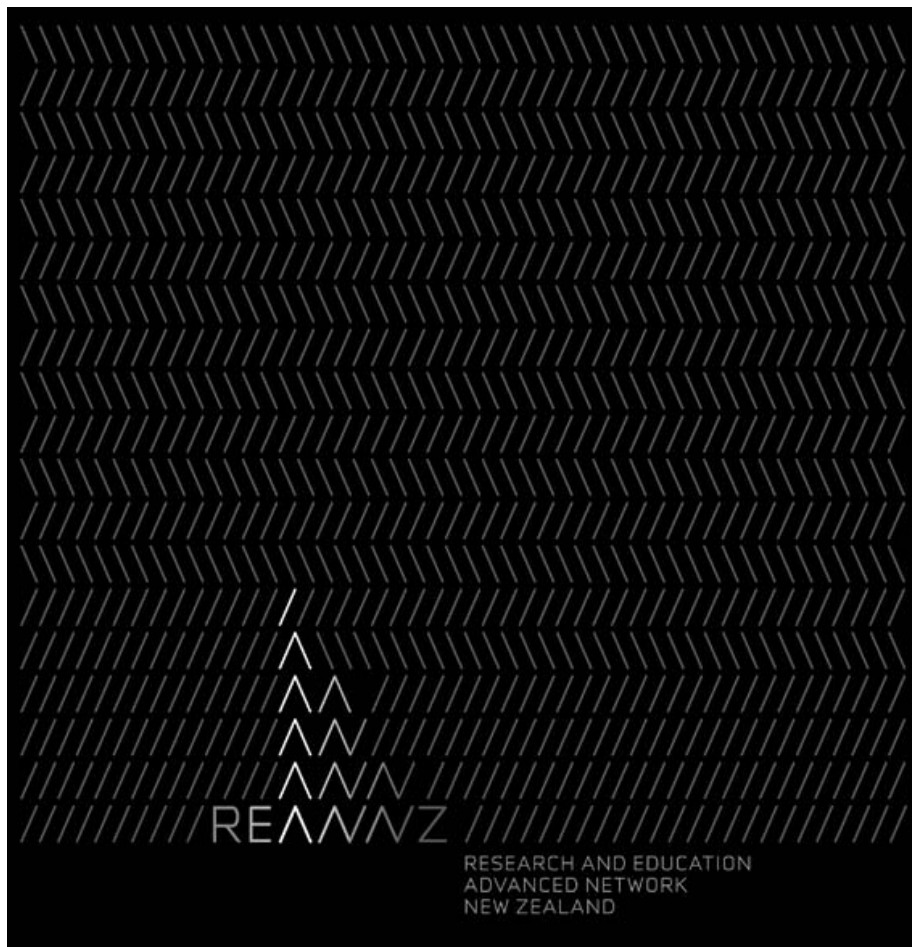


REANNZ

RESEARCH AND EDUCATION  
ADVANCED NETWORK  
NEW ZEALAND

# Research and Education Advanced Network New Zealand Statement of Intent 2007 – 2010

May 2007





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# 1. Introduction

This Statement of Intent is submitted by the Board of Directors of the Research and Education Advanced Network New Zealand Limited (REANNZ), pursuant to the Crown Entities Act 2004. It sets out the intentions and objectives for REANNZ for the period 1 July 2007 to 30 June 2010.

## Statement of responsibility

REANNZ is responsible for the prospective financial statements and statement of forecast service performance 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.

J. D. Watson  
Chair

D. J. Taylor  
Director

26 April 2007



## 2. Purpose, vision, mission and objectives

### 2.1. Purpose

REANNZ’s purpose is to establish, own and operate a high-speed data network dedicated to New Zealand’s research, education and innovation (R,E & I) sector. This network is called KAREN – the Kiwi Advanced Research and Education Network.

Detailed up-to-date information about KAREN, including its topology, service offerings, community and capability building activity, and connection information can be found on our website: [www.karen.net.nz](http://www.karen.net.nz)

### 2.2. Vision

*“A New Zealand where location, distance, size and wealth are no barrier to the exchange and development of ideas and knowledge, nationally or internationally.”*

One of the government’s three themes for the next decade is Economic Transformation: ensuring that the economy is better able to continuously adapt and lift its performance. Developing a high income, knowledge based economy requires accelerating the pace of change in our economy and becoming more internationally integrated. Economic transformation requires more globally competitive firms that are internationally connected and have productive and innovative workplaces which are supported by high standards in education, skills and research – and world class infrastructure.<sup>1</sup>

Cabinet agreed a set of indicators of a transformed economy. Three that are highly relevant to our vision are:

- people invest in acquiring new knowledge and skills and these are effectively applied in the workplace to create ideas and capitalise on them
- the country is fully hooked into the latest technology, ideas, knowledge and market trends through world class infrastructure, higher levels of investment in science and technology, and strong people-to-people connections.

<sup>1</sup> *Economic Transformation: securing New Zealand’s future prosperity*, Cabinet Policy Committee, 21 Aug 2006



- that has more globally competitive firms that are nimble, creative and innovative, investing more in science chains and technology, and linking into domestic and global value chains.

### 2.3. Mission

*“To make KAREN essential infrastructure for an innovative New Zealand.”*

Modern science, education and technical development is increasingly taking place via collaborations that extend beyond institutional, geographic and international boundaries. Vast datasets are shared and manipulated around the world, digitised reference and educational materials are being accessed remotely, and personal and group interaction is being made more real and intimate through applications like virtual reality, even from opposite sides of the globe<sup>2</sup>. This is made possible by high speed ICT infrastructure.

The government has identified the lack of such infrastructure, as constraining the development and introduction of advanced technology and business applications and, therefore, as a “critical issue” in achieving economic transformation<sup>3</sup>.

The implementation of KAREN is one of the agreed actions to address this issue. Our mission enshrines this action in an appropriate context.

### 2.4. Objectives

REANNZ’s objectives are clearly set out in the original Cabinet decisions and carried through in our constitution. They provide the touchstone by which we guide our existing activities and assess new activity.

REANNZ’s research, education and innovation objectives:

- Enable leading edge e-research.
- Facilitate universal connectivity throughout the New Zealand and international research and education community.
- Encourage broad participation by the research and education sector in New Zealand through accessible technology and reasonable pricing.

<sup>2</sup> Cabinet paper EDC (04) 69 *Establishment of an Advanced Network*

<sup>3</sup> *Giving Effect to the Five Themes*, Cabinet Policy Committee, 21 Aug 2006



- Connect research and education sector to the broader innovation community for pre-commercial, research and development based collaboration.
- Facilitate participation by multiple telecommunications sector partners so as to ensure the greatest possible flexibility for ongoing evolution.

REANNZ’s governance objectives

- Operate in a financially sustainable manner and manage foreseeable upgrades and increases in network capacity through the accumulation of reserves.
- Endeavour to transfer the Crown's share in the company to users (for example, tertiary education institutes and Crown research institutes) within a reasonable timeframe.



### 3. About research and education networks

#### 3.1. Operating environment

R&E networks are required as “modern science and education is increasingly taking place via collaborations that extend beyond institutional, geographic and international boundaries. Vast datasets are shared and manipulated around the world, digitised reference and education materials are being accessed remotely, and personal and group interaction is being made more real and intimate through applications like virtual reality, even from opposite sides of the globe.”<sup>4</sup>

Such networks, common overseas, are sometimes called ‘advanced networks’ as they typically offer advantages to their members over normal ‘commodity internet’ connectivity.

Due to the non-profit / public good aspect of the research, education and innovation sector, telecommunication infrastructure owners typically provide access to capacity (usually at the fibre optic cable or wavelength of light level) at a price much lower than the open market (or that could be obtained by any single institution). The R&E community therefore gains everyday access to communication speeds far quicker than the general populous.

Commercial networks focus on quality and reliability of service. As such, the ability to innovate with new network protocols (methods of transmitting data), optimise the network for certain events / activities and generally push the boundaries of what is capable with networking technologies is very restricted. An R&E network provides a test-bed for new communications technologies and approaches that may eventually become mainstream.

For users who have lower bandwidth requirements, eg schools, the advantage of an NREN lies in its focus on their sector and, frequently, with some national public good mandate to facilitate or provide (subsidised) connectivity.

Many countries have had an R&E network for well over a decade. They have been proven time and again as essential infrastructure; as a natural and neutral focus for collaboration and joint problem solving.

It is important that New Zealand has its own R&E network so that it can participate fully in an ever globalising economy and increase the value of its exports.

<sup>4</sup> Cabinet paper EDC (04) 69 *Establishment of an Advanced Network*

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### 3.2. Relation to the market

It is useful to compare KAREN’s position in relation to the private sector market in New Zealand with that of National Research and Education Networks (NRENs) and Advanced Networks in other jurisdictions.

A recent foresight project run by TERENA, the trans-European Research & Education Networking Association, examined the differences<sup>5</sup> between NRENs and Advanced Networks and standard commercial networks. The following factors were identified as important to such networks in retaining their distinctive value offering.

1. A successful NREN has to anticipate the needs of the users, otherwise will soon become obsolete.
2. NRENs need to focus on advanced services (e.g. wavelength switching), not commercially available.
3. NRENs need to keep full control of the networking infrastructure while at the same time leave it ‘open’<sup>6</sup>.
4. NRENs can/should invest in projects with higher risk and serve user’s minorities with specific needs which will never be a "business case".
5. NRENs should go up in the protocols stack creating economies of scale but be careful that moving up may change the operating model (millions of users instead of decades).
6. The Pan-European NREN solidarity, the collaborative role of European NRENs that allows for taking care of aspects like the digital divide or e2e [end to end] services also differentiate their role.
7. Marketing the mission and role of NRENs is important.
  - Comparing solely on a cost-basis, NRENs can be challenged since more than 90% of our users are “normal users” in terms of demand.

<sup>5</sup> <http://www.terena.nl/activities/earnest/ws1/presentations/EARNEST-CommonQuestions-GroupC-2006-05-23.ppt>

<sup>6</sup> ‘Open’ in this context means the technical and philosophical approach of the network operator is to not restrict multiple uses and service delivery options often pursued by vertically integrated telecommunication providers.



- Carriers/ISPs may be able to provide most of the services that an NREN provides but, unlike NRENs, will do so on a "project"-basis.

KAREN is consistent with this comparative analysis in that:

- it has been developed in advance of widespread availability of network-enabled research and education applications
- it offers an entire wavelength without capacity or usage charges
- it has open PoPs and maintains open layer-2 network protocols
- no institution could afford the national or international bandwidth KAREN provides
- it connects to many other NRENs on a peering equivalence basis and is focussed on universal connectivity for the R&E sector.

KAREN leverages the existing telecommunications market as it does not currently lay or own fibre or other transmission infrastructure. National and international connectivity are provided by the market – but on a non-standard basis. KAREN also leases space for some of its PoP premises from commercial providers.

KAREN can have a positive impact on the market in the way it directly procures connectivity and facilitates content and services. Our core national build has enabled TelstraClear’s business case for extending its fibre network into new areas, bringing competitive supply and significant cost savings to many of our members and other businesses already. As we address local access issues, it is likely that urban fibre networks and 3G mobile networks will see advantages from KAREN member demand.



## 4. Business model

REANNZ was established on the basis that:

- KAREN would be a simple ‘connectivity only’ network, ie it would not offer services like other NRENS
- that the income secured from its founder members, along with some speculative revenue from the Institutes of Technology & Polytechnics (ITPs) and others would ensure its viability
- the disbursement of the Capability Build Fund would form the bulk of the end-user engagement activities

The situation today is that:

- KAREN members are increasingly calling for REANNZ to deliver services and content to increase the value of KAREN to them
- that even by securing income from all possible member and partner sectors, we have a challenge to make KAREN financially sustainable
- a significant amount of outreach and end-user engagement is required beyond dispersing the Capability Build Fund.

Today’s situation requires a different delivery approach than that originally envisaged. We have consequently adopted the following internal business model.

### REANNZ BUSINESS MODEL





## 5. Measures of success

### 5.1. Long term

The long-term success metric for REANNZ is the continued existence of KAREN on a financially sustainable basis.

### 5.2. Medium term

Within three to five years we have to:

- Make KAREN essential infrastructure for research, education and innovation
- Achieve financial sustainability.

The first of these will be evidenced by:

- Recognition that membership is value for money
- An increasing number of users (human or otherwise) and their increasing dependence on KAREN to achieve their goals.

The second of these will be evidenced by:

- REANNZ securing enough income to meet its financial sustainability objective on an immediate and projected medium-term basis.
- The ability to open sensible discussions on the sale of REANNZ.

### 5.3. Short term

Detailed short-term financial and non-financial performance targets are contained in the *Forecast Statement of Service Performance* and *Prospective Financial Statements*, Annexes 1 & 2.



## 6. Accountability

### 6.1. Corporate

REANNZ is a Crown-owned company, listed under schedule 4 of the Public Finance Act 1989 and incorporated under the Companies Act 1993. Its shareholders are the Minister of Finance and the Minister of Research, Science & Technology. Each shareholder holds 500 shares on behalf of the New Zealand public.

Although REANNZ is not a Crown Entity listed under the Crown Entities Act, it is the intent of the shareholders that it act in a manner consistent with the Crown Entities Act. REANNZ is subject to the Official Information Act.

The functions and purpose of the company are contained in its Constitution and further augmented by this Statement of Intent and a Letter of Expectations from shareholding Ministers.

REANNZ’s performance is monitored by CCMAU, in conjunction with the Treasury. The Ministry of Research, Science & Technology and the Treasury maintain a policy oversight role on REANNZ's outcomes.

### 6.2. Stakeholders

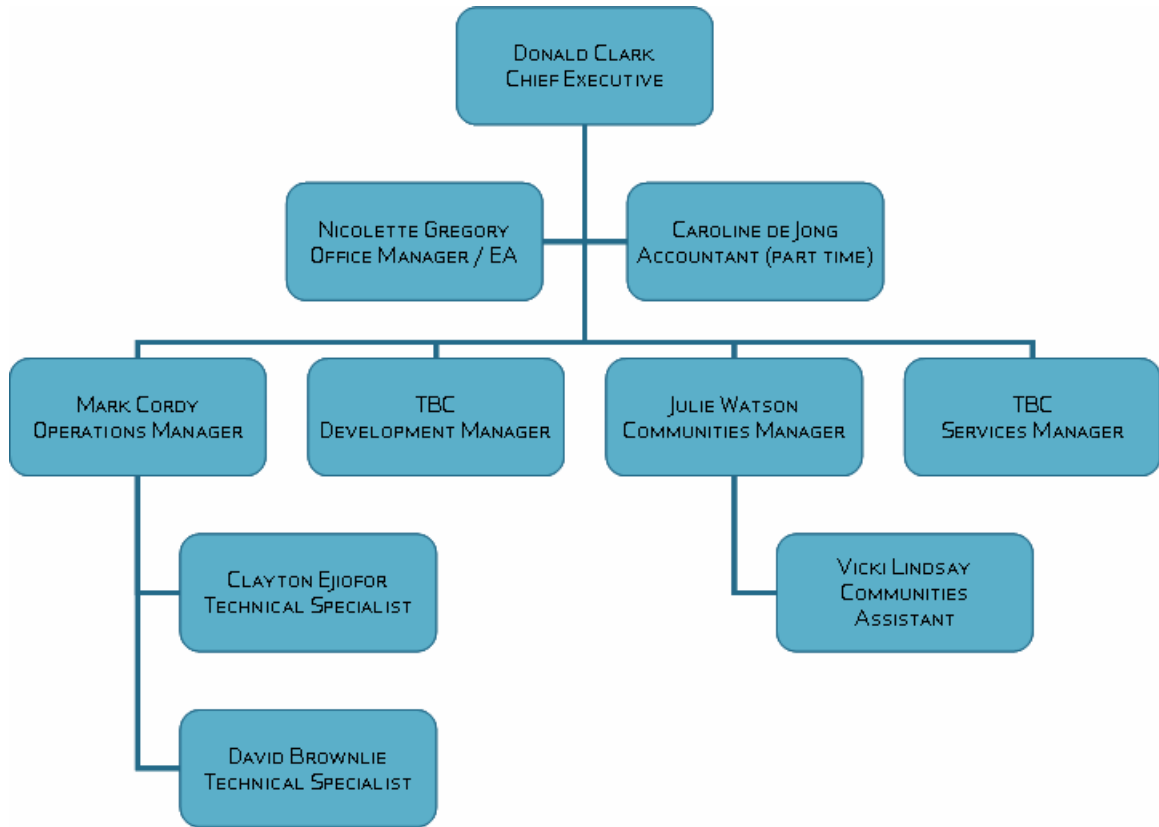
As a network company – both literally and figuratively – REANNZ has to retain excellent relationships with a large number of members, government and non-government stakeholders.

Key working relationships are important with:

- Ministry of Research, Science & Technology – as a funder, an policy agency
- Ministry of Economic Development – as a coordinator of telecommunications policy in government, and funder of digital strategy initiatives
- Ministry of Education – as policy and funding agency for schools and the tertiary education sector
- Supplier partners – the local and national fibre providers and local wireless providers.
- Internet community – InternetNZ and related community for their foresight and influence







The Operations team is focussed on management of our network contracts, connecting members and policy and planning for KAREN's use and evolution.

The Communities team is focused on catalysing a network-enabled community of researchers and educators in New Zealand with the capabilities to exploit KAREN and make it essential to their activities.

The Development team focuses on connecting new members to KAREN and strategic account management with Ministry of Education and the library sector.

The Services team will trial and implement profitable and cost-neutral services that enrich the user experience and increase the value proposition of a KAREN connection.

The formation of an Advisory Council for KAREN (ACK) is underway to provide advice to REANNZ on the development of KAREN and KAREN services. The ACK will have membership of each key market sector and policy agency.



### 7.3. Good employer

To ensure that REANNZ meets its Good Employer obligations prescribed in the Crown Entities Act Part 3 Section 1 18.

REANNZ will provide opportunities to:

- enhance the abilities of individual employees
- recognise the aims, aspirations and employment requirements of women, and the cultural differences of ethnic or minority groups.
- recognise the employment requirements of persons with disabilities.

REANNZ values the uniqueness of its employees and their contribution to the organisational personality and culture. Being responsive to a diverse range of viewpoints and cultures within the workplace will help the organisation develop a more representative workforce able to respond to an increasingly diverse NZ society.

### 7.4. Values

REANNZ's values underpin the way we work and do businesses.

#### Open

- we are transparent and upfront with our stakeholders and each other
- we seek out and embrace new ideas and thinking, irrespective of source
- our actions and our outputs are designed to be enabling, not restrictive
- we share our learning

#### Collaborative

- we work with others, nationally and globally, not in isolation
- we aren't constrained by roles and responsibilities
- our network is required to inter-connect and inter-operate

#### Advanced

- we build our community's capability to push back boundaries...
- our network is ahead of the game technically, operationally and commercially





## 8. Business and Statutory policies

### 8.1. Operating responsibilities

REANNZ will:

- consult with members on strategic development of the network
- maintain a network development plan and a network use policy (Network Access Policy)
- approve applications for network connections and participation of members, associates, or partners.
- review and set of tariffs in consultation with members
- set standards and protocols for use in the operation of the network
- manage relationships with overseas NRENs
- manage the capability build fund to enhance network use.

### 8.2. Statutory requirements

- REANNZ is established under the Companies Act 1993 and the Company, the Board, each director and each shareholder have the rights, powers, duties and obligations set out in the Act, except to the extent that they are negated or modified, in accordance with the Act, by the REANNZ Constitution.
- REANNZ acts as a 'good employer' where 'good employer' has the same meaning as in section 118 of the Crown Entities Act 2004 (CEA).
- Under the Public Audit Act 2001, the Controller and Auditor-General is to be the auditor of the Company.
- REANNZ is listed on Schedule 4 of the Public Finance Act 1989 (PFA), rather than as a Crown entity under the Crown Entities Act 2004 (CEA). This is to allow flexibility for the company to achieve one of its key objectives: to obtain a commitment from users to acquire the Crown's shares in the company.
- REANNZ is subject to certain sections of the CEA<sup>7</sup> as if it were a Crown entity, and also to the Official Information Act 1982 and the Ombudsmen Act 1975.

<sup>7</sup> As laid out in REANNZ's Letter of Expectations and Constitution

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- The Company must have regard to any whole of government direction that would apply to the company if it were a Crown entity company under the Crown Entities Act 2004.

### 8.3. Accounting policies

- The policies will be consistent with the legal requirements for the Companies Act (as amended) and any other relevant legislation
- Forecasts are made in accordance with generally accepted accounting policies and are compliant with NZIFRS.

### 8.4. Dividend policy

- It is one of the Objectives of the Company that it accumulates reserves to pay for foreseeable upgrades and increases in network capacity. Any funds surplus to this requirement will be distributed to the Company’s shareholders.
- REANNZ is not covered by s165 of Crown Entities Act which governs payment of surpluses.

### 8.5. International benchmarking

REANNZ will also contribute fully to both the Asia Pacific Advanced Networks (APAN) community<sup>8</sup> and TERENA compendium<sup>9</sup> surveys that will provide comparative data on our network and operations to most of the other NRENS globally. This will help inform the debate over KAREN’s strategic evolution.

The data available on other NRENS is not relevant as direct organisation performance comparators.

### 8.6. Output agreements

REANNZ has entered into two Output Agreements with the Ministry of Research, Science and Technology (MoRST)<sup>10</sup>:

1. for the governance and operation of REANNZ (network fund)
2. to support development of REANNZ members’ capabilities to access and use the Advanced Network (capability build fund)

The network fund provides the cash to purchase KAREN for an initial period, and support REANNZ’s ongoing corporate and network costs until KAREN is sustainable from member income. Total payments from MoRST to REANNZ during 2007/08 are scheduled to be \$2.7m (inc GST).

<sup>8</sup> <http://www.apan.net/documents/compendium2007.pdf>

<sup>9</sup> [http://www.terena.org/activities/compendium/2006/compendium06\\_web.pdf](http://www.terena.org/activities/compendium/2006/compendium06_web.pdf)

<sup>10</sup> <http://www.karen.net.nz/documents/>

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## 9. Annex 1: Forecast Statement of Service Performance 2007-2010

### 9.1. Short-term performance measures

REANNZ has identified the main financial and non-financial performance measures (below) by which our performance in the coming three years may be judged. These allow progress towards our medium-term performance measures (outlined in section 5.2) to be tracked.

We have applied target values to each measure for the three year period of this Statement of Intent. Some measures have the same value for each year and are given only once. The measures are grouped by our five business areas.

### 9.2. Key measures for 2007/008

A subset of the measures below is of particular importance for the first year of this forecast.

- *Number of users / connections* – determines progress in building the number of people who can have a KAREN experience
- *Event index* – demonstrates our outreach activities are effective
- *An efficient and effective Capability Build Fund* – fulfils our Output Agreement and helps to build sector capability to better leverage KAREN
- *Sector income* – underlies the financial progress of the company.

### 9.3. REANNZ performance measures 2007-2010

#### Network operations

Reliability is the underpinning of Network operations performance metrics: both in a technical and customer service perspective. Only by operating highly reliably will members be able to trust KAREN as an essential service and see it as value for money.

<b>Number of users /connections</b>	<b>21/47</b>	<b>129/60</b>	<b>1041/267</b>
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This reflects ultimately on perceived value for money – the more organisations that join a network, the more valuable the network is to the connected parties. The target represents all of the Universities, Crown research institutes in almost all locations and the National Library along with some new associate and partner connections. 2008/09 figures based on adding 100 schools with 5 connections and 8 content/service partners with a connection each. 2009/10 figures based on 1000 schools with 200 connections and 20 content/service partners with a connection each.



<b>Average Traffic load over the domestic network</b>	<b>0.5-1%</b>	<b>1-5%</b>	<b>5-10%</b>
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Increasing traffic loads indicate an increasing dependency of KAREN as essential infrastructure. The target represents an average of 100Mb/s of traffic continuously flowing over the network.

<b>Network availability</b>	<b>99.9% 12 month rolling average</b>
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If KAREN does not have a very high availability, members will cease to consider it a good investment and will not trust it. Although we have no SLA guarantees, the expectation from all parties is of a highly reliable network. The target represents a network with no more than 8.76 hours of downtime per year.

<b>Services availability</b>	<b>99.9% 12 month rolling average</b>
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Any services that KAREN introduces (as opposed to third party provided services) must have the same reliability expectations on them as the core network. The target represents services having no more than 8.76 hours of downtime per year.

<b>International Peers IPv4/IPv6</b>	<b>7/5</b>	<b>9/5</b>	<b>9/7</b>
<ul style="list-style-type: none"> <li>• <b>Asia Pacific</b></li> <li>• <b>Europe/Middle East/Africa</b></li> <li>• <b>North America</b></li> </ul>	<ul style="list-style-type: none"> <li>• <b>2/2</b></li> <li>• <b>2/1</b></li> <li>• <b>3/2</b></li> </ul>		

As more peering relationships are put in place, the network reach extends, and more overseas network members become aware of New Zealand’s availability to participate in new research and education collaborations. The target represents >90% of the North American and European routes, and 33% of the potential peering partners at the Pacific North-West GigaPOP in Seattle.

<p><b>Annual Stakeholder Survey results in the areas of</b></p> <ul style="list-style-type: none"> <li><b>a. Helping members to connect</b></li> <li><b>b. Responsiveness and behaviour of help desk and support staff</b></li> <li><b>c. Research, education and innovation opportunities missed because the network did not support the necessary protocols/functions</b></li> </ul>	<p><b>80% excellent or very good</b></p> <p><b>80% excellent or very good</b></p> <p><b>0</b></p>
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An important part of the trust underpinning the KAREN brand is the responsiveness and expertise of the operational side of the business. The target represents a generally accepted standard for service excellence.

**Communities**

The communities and capability metrics are there to provide solid evidence that KAREN is becoming more essential to an ever increasing user base.

<b>Members with KAREN champions in place and active</b>	<b>70%</b>	<b>80%</b>	<b>90%</b>
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Appointing a KAREN Champion demonstrates an understanding by a member of the value of their investment in KAREN and the need for an internal approach to maximise that investment. KAREN champions also provide leveraged resource to REANNZ in its capability building activities. This target represents international good practice.

<b>Projects that could not practically have occurred without KAREN</b>	<b>1 per institution</b>	<b>3 per institution</b>	<b>4 per institution</b>
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We are not concerned with substitution of existing network capabilities for KAREN but with people able to work differently and on new activities now that they have KAREN. The higher this figure the greater the inference that KAREN is essential infrastructure. A target of 1 per institution supports the need for wide recognition of KAREN’s value.

<b>Unique visitors to karen.net.nz</b>	<b>20,000 pa</b>	<b>40,000 pa</b>	<b>50,000 pa</b>
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The flexibility and low cost of our web channel means we intend to maximise it in our communications. Unique visitor numbers provide a reasonable proxy for the relevance and value of the site to the KAREN community. This represents steady growth of 10% month on month from current levels.

<b>Active KAREN community subsites</b>	<b>4</b>	<b>8</b>	<b>10</b>
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An engaged and active community of interest indicates both that we are growing capability and that REANNZ is facilitating that growth. This level is realistic given the number of connected members and likely interest groups. Key to success is to ensure these subsites are active and relevant – even if this requires some seeding by REANNZ.

<b>Event index (see below)</b>	<b>≥ n for all events</b>
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This metric demonstrates that the events we hold are of a high quality, highly relevant and are reaching an ever a widening audience.



$$Event\ index = \sum_{i=1}^n (person\ score \times [quality \cdot relevance])$$

where :

*person score* = 1 for regular attendee, 3 for occasional attendee, 5 for new attendee

*quality & relevance* = 0 → 1

<b>Media uptake on KAREN activities and development</b>	<b>9 positive articles in general</b>  <b>12 positive articles in specialist media</b>
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Covering the specialist and wider media achieves several goals, including: reinforcing the value of our members investment; stimulating new usage ideas; support of business development (connection) activity; and reinforcing KAREN as essential infrastructure. Specialist media are more likely to cover KAREN activities and an appropriately higher target of one positive article per month has been set compared with the general media.

<b>An efficient and effective Capability Build Fund</b>	<b>Funds dispersed in accordance with Output Agreement standards<sup>11</sup> and financial forecast</b>
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The Output Agreement for the CBF contains clear outcomes sought from the fund dispersal. Our Plan has an estimate of the commitment profile that we have judged optimal.

**Content & services**

Content and services performance metrics have a clear tie to ensuring our members see KAREN as “value for money”. As services also have the potential to generate income and contribute to KAREN’s financial sustainability, these metrics also have a financial component.

<b>New service trials successfully completed</b>	<b>4</b>	<b>4</b>	<b>4</b>
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New service trials are an effective manner to explore new service or connection delivery options without fully committing REANNZ to a particular direction. They can allow people to experience KAREN-enablement and increase demand for service. Completing one trial per quarter is a suitable workload to ensure quality is maintained.

<b>Publication of a service and content roadmap</b>	<b>By 30 June annually</b>
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<sup>11</sup> <http://www.karen.net.nz/documents/>





**Management & governance**

The management & governance metrics are there to ensure a solid and reliable underpinning base to our operations to allow us to achieve our medium-term goal of sustainability (from a business perspective).

<b>Reports delivered on time</b>	<b>100%</b>
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Quarterly reports, SolIs, Audit requirements, Output Agreement reports and business plans all delivered on time to ensure efficient operational reporting and accountability. All reporting obligations should be met on time, and to a quality acceptable by the Board.

<b>Legislative and contract compliance</b>	<b>100%</b>
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REANNZ has the legislative obligations of any Company, coupled with various public sector statutory obligations. REANNZ also has several major underpinning contracts. All these obligations require management to avoid risk.

<b>Forecast cash position</b>	<b>+/- 10%</b>
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An ability to project REANNZ’s cash position and thus financial viability is a key metric for the Board, shareholders and Members. REANNZ faces increasing uncertainty as its reliance on Crown income diminishes; and new income routes are explored.

<b>Audit management report performance</b>	<b>At least 2 out of 3 categories rated ‘good’ or better</b>
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The annual audit provides a comprehensive review of the quality of REANNZ’s processes and systems. The audit provides assurance that the Company has appropriate risk management and operational controls in place. ‘Good’ is the second highest rating given by the Office of the Auditor General.

<b>Staff turnover</b>	<b>1 -2 people</b>
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As a small company, a climate survey of staff is not practical. Maintaining a moderate staff turnover is a proxy indicator for a positive staff environment.

<b>Carbon footprint</b>	<b>5%-10% reductions pa in carbon from travel</b>
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All organisations have a responsibility to minimize their environmental impact. We will leverage video conferencing and other remote collaboration techniques.

## 10. Annex 2: Prospective financial statements

### 10.1. Prospective statement of Financial Performance

#### PROSPECTIVE INCOME STATEMENT RESEARCH & EDUCATION ADVANCED NETWORK NZ LTD

(FOR THE YEAR ENDED 30 JUNE)	07/08 (\$000)	08/09 (\$000)	09/10 (\$000)
<b>CAPABILITY BUILD FUND</b>			
<b>Revenue</b>			
Crown income	1,471	1,421	-
Other income	-	-	-
<b>Total Capability Build Fund Income</b>	<b>1,471</b>	<b>1,421</b>	<b>-</b>
<b>Expense</b>			
Capability Building Fund Transfer to REANNZ	135	105	-
Development Projects	2,788	1,341	-
TCL Capability Development co-funding	-	-	-
Workshops / workgroups	60	70	-
External advice	55	20	-
Other operating expense	193	209	-
<b>Total Capability Build Fund Expenses</b>	<b>3,231</b>	<b>1,745</b>	<b>-</b>
<b>Net Surplus Capability Build Fund to Public Equity</b>	<b>(1,760)</b>	<b>(324)</b>	<b>-</b>
<b>REANNZ</b>			
<b>Revenue</b>			
Crown income	247	2,000	5,000
Capability Building Fund Transfer from CBF	135	105	-
Network Income	4,064	4,756	5,985
Other income	219	146	124
<b>Total REANNZ Revenue</b>	<b>4,665</b>	<b>7,007</b>	<b>11,109</b>
<b>Expense</b>			
Audit	25	26	27
Board Costs	49	54	56
Depreciation	160	167	125
Directors Fees	150	156	162
External advice	82	63	64
Network costs - Managed services	9,352	9,750	8,449
Network costs - Operating lease	63	63	63
Personnel costs	1,394	1,436	1,490
Rent	55	55	60
Other operating expenses	699	597	635
<b>Total REANNZ Expenses</b>	<b>12,029</b>	<b>12,366</b>	<b>11,132</b>
<b>Net Surplus REANNZ to Public Equity</b>	<b>(7,364)</b>	<b>(5,359)</b>	<b>(22)</b>

## 10.2. Prospective statement of Financial Position

**PROSPECTIVE BALANCE SHEET****RESEARCH & EDUCATION ADVANCED NETWORK NZ LTD**

<b>(AS AT 30 JUNE)</b>	<b>07/08</b>	<b>08/09</b>	<b>09/10</b>
	<b>(\$000)</b>	<b>(\$000)</b>	<b>(\$000)</b>
<b>CURRENT ASSETS</b>			
Cash at Bank	1,174	2,253	692
Debtors and receivables	-	-	-
<b>Total Current Assets</b>	<b>1,174</b>	<b>2,253</b>	<b>692</b>
<b>NON-CURRENT ASSETS</b>			
Fixed assets	776	609	759
Prepaid network costs	13,878	7,271	8,503
<b>Total Non-Current Assets</b>	<b>14,654</b>	<b>7,880</b>	<b>9,262</b>
<b>TOTAL ASSETS</b>	<b>15,828</b>	<b>10,133</b>	<b>9,954</b>
<b>CURRENT LIABILITIES</b>			
Creditors and payables	333	249	93
Employee entitlement	7	7	7
Net GST Payable	(71)	-	-
<b>Total Current Liabilities</b>	<b>269</b>	<b>256</b>	<b>100</b>
<b>NON-CURRENT LIABILITIES</b>			
	-	-	-
<b>TOTAL LIABILITIES</b>	<b>269</b>	<b>256</b>	<b>100</b>
<b>NET ASSETS</b>	<b>15,559</b>	<b>9,877</b>	<b>9,854</b>
<b>Public Equity</b>	<b>15,559</b>	<b>9,876</b>	<b>9,854</b>

10.3. Prospective statement of Changes in Equity

**PROSPECTIVE STATEMENT OF THE MOVEMENT IN PUBLIC EQUITY OF RESEARCH & EDUCATION ADVANCED NETWORK NZ LTD**

(FOR THE YEAR ENDED 30 JUNE)	07/08 (\$000)	08/09 (\$000)	09/10 (\$000)
<b>PUBLIC EQUITY</b>			
<i>Capability Build fund</i>			
Opening Balance - CBF	430	324	(0)
Retained earnings for the year	(106)	(324)	-
	<u>324</u>	<u>(0)</u>	<u>(0)</u>
<i>REANNZ Fund</i>			
Opening Balance - REANNZ	15,947	15,235	9,877
Retained earnings for the year	(711)	(5,359)	(22)
	<u>15,235</u>	<u>9,877</u>	<u>9,854</u>
<b>TOTAL PUBLIC EQUITY</b>	<b><u>15,559</u></b>	<b><u>9,876</u></b>	<b><u>9,854</u></b>

## 10.4. Prospective statement of Cash Flows

**PROSPECTIVE INCOME STATEMENT  
RESEARCH & EDUCATION ADVANCED NETWORK NZ LTD**

(FOR THE YEAR ENDED 30 JUNE)	07/08 (\$000)	08/09 (\$000)	09/10 (\$000)
<b>Cash Flows from Operating Activities</b>			
<u>Cash was provided from:</u>			
Crown Income	1,655	1,599	-
Crown Income - Network build fund	278	2,250	5,625
Network income	4,572	5,350	6,733
Interest received	199	65	124
Other income	23	92	-
	6,726	9,356	12,482
<u>Cash was applied to:</u>			
Employees	(1,300)	(1,349)	(1,401)
Suppliers	(7,786)	(6,385)	(4,824)
Network payments	(1,101)	-	(6,407)
Goods and Services tax	(271)	(543)	(1,101)
	(10,458)	(8,277)	(13,734)
<b>Net Cash Flows - Operating Activities</b>	<b>(3,732)</b>	<b>1,078</b>	<b>(1,251)</b>
<b>Cash Flows from Investing Activities</b>			
<u>Cash was provided from:</u>			
Sales of assets	-	-	-
<u>Cash was applied to:</u>			
Purchase of assets	(259)	-	(309)
<b>Net Cash Flows - Investing Activities</b>	<b>(259)</b>	<b>-</b>	<b>(309)</b>
<b>Cash Flows - Financing Activities</b>			
<u>Cash was provided from:</u>			
Crown - capital injection	-	-	-
<u>Cash was applied to:</u>			
Crown - capital withdrawal	-	-	-
<b>Net Cash Flows - Financing Activities</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Net Cash Inflow/(Outflow)</b>	<b>(3,991)</b>	<b>1,078</b>	<b>(1,561)</b>
Opening Balance	5,165	1,174	2,253
<b>Closing Balance</b>	<b>1,174</b>	<b>2,253</b>	<b>692</b>

REANNZ Statement of Intent 2007-2010



10.5. Statement of significant assumptions

Overall, the biggest drivers of REANNZ’s forecast financial statements are:

- 1. connection (or other) income from the various member sectors
- 2. renewal costs of the network contracts (corporate costs are significantly eclipsed by these)

Given that REANNZ’s current network cost base has been fixed (and its corporate cost base largely fixed), increasing connection and sector income is the most important driver from a fiscal sustainability perspective for the period of this plan. Unfavourable variances in network income will flow directly to REANNZ’s cash position.

Financial position

- For forecasting purposes, we have assumed an average of one month of the previous year’s creditors and debtors at year end.

Income

- CRI and University income is forecast at pre-agreed rates, increasing by 10% every three years from contract signing.
- Other sector income increases by 10% every three years after initially occurring.
- Crown grant income is forecast consistently with REANNZ’s output agreements with MoRST.
- Non-university TEI connections, associate and partner connection income increases to \$3.7m by 2011.

Network costs

- A NZD:USD 20 year average rate of 0.5770 has been used for international connection costs.
- The current 36 month international connectivity contract is renewed on the same cost basis, ie a large payment in mid 2009 followed by regular monthly payments.
- The current 48 month national connectivity contract is renewed on the same cost basis in late 2010, ie a large one-off payment.

Corporate costs

- General cost escalation is factored at 3.8% per annum on most items.





## 11. Annex 3: Statement of accounting policies

### Reporting entity

The reporting entity is the Research and Education Advanced Network New Zealand Limited ("REANNZ"), a not-for-profit Company, incorporated in New Zealand entirely owned by the Crown. The principal activity of REANNZ is the establishment, ownership, and operation of a high speed communication network for the research and education sector.

REANNZ has designated itself as a public benefit entity. Public benefit entities are defined as "Reporting entities whose primary objective is to provide goods or services for community or social benefit and where any equity has been provided with the view of supporting that primary objective rather than for a financial return for equity holders".

### Basis of preparation

The prospective financial statements have been prepared on a historical cost basis except for the revaluation of certain items for which accounting policies are stated below.

Cost is based on the fair value of the consideration given in exchange for assets.

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

Accounting policies are selected and applied in a manner which ensures that the resulting financial information satisfies the concepts of relevance and reliability, thereby ensuring that the substance of the underlying transactions or other events is reported.

### Significant accounting policies

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

#### Revenue recognition

Revenue comprises the fair value of the consideration received or receivable.

Grant income is recognised as it is received or receivable by REANNZ from the Crown where conditions relating to the grant are satisfied. Where there are no conditions specifically relating to the operating activities other than the requirement for REANNZ to own, and operate a high speed communication network for the research and education sector, grant income is recognised as it is received or receivable.

Interest revenue is recognised using the effective interest method.

#### Property, plant and equipment

Property, plant and equipment is stated at cost or valuation less accumulated depreciation and impairment. 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.

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

Assets under construction are held in work in progress until they are completed when they will be transferred to the appropriate category of property, plant and equipment.



Depreciation is calculated on a straight-line basis on property, plant and equipment (excluding work in progress) once in the location and condition necessary for its intended use so as to write off the cost or valuation of the property, plant and equipment over their expected useful life to its estimated residual value. The estimated useful lives, residual values and depreciation method are reviewed at the end of each annual reporting period and adjusted if appropriate.

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

Leasehold improvements	10 years
Routers & switches	5 years
Information technology equipment	3 years
Information technology software	3 years
Office equipment	5 years

### Prepayments

REANNZ has entered into agreements for managed services for which they have paid in advance. These upfront payments are recognised as prepayments and will be recognised as an expense on a straight line basis over the period of the agreement.

REANNZ has also entered into agreement for the lease of equipment for which they have paid in advance or have paid for assets of third parties (which do not belong to REANNZ) in return for space to hold assets under POP agreements. These agreements do not transfer the risks and rewards of ownership of the asset to REANNZ and therefore have been accounted for as operating leases and treated as a prepayment. The lease payments will be recognised as an expense on a straight line basis over the period of the lease.

### 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 financial performance in equal instalments over the lease term when the leased items are in use.

Where the leased items are not in use, the operating lease payments will be treated as a prepayment until the items are being used to derive income. These prepayments are released to the statement of financial performance on a straight line basis over the period of the remaining operating lease term.

### Impairment

At each reporting date, the Directors review the carrying amount of the assets to determine whether there is any indication that those assets have suffered an impairment loss. If any such indication exists, the recoverable amount of the asset is estimated in order to determine the extent of the impairment loss (if any).

If the recoverable amount of an asset is less than its carrying amount, the asset is written down to its recoverable amount. The impairment loss is recognised as an expense in the statement of financial performance.

Where an impairment loss subsequently reverses, the carrying amount of the asset is increased to the revised estimate of its recoverable amount, but only to the extent that the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognised for the asset in prior years. A reversal of an impairment loss is recognised in the statement of financial performance immediately, unless the relevant assets is carried at fair value, in which case the reversal of the impairment loss is treated as a revaluation increase.



**Financial assets**

Investments are recognised and derecognised on trade date where purchase or sale of an investment is under a contract whose terms require delivery of the investment within the timeframe established by the market concerned, and are initially measured at fair value, net of transaction costs.

Other financial assets are classified into the following specified categories: “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 in banks, other short-term highly liquid investments with original maturities of three months or less, net of outstanding bank overdrafts. Bank overdrafts are shown within borrowings in current liabilities in the statement of financial position.

**Receivables**

Accounts receivable are recognised initially at fair value and subsequently measured at amortised cost, less provision for impairment. A provision for impairment of accounts receivable is established when there is objective evidence that REANNZ will not be able to collect all amounts due according to the original terms of receivables.

**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.

**Derivatives**

REANNZ enters into a variety of derivative financial instruments as part of its normal operations to manage its exposure to foreign exchange rate risk, including forward foreign exchange contracts.

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

Financial instruments that do not constitute hedges are stated at fair value and any resultant gain or loss recognised in the Statement of Financial Performance.

**Employee entitlements**

Provision is made in respect of liability for annual leave when it is probable that settlement will be required and they are capable of being measured reliably.

Provisions made in respect of employee benefits expected to be settled within 12 months of reporting date, are measured at the best estimate of the consideration required to settle the obligation using the current remuneration rate expected.

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



**Taxation**

Based on legal advice received by the directors (subject to verification) REANNZ is a public authority for tax purposes and therefore not liable for income tax. This advice has not been verified and as such the tax position of REANNZ is still uncertain.

**Statement of cash flows**

The Statement of Cash Flows is prepared exclusive of GST, which is consistent with the method used in the Statement of Financial Performance.

Definitions of the terms used in the statement of cash flows 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 the entity 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 the entity.

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

**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 Financial Performance.

**Goods and Services Tax (GST)**

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

**Standards or interpretations not yet effective**

Various standards, amendments and interpretations have been issued by the Accounting Standards Review Board but have not been adopted by REANNZ as they are not yet effective.

Application of these standards, amendments and interpretations is not expected to have a material impact on REANNZ’s financial position and results in the period of initial application.

**Compliance**

REANNZ’s prospective financial statements have been prepared in compliance with FRS-42 and in accordance with generally accepted accounting principles and are compliant with NZIFRS.