the basis that it does not have public accountability and is not large.

### **Measurement base**

The prospective financial statements have been prepared on the basis of historical cost, except where modified by the revaluation of certain items of property, plant and equipment, and the measurement of derivative financial instruments at fair value. The accounting policies for these items are stated below.

### **Functional currency**

The prospective financial statements are presented in New Zealand dollars, rounded to the nearest thousand (\$000). The functional currency of REANNZ is New Zealand dollars.

## SIGNIFICANT ACCOUNTING POLICIES

Accounting policies are selected and applied in a manner that ensures that the resulting financial information satisfies the concepts of relevance and reliability. REANNZ accounting policies, therefore, are designed to report the substance of the underlying transactions undertaken by the entity.

The following significant accounting policies have been adopted in the preparation and presentation of the prospective financial statements:

### **a) Revenue recognition**

Revenue is measured at the fair value of the consideration received or receivable.

Grant income is recognised by REANNZ as it is received or receivable from the Crown, when the conditions relating to the grant are met. Where there are no conditions attached to the grant, other than the requirement for REANNZ to own and operate a high-speed communication network for the research and education sector, grant income is also recognised as it is received or receivable.

Where grant income has been received but the conditions of the grant are not yet satisfied, grant income is recognised as income received in advance in the Statement of Financial Position.

Interest revenue is recognised using the effective interest method.

### **b) Property, plant and equipment**

Property plant and equipment asset classes consist of office equipment, ICT equipment, PoP equipment, leasehold improvements and network hardware and dark fibre.

Property, plant and equipment are stated at cost or valuation less accumulated depreciation and any impairment losses. Cost includes consideration given to acquire or create the asset and any directly attributable costs of bringing the asset to working condition for its intended use.

The cost of an item of property, plant and equipment is only recognised as an asset when it is probable that future economic benefits or service potential associated with the item will flow to REANNZ and the cost of the item can be measured reliably.

Where an asset is acquired at no cost, or for a nominal cost, the asset will be recorded at fair value at the date when control of the asset is obtained.

Gains and losses on disposals are determined by comparing the proceeds of disposal with the carrying amount of the asset. Gains and losses on disposal are included in the Statement of Comprehensive Revenue and Expense.

Assets under construction are held in work in progress until they are completed, at which point they are transferred to the appropriate category of property, plant and equipment.

Costs incurred subsequent to initial acquisition are capitalised only when it is probable that future economic benefits or service potential associated with the item will flow to REANNZ and the cost of the item can be measured reliably.

The costs of servicing property, plant and equipment are recognised in the Statement of Comprehensive Revenue and Expense as they are incurred.

Depreciation on property, plant and equipment (excluding work in progress) is calculated on a straight line basis, from the time the asset is in the location and condition necessary for its intended use. This basis allocates the cost or value of the asset, less its residual value, over its estimated useful life.

The depreciation method, estimated useful lives and residual values of property, plant and equipment are reviewed annually to assess appropriateness.

The following estimated useful lives are used in the calculation of depreciation:

Fibre	20 years
PoP Equipment	8 years
Network Hardware	5–7 years
ICT Equipment	3 years
Office Equipment	5 years
Leasehold Improvements	3 years

Leasehold improvements are depreciated on the basis of estimated useful life or the remaining lease term, whichever is shorter.

### **c) Intangible assets**

Software is a finite life intangible and is recorded at cost less accumulated amortisation and impairment. Amortisation is charged on a straight-line basis over the estimated useful life of the intangible asset.

The following amortisation rates are used in the calculation of amortisation:

Software	3 years
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### **d) Impairment**

At each reporting date, assets are reviewed by the Directors to determine whether there are any events or changes in circumstances that indicate that carrying amounts may not be recoverable. An impairment loss is recognised as the amount by which the asset's carrying amount exceeds its estimated recoverable amount.

If the carrying amount of an asset exceeds its recoverable amount, the asset is impaired and the carrying amount is written down to the recoverable amount.

The impairment loss is then recognised as an expense in the Statement of Comprehensive Revenue and Expense.

Where an item of property, plant or equipment has been revalued, any impairment loss is recognised against the revaluation reserve for that class of asset. Where this results in a debit balance in the revaluation reserve, the balance is recognised in the Statement of Comprehensive Revenue and Expense.

Any reversal of an impairment loss is recognised in the Statement of Comprehensive Revenue and Expense.

Impairment losses can only be reversed to the extent that the carrying amount of the asset matches the carrying amount as calculated under the cost less accumulated depreciation method.

For items of property, plant or equipment that have been revalued, any reversal of impairment loss is credited back to the revaluation reserve. However, to the extent that an impairment loss for that class of asset was previously recognised in the Statement of Comprehensive Revenue and Expense, a reversal of impairment loss is also recognised in the Statement of Comprehensive Revenue and Expense.

### **e) Borrowing costs**

Borrowing costs are recognised as an expense in the period in which they are incurred.

### **f) Inventories**

Inventories held for sale or use in the provision of services on a commercial basis is valued at the lower of cost and net realisable value. The cost of purchased inventory is determined using the first-in first-out method.

The write down from cost to net realisable value is recognised in the Statement of Comprehensive Revenue and Expense, in the period when the write-down occurs.

### **g) Operating leases**

Operating lease payments, where the lessors effectively retain substantially all the risks and benefits of ownership of the leased items, are included in the Statement of Comprehensive Revenue and Expense. Where the leased items are in use, operating lease payments are allocated in equal instalments over the lease term.

Where the leased items are not in use, the operating lease payments will be treated as a prepayment in the Statement of Financial Position. Once the items begin to be used in deriving income, these prepayments are released to the Statement of Comprehensive Revenue and Expense on a straight-line basis over the period of the remaining operating lease term.

### **h) Financial assets**

#### **Investments**

For investments under a contract where the terms require delivery within a specified timeframe, the investment is recognised on the date of trade at fair value, net of transaction costs.

Other financial assets are classified into "Cash and cash equivalents" and "receivables". The classification depends on the nature and purpose of the financial assets and is determined at the time of initial recognition.

#### **Cash and cash equivalents**

Cash and cash equivalents comprise cash on hand; cash held in banks, other short-term highly liquid investments with original maturities of three months or less and are net of outstanding bank overdrafts.

## **Receivables**

Accounts receivable are recognised at fair value. A provision for impairment of accounts receivable is made where there is objective evidence that REANNZ will not collect all amounts due according to the original terms of the receivable. When this occurs, the receivable is recorded at amortised cost, less provision for impairment. When the receivable is uncollectible, it is expensed in the Statement of Comprehensive Revenue and Expense.

### ***i) Financial liabilities***

#### **Payables**

Accounts payable, comprising trade payables and other accounts payable, are recognised when REANNZ becomes obliged to make future payments resulting from the purchase of goods and services. Payables are initially measured at fair value and subsequently measured at amortised cost using the effective interest method.

#### ***j) Derivatives***

REANNZ enters into a variety of derivative financial instruments, including forward foreign exchange contracts, as part of its normal operations to manage its exposure to foreign exchange rate risk. REANNZ does not hold these financial instruments for trading purposes.

Financial instruments that constitute hedges, including forward foreign exchange contracts, are valued at the prevailing exchange rate at year end. Any unrealised gains or losses are recognised in the Statement of Comprehensive Revenue and Expense.

Financial instruments that do not constitute hedges are stated at fair value and any resulting gain or loss is recognised in the Statement of Comprehensive Revenue and Expense.

#### ***k) Foreign currency transactions***

Transactions in foreign currencies are translated to New Zealand dollars at the rate applying at the date of transaction.

At balance date foreign currency monetary assets and liabilities are translated at the closing rate and exchange variations arising from these translations are recognised in the Statement of Comprehensive Revenue and Expense.

#### ***l) Employee entitlements***

Provision for accrued annual leave is made when it is probable that settlement will be required and the provision is capable of being measured reliably.

Provisions made for employee benefits expected to be settled within 12 months of the reporting date are measured using the best estimate of the amount required to settle the obligation, based on the remuneration rate expected.

Provisions made in respect of employee benefits that are not expected to be settled within 12 months of the reporting date are measured at the present value of the estimated future cash outflows to be made in respect of services provided by employees up to reporting date.

#### ***m) Taxation***

REANNZ, as a public entity, is exempt from taxation. Accordingly, no charge for income tax has been provided for.

#### ***n) Cash flow statement***

The prospective cash flow statement is prepared exclusive of GST, which is consistent with the method used in the Prospective Statement of Comprehensive Revenue and Expense.

Definitions of the terms used in the cash flow statement are:

“Cash” includes coins and notes, demand deposits and other highly liquid investments readily convertible into cash and includes at call borrowings such as bank overdrafts, used by REANNZ as part of its day to day cash management.

“Investing activities” are those activities relating to the acquisition and disposal of current and non-current investments and any other non-current assets.

“Financing activities” are those activities relating to changes in equity of REANNZ.

“Operating activities” include all transactions and other events that are not investing or financing activities.

#### ***o) Goods and Services Tax (GST)***

These prospective financial statements have been prepared on a GST exclusive basis except for accounts receivable and accounts payable, which are stated inclusive of GST.

The net GST paid to, or received from, the Inland Revenue Department, including the GST relating to investing and financing activities, is classified as an operating cash flow in the Statement of Cash Flows.

Commitments and contingencies are disclosed exclusive of GST.



REANNZ