



Annual Report 2014

Vision: A communications environment that enriches the social, cultural, customs and commercial fabric of Vanuatu



Telecommunications &
Radiocommunications
Regulator

30th June 2015
Honourable Prime Minister

Honourable Sato Kilman Livtunvanu,
Minister for Telecommunications/ICT
PMB 9057 Port Vila

Dear Honourable Prime Minister,

Re: Telecommunications and Radiocommunications Regulator (TRR) 2014 Annual Report

I am pleased to provide you with our 2014 Annual Report as Prime Minister, and Minister responsible for Telecommunications/ICT. TRR is an independent statutory body of the Government. It is, however, under section 11 of the Telecommunications and Radiocommunications Regulation Act 2009 (the Act) obliged to provide an Annual Report for each calendar year to the Honourable Minister. The report is to include, but is not limited to, a summary of the activities of TRR, audited financial statements including an auditor's report, a list of entries and deletions in the Register in the preceding year, a summary of material litigation involving TRR, and list of consultants and advisors retained by TRR.

This Annual Report fulfils that legal requirement and also provides detailed information on our activities throughout year, 2014. A soft copy of this Annual Report can also be found at www.trr.vu for our stakeholders, including service providers and the public at large, to view.

2014 was a fast paced year with significant development and rapid growth of the telecommunications/ICT industry and service provision; particularly in terms of increased competition and growth of internet services. There has been an increased pace in competitive service provision, growth in internet services in areas where there is internet access, and a roll out of telecommunications services to underserved and unserved areas; facilitated and stimulated through the Government's innovative Universal Access Policy initiative, together with the opportunity to have high speed service provision access through the submarine cable launched early this year. TRR has played its part and fulfilled its role towards this, and in ensuring appropriate legislative instruments were developed, licenses were granted or revoked, and effective and appropriate monitoring of the industry occurred, to ensure a fair and competitive environment for our consumers is maintained.

I wish to congratulate and recognize the Government of the Republic of Vanuatu for its vision and forward thinking in liberalizing the telecommunications market and the development of its telecommunications/ICT policies. I thank the Prime Minister's Office as the Ministry responsible for telecommunications and ICT, and the Office of the Government Chief Information

Officer as Government technical advisors, and other Government departments and stakeholders, including the service providers, for the continued support rendered to TRR in 2014. Together we work co-operatively towards achieving the requirements of the objectives of the Government's telecommunications policies, the object of the Act, whilst maintaining TRR's independence.

TRR will perform at its best to deliver on these Government objectives, and for its stakeholders and the citizens of this country. TRR is highly recognized amongst its peers as the leading Regulator in the Pacific Region, and my aim for TRR is to build on its strengths to date towards the provision of a regulatory service that is exemplary.

Liberalization of the telecommunications market in Vanuatu has been supported by the Australian Government and the World Bank who have provided significant donor finance for capacity building and expert technical assistance to TRR towards effective regulation of the telecommunications and ICT sector industry, as a whole, TRR's sustainability and the sustainability of a competitive market sector, which I am thankful for.

As Regulator, I am supported by a team who are growing in confidence and advancing their experience and knowledge across the broad range of TRR's responsibilities as set out in the Act, and the growing Work Plans and initiatives we wish to achieve.

I look forward to briefing you, on request, in respect of this Annual Report and you can keep abreast of market developments and TRR's activities by accessing our website, and through the Reports which will be provided regularly to you throughout the year 2015.

It is with pleasure that I provide you with TRR's seventh Annual Report.

Yours Sincerely,



Ronald Box
Telecommunications and Radiocommunications
Regulator



In accordance with section 11 of the Telecommunications and Radiocommunications Regulation Act 2009 (hereinafter referred to as "the Act") the Regulator must provide the Minister with an Annual Report as follows:

11 Annual report

- (1) The Regulator must provide to the Minister an annual report including, but not limited to:
 - (a) a summary of the activities of the Regulator, and
 - (b) such financial statements and auditor's reports as are required by this Act or other law; and
 - (c) a list of all entries and deletions to the Register in the preceding year; and
 - (d) a summary of material litigation involving the Regulator; and
 - (e) a list of consultants and advisors retained by the Regulator and a description of the matters in relation to which they have consulted or advised.
- (2) A contravention of subsection (1) is deemed to be a serious breach of duty by the Regulator.
- (3) The annual report provided to the Minister pursuant to subsection (1) must be made available to the public on the website.

This Annual Report 2014 is provided to fulfil this obligation.

Content

A message from the Regulator		6
2014 Highlights		9
1	About TRR	14
2	World Bank and Donor Partnership	21
3	Government Working Relations	22
4	Universal Access and Services	24
5	Telecommunications Market and Competition	33
6	Litigation	41
7	Orders, Decisions and Determination made by TRR	42
8	Telecommunications and Radiocommunications: Technical and Engineering	44
9	Internet Governance	54
10	Consumer Activities	57
Financial Statement and Auditor's report		63
Annex 1		
	Register of Consultants 2014	66



Message from the Regulator

This year saw TRR deliver on many key programs and focus significantly on implementation of the Government's innovative Universal Access Policy (UAP), and heighten its consumer awareness and protection mechanisms; particularly through our finalization of a Consumer Protection Regulation.

I am pleased to advise that we have finalized, for printing, our 2015 – 2017 Strategic Plan which outlines TRR's Vision, Mission, and our Long Term Goals, and Objectives; our first such Plan. It provides a 'big picture of actions and TRR's intentions' that we have set for implementation and achievement.

2014 was a fast paced year with significant development and rapid growth of the telecommunications/ICT industry and service provision; particularly in terms of increased competition and growth of internet services. This challenged TRR and I am proud to say we met those challenges head on with enthusiasm, resilience, courage, determination and appropriate responses. We did so in an open, cooperative, transparent, effective, light-touch, but firm and fair approach that TRR has shown now since late 2012.

TRR welcomed the opportunity to meet the (then) Prime Minister and Minister responsible for Telecommunications/ICT and his delegation, during a visit to TRR in February, 2014. TRR was pleased to brief the delegation on TRR's role in the facilitating the ongoing competitive development and regulation of the telecommunications sector in Vanuatu, TRR's key priorities, and the initiatives and projects it put in place through its 2014 and beyond Work Plan. This was a valuable occasion for TRR; given it was the first such visit since TRR's establishment.

2014 was also an interesting and exciting year for the sector given that Vanuatu was connected to the fibre optic submarine cable that connects Vanuatu to the Southern Cross Cable via Fiji. Since its independence in 1980 (and prior to that) Vanuatu has only had Satellite

link access as its international gateway to the world. The arrival of the submarine cable in January 2014, however, means that Vanuatu is now able to use both satellite and the submarine cable for its international gateway connections.

The positive impact of connection to the submarine cable in the retail services market is evident and profound. Internet speeds capacity, and subscriptions have increased significantly. Broadband internet prices have dropped by 70 percent and internet subscriptions have increased by a noteworthy 89% compared to the previous year. More, wider and additional services and upgrades have been made within the internet market. There was also an increase in subscriptions for mobile retail services by 25% compared with 2013.

The telecommunications sector plays a vital role in contributing 5.3 percent to the country's GDP growth, and TRR understands and recognizes its key role and regulates the sector, accordingly and carefully, to provide the conditions for sustained and active competition.

2014 saw TRR's implementation of and assistance with three key Policy instruments for the telecommunications/ICT sector: the National ICT Policy, the Universal Access Policy (UAP) and the Cybersecurity Policy. These policies

have enhanced the role of TRR as a regulatory body, as we are implementing the UAP, fulfilling our obligations under the National ICT Policy and are assisting the Government with the drafting of its Cybercrime Legislation. We also increased our focus and improved our responsiveness on consumer and stakeholder issues, and have set in place a number of required regulatory instruments.

Our forward looking vision draws on our achievements from the past, while embracing and having an eye to the future; and, particularly, the needs of Vanuatu's citizens. The ICT sector is the fastest growing sector worldwide and Vanuatu cannot rest on its laurels, in any way, and we cannot watch or let progress pass us by in comparison with the rest of the world.

We understand the importance of telecommunications/ICT tools to support learning, positively contribute to and assist daily operations and personal use, and which are required for efficiently and effectively conducting business in Vanuatu. We also recognize the important role played by this sector in enabling our connection with families throughout our vast island geography that is held together by the vital mobile telephony system.

Our increased consumer focus in 2014 included a variety of TRR actions, tasks and accomplishments. TRR collaborated with OGCI to enable a very successful national celebration of ICT Day on May 17th; in recognition of the International Telecommunication Union's (ITU's) World Telecommunication and Information Society Day and National ICT Day. TRR also conducted a variety of ICT awareness programs with rural communities on the islands of Epi, Santo, Malekula, Tanna and North Efate to raise awareness and share and discuss the benefits of being 'connected' to telecommunications services and the internet. Of particular importance is our finalization of a Consumer Protection Regulation which safeguards consumers and will be a powerful tool to ensure consumers of telecommunications services in Vanuatu have rights, a voice that must be heard and respected, are protected and TRR can monitor compliance with it. It will be implemented in Q1 of 2015.

TRR's highest priority program remains as implementation of the Government's UAP. We are committed to that and have a strong focus and priority given to a range of initiatives reported on in this Annual Report. The UAP recognizes TRR's prime UAP role as the implementing agency. The UAP requires, by 1 January 2018, that 98 percent of the population of Vanuatu must have access to telecommunication services. The focus of that requirement is on unserved and underserved rural and remote areas and, particularly, with a need to provide benefit to education, health services and

public offices. Through this outreach program Vanuatu communities will have access to, and be able to gain a better appreciation of, the use of telecommunications/ICT tools and services, and the significant benefits that use of the internet can provide.

We conducted rudimentary drive and manual call tests to confirm coverage of mobile services in some UAP identified sites in Vanuatu, and undertook some basic testing for reference and assistance to TRR in undertaking a mobile service coverage audit in 2015.

While we understand that the internet provides us with a limitless source of information and connects us to the wider world, the dangers of exposing young people to inappropriate content or information are well and truly recognized. In this respect TRR plays, and will continue to play, along with Government, the service providers and Agencies/interested parties, and the media, a key role towards protection, safety and support mechanisms, and we have developed our plans towards this objective.

To cater for awareness and the protection and safety of consumers in the rural communities of Vanuatu, TRR developed a Community Consumer Champions program in 2014. This exciting program which will be implemented in Q1 of 2015. In consideration of the safety of user's online, TRR and OGCI facilitated a Child Online Protection (COP) Workshop in the Pacific region. Vanuatu hosted this first Pacific Islands Capacity Building Workshop on COP, which brought together local and regional stakeholders to discuss and be informed of effective COP mechanisms. A Vanuatu, specifically, COP Strategy Framework was developed by Vanuatu COP stakeholders, and this in the process of finalisation.

TRR also released a draft Regulation for public comment on the management and administration of .vu domain names; given .vu is an important national resource that must be equitably and securely managed and monitored.

On spectrum related matters, I am pleased to inform that Vanuatu now has a revised National Frequency Allocation Table which is in alignment with the ITU's most updated World Radiocommunication Conference 2012 standards.

TRR established a National Numbering Working Group (NWG) to provide advice to TRR on, and assist it in, considering numbering issues. Outputs of the NWG have also contributed to the work of the National Emergency Response Working Group, and to improvement in numbering services provided by operators.

TRR also launched its new look and consumer friendly website early this year. Our aim for this new site is for it

to be easy to use and navigate, including through mobile browsing, and in being an effective medium for our communication acquisition and dissemination.

TRR is ever mindful of the ongoing need to exercise thrift, care, due diligence and ensure that the revenue it receives is appropriately utilized with maximum efficiency for the benefit of the citizens of Vanuatu in the provision of telecommunications services, and in TRR's daily operations. TRR has contributed and deposited into the Universal Access Policy Fund (UAP Fund) in past years, is committed to achieving the Government's universal service objectives, and will make its best efforts to make further donations in the years ahead to the UAP Fund; where that is possible.

We continue to work towards achieving our vision: to support a *communications environment that enriches the social, cultural, customs and commercial fabric of Vanuatu*. During the year, our team had staff loss and increased in number, knowledge and experience. This has allowed us to grow in confidence in our role, capability and delivery mechanisms in a timely and quality manner. TRR also played a role in supporting and embracing young talent through its provision of internships from final year law students studying at the University of the South Pacific; in association with the Ministry of Justice and the Australian Governance for Growth Program.

Significantly, Vanuatu and TRR has been facilitated by the World Bank extending its Grant assistance to TRR until mid-2016. This has strengthened, and will continue to strengthen, our technical capacity, knowledge, experience and understanding through expert support from abroad. We recognize and appreciate the support of donor funding in this respect via the Australian Government to the World Bank, and are fully conscious of our need to be a self-sustainable entity in the latter half of 2016.

To support our vision, Vanuatu needs a healthy, sustainable and competitive telecommunications/ICT market, and we play our part towards this. Importantly too, we recognize the leadership of the CEOs of each of the operators in leading their teams, provision of service to consumers and in their shareholders investment in Vanuatu.

TRR continued to collaborate effectively and efficiently with OGCI0 in the provision of timely advice to the Government and towards implementation of key ICT policies, and in facilitating competition and implementation of the Minister's requests or policies. Whilst we work cooperatively with OGCI0 to achieve Government objectives each Office, however, maintains

its clear independence. TRR, as the regulatory arm of the Government's telecommunications/ICT policies, must be independent and ensure that it continues to play a significant role in providing effective and timely implementation towards achievement of Government objectives and for effective, sustainable competition.

Any competitive market needs a referee, and TRR is that referee in the telecommunications sector. Our road map ahead has been laid out in our 2015 and beyond Work Plan, and in setting appropriate rules (Decisions, Guidelines and Regulations) to encourage fair competition and protect consumers. We have developed, and continue to invest in developing, a capable team at TRR to regulate the market. Only by having a fair telecommunications market environment, managed by an independent referee, will Vanuatu continue to enjoy choice and derive benefit from a sustainable competitive market. TRR will continue to assist, mediate and regulate where required; whilst keeping a high priority on our consumer support and protection mechanisms. Through these mechanisms we intend to promote and facilitate a better and enriching communications environment for the people of Vanuatu.

TRR is highly recognized amongst its peers as the leading Regulator in the Pacific Region, and my aim for TRR is to build on its strengths to date towards the provision of a regulatory service that is exemplary.

I recognize and acknowledge the valuable contribution of my staff, and the technical experts who have assisted TRR towards our achievements during 2014. Their contribution to the development and expertise of this Office has assisted TRR to become a strong, firm and fair, independent regulatory body.

It gives me great pleasure to provide this seventh Annual Report of TRR. It is presented and provided in accordance with Section 11 of the Act.

We look to 2015 as a critical year in strengthening TRR and in delivering on required outcomes, and in continuing to facilitate and support a strong, sustainable and competitive industry that will better serve the people of Vanuatu, in the manner they deserve for the years ahead.

2014 Highlights

TRR's highlights, as a result of our ever-widening range of activities during 2014, in accordance with our 2014 and onwards work plan (refer to our website at www.trr.vu), include:



A Visit from the Prime Minister and Minister responsible for Telecommunications/ICT

TRR was pleased to receive the Prime Minister (PM), Moana Carcasses, and his delegation early in the year. This is the first such visit to TRR's Office. The Team took the opportunity to provide the Minister and his delegation with a presentation on TRR's role in the facilitating the ongoing competitive development and regulation of the telecommunications sector in Vanuatu, TRR's key priorities, and the initiatives and projects it put in place through its 2014 and beyond Work Plan. TRR outlined what it had delivered on, on behalf of the Government and the country. In response to the Regulator's presentation, the Hon. PM acknowledged the important work being carried out by the Regulator and his team, and complimented TRR on its positive and proactive efforts towards the roll out of services to underserved and un-served communities under the Government's UAP. He noted TRR has gender based equality in the composition of its employees.

TRR's Support to the Government

TRR continued to build on its cooperative and effective, but independent, working relationship with the OGCI0 and in the provision of high-level support and advice to the Government. The established formal channel of reporting to the Minister has been effective and valuable. TRR has been implementing the Government's National ICT Policy and its UAP with initiative, drive and proactivity. TRR has played a key support role and been an active contributor to the development of the Government's Cybersecurity Act, and our role as an important, and critical, regulatory body and implementing agency was recognized through these three policies.

TRR's Implementation of the Universal Access Policy and related ICT Projects

Throughout 2014, TRR has driven and actively implemented universal service and ICT Projects in accordance with the UAP, and the agreement between the Australian Government, through the Governance for Growth Programme, and the Government of Vanuatu, through the Office of the Government Chief Information Officer and, of late, with the Ministry of Education. We have worked cooperatively with industry to ensure that the aims and objectives of the UAP are being met and achieved. Through this we have ensured that the selected schools and rural communities have benefited and will continue to benefit from the three ICT programs that have been initiated in support of, and to integrate with, the UAP, and in facilitating and driving service take up in conjunction with the rollouts. The 'Pay' and 'Play' approach for UAP rollout plans to unserved and underserved areas were also initiated and developed for implementation later in 2015.



Child Online Protection Workshop

Child Online Protection

The First Pacific Islands capacity building Workshop on Child Online Protection (COP) and the Commonwealth National Cybersecurity Framework held in Vanuatu in September highlighted the need for cooperation and the importance of establishing a framework at both national and regional levels, to deal with COP issues. The five day workshop conducted by the ITU, IMPACT, and the Commonwealth Telecommunications Organisation (CTO), aimed at building awareness on issues and features related to child online safety. In particular, the workshop spanned the five pillars of the COP Initiative: Legal measures, Technical and procedural measures, Organizational structure, Capacity building and International cooperation. The event aimed at reaching policy makers, academia, private sector, civil society, and international and regional organizations as a facilitator to setting up a framework to implement a regional strategy on child online safety. A significant outcome for Vanuatu was the development of its own draft national COP strategy framework.



National ICT Day 2014

National ICT Day

TRR, with its continuous support to the Government, worked cooperatively and actively with OGCI0 in the preparation and celebrating of the World Telecommunications Information Society Day (WTISD) on the 16th and 17th of May 2014. The event was also celebrated as Vanuatu's National ICT Day. It commenced with a stakeholder parade in very heavy rain in the morning of the 16th. It showcased telecommunications/ICT products and services during the two days, linking to its theme: "Broadband for sustainable Development". A highlight of the two day event was the panel discussions on a number of related topics where organisation heads were invited to speak on topics linking to the theme for the celebrations. These included the: Status of the Submarine Cable – User Experience, where the key operators, the Government through the Office of the Chief Information Officer and the Regulator were involved in discussions; E-Government and its benefits; Global trends in ICT and how they affect Vanuatu; Universal access and school connectivity; and Mobile banking in developing countries.

During the event, the newly elected Prime Minister and also Minister responsible for the Telecommunications/ICT sector officially launched the Government's National ICT Policy, its Cyber-security Policy, and the UAP; which had been passed by the Council of Ministers in November 2013. (Refer to Section 3 and 10.3.3 of this Report for more information.) He also officially handed over the Rensarie UAP Pilot Project to the Rensarie Community. (Refer to Section 4.2 of this Report for more information.)

Telecommunications Market Behaviour

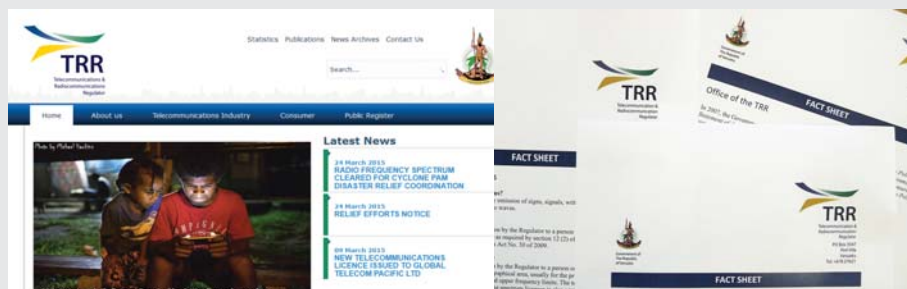
The Telecoms market continued to deliver significant benefits to consumers through reasonable prices and more attractive service features being offered, such as increased talking minutes, more SMS and more urban users of internet; either through mobile broadband or fixed internet lines. TRR has witnessed a more competitive and advancing telecommunications market this year through increased advertising and promotion of mainstream services: mobile, landline and internet packaging. With the market extending to the rural areas, a further increase in mobile phone usage has been evident. An upturn in the use of internet, as well as the different devices used to access it, has been observed; particularly amongst youth using the internet for educational purposes and socializing online. This has seen the number of internet service subscribers grow by a staggering 89% from the previous year. The take up of fixed line by businesses has increased together with some residential use, while fixed public phones are now rarely used. There is also an increase in promotional offers through value added services which consumers are also enjoying and benefiting from. TRR recognized the cooperation of licensees who now are more aware and understand their obligations in promoting a competitive market and in working with the Regulator towards achieving their objectives.

GIS Market Database

To assist TRR and industry with the rollout of UAP, TRR developed and produced Geographic Information System (GIS) maps combining broadband internet coverage with Global System for Mobile communications (GSM) and Universal Mobile Telecommunications System (UMTS) mobile coverage, overlaid with villages, population density, schools, medical health centres, roads, wharfs and airstrips. The GIS database has become a vital support information tool to TRR and industry in the roll out and implementation of the UAP, as well as reflecting new trends in spatial data, demographic and economic services for analytical purposes. It provides the UAP Players with key information towards ascertaining the appropriate sites to focus on for achievement of the population coverage requirement for compliance with the UAP.

TRR's new website

TRR officially launched its new website, www.trr.vu, in March 2014, with the successful migration and update of relevant content from the old to its new site. The new website was designed to be a user friendly and responsive site, and able to be easily viewed on normal laptops and PC screens and, particularly, mobile devices as well. Through our new website, we are now able to be more interactive with communities and our stakeholders in providing regular updates and information. We will continue to enhance our website based on our experience, and user experience and feedback.



Community Consumer Champions

The telecommunications/ICT related Community Consumer Champions Project was designed by TRR, and consulted on and approved for Youth Representatives, volunteers and other interested individuals, who are capable, influential, have good level of public presentation skills and, most importantly, have a good awareness and understanding (savvy) of their peoples' behaviour in outlying villages and respective communities. TRR will select 'Champions' who have an awareness and care of telecommunications/ICT issues currently affecting peoples' lives. As a result of the uptake of voice and data services TRR notes the benefits but also is well aware of the adverse effects of the potential abuse of such services; e.g cyberbullying. Through our Community Consumer Champions Project, TRR wishes to raise awareness of the benefits of telecommunications/ICT and address any negative impacts at the community/village level. Recruitment of Champions is expected to commence early in Q1 of 2015, and the initiative will be implemented shortly thereafter. (See further information in Section 10.2.3 of this Report.)

Consumer Protection Regulation

The Consumer Protection Regulation which TRR finalized in Q4 and is now with the Government for gazettal. It will be implemented in Q1 of 2015. Its development followed successful consultation with relevant stakeholders including the Prime Minister's Office (Minister responsible for Telecommunications/ICT) through the OGCI.

TRR publically consulted on the draft Regulation through its normal consultative mechanisms and, in addition, radio tok bak show programs, radio interviews, organised public forum at the Chief's Nakamal and also on social media forum (Yumi Toktok Stret).

This Regulation safeguards consumers and will be a powerful tool to ensure consumers of telecommunications services in Vanuatu have rights, a voice that must be heard and respected, are protected and TRR can monitor compliance with it. (For more information see Section 10.4.1.)

Embracing young talent through TRR's Internship Program

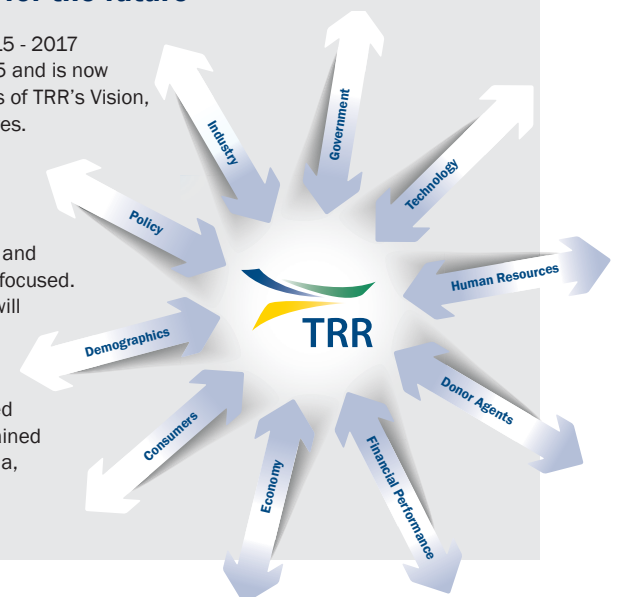
Following our 2013 efforts TRR, through the Ministry of Justice and the Australian Governance for Growth program, hosted two fourth year law students studying at the University of the South Pacific, Faculty of Law. The program was part of their work experience development and was conducted over 15 weeks ending November 2014. Our contribution to this program was well rewarded with an excellent performance by the students and we look forward to continuing this partnership with the Vanuatu Law and Justice Program, and USP in 2015.

TRR Strategic Plan: Our Vision for the future

TRR developed its three year Strategic Plan 2015 - 2017 in December. It will be released in January 2015 and is now undergoing printing. Our Strategic Plan informs of TRR's Vision, Mission, and our Long Term Goals, and Objectives. It provides a 'big picture of actions and TRR's intentions' that we have set for implementation and achievement.

Our Plan was developed through a participative and consultative process and is result-oriented and focused. The key pressures identified that TRR believes will determine the environment in which we are operating in are reflected in the figure opposite.

TRR's Strategic Plan will be able to be accessed at our website: www.trr.vu or a copy can be obtained at the TRR's Office, opposite Bred Bank, Port Vila, early in Q1 2015



1.1 What are we

The Vanuatu Government through the Telecommunications and Radiocommunications Regulations Act, 2009 (the Act), provides for a regulatory framework for telecommunications and radiocommunications regulation, and established a separate and independent legal regulatory body and under the name: "Telecommunications and Radiocommunications Regulator (TRR)".

TRR's core functions are to regulate and facilitate the development of the telecommunications and radiocommunications sector, manage Vanuatu's scarce radio-frequency spectrum resource, safeguard consumers, and promote national, social and economic development.

TRR issues licences authorising a person to:

- **provide telecommunications services to end users to and from anywhere in Vanuatu;**
- **operate a radiocommunications device; and**
- **use radio spectrum.**

A key TRR role is to facilitate and regulate for fair and sustainable market competition, ensure licensees comply with their licence obligations and are providing quality, affordable and reliable services to the public, and consumers are safeguarded.

TRR must, at all times, act independently and impartially in performing its responsibilities, functions, duties and powers as set out in the Act and other laws of Vanuatu; and its actions and decisions must be free of political influence. This is a critical 'must' for TRR's credibility, reliability, integrity and ongoing relationship with all stakeholders.

TRR is highly recognized by its peers and other regional organisations, as the leading Regulator in the Pacific, and it wishes to build on that towards being an exemplar Regulator.

Our Annual Work Plans and Information on current projects, recent achievements and activities is available from our website on www.trr.vu.

1.2 Mission, Vision and Values



Trainer and guest speaker for Managers Training

VISION: A communications environment that enriches the social, cultural, customs and commercial fabric of Vanuatu.

MISSION

To develop a competition led market for the provision of innovative information and communications services, available to all, which: **encourages** sustainable and economically efficient investment; **respects** the interests of consumers; **fosters** ecologically friendly initiatives; and **supports** the social, cultural, customs and commercial welfare of the Vanuatu.

To continue to build as an exemplar regulator within the region through thought leadership and to be the employer of choice by: **investing** in our people to develop a professional, passionate team; **transparency** and **fairness** in operations; and **adherence to quality assurance**.

VALUES

Inspiring: Our imagination, clarity of thought and clear leadership stimulates innovative thinking that meets the needs of tomorrow.

Commitment: Our drive and determination to achieve excellence, our discipline in the execution of our duties, our focus on the development of our team, and our sense of responsibility instil passion for the development of Vanuatu.

Respect: Our respect for each other is ensured by listening, collaborating and having consideration for each other, the public and licensees we work for, the rule of law, confidentiality, intellectual property, customs, environment, and future generations.

Balanced: Our evidence based approach to decision making and our adaptability ensure that we remain proportionate, consistent, fair and just.

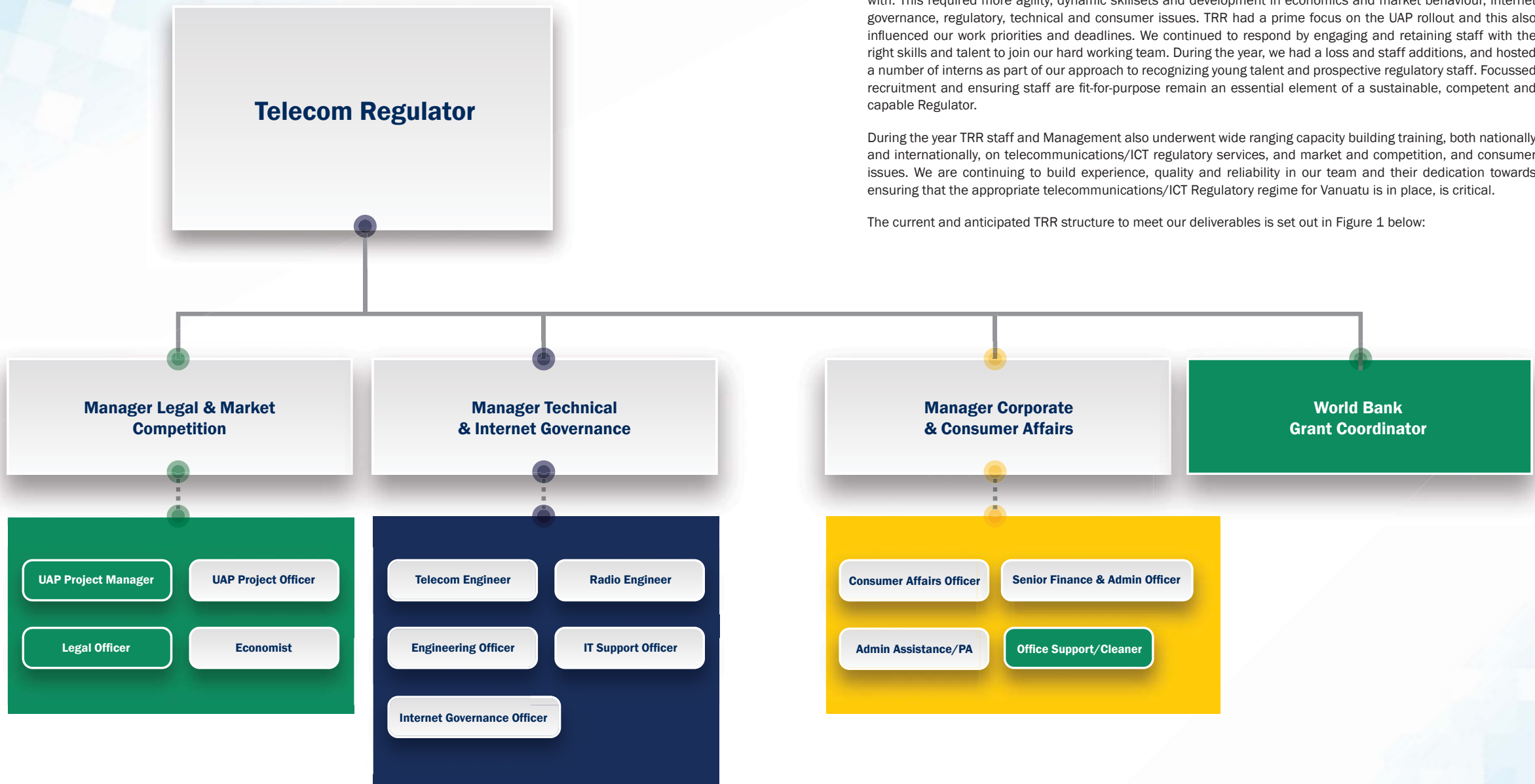
Transparency: Our open and inclusive approach to regulation ensures that we are held responsible and our actions and decisions are understood.

1.3 Our Team

2014 challenged the TRR team due to its pace and the wide nature of issues we had to face, and matters to deal with. This required more agility, dynamic skillsets and development in economics and market behaviour, internet governance, regulatory, technical and consumer issues. TRR had a prime focus on the UAP rollout and this also influenced our work priorities and deadlines. We continued to respond by engaging and retaining staff with the right skills and talent to join our hard working team. During the year, we had a loss and staff additions, and hosted a number of interns as part of our approach to recognizing young talent and prospective regulatory staff. Focussed recruitment and ensuring staff are fit-for-purpose remain an essential element of a sustainable, competent and capable Regulator.

During the year TRR staff and Management also underwent wide ranging capacity building training, both nationally and internationally, on telecommunications/ICT regulatory services, and market and competition, and consumer issues. We are continuing to build experience, quality and reliability in our team and their dedication towards ensuring that the appropriate telecommunications/ICT Regulatory regime for Vanuatu is in place, is critical.

The current and anticipated TRR structure to meet our deliverables is set out in Figure 1 below:



1.4 TRR's 2014 and Onwards Work Plan and Priority Deliverables

TRR develops an Annual Work Plan (see www.tr.vu) with the objective of informing our stakeholders of our key commitments, projects and priorities in carrying out TRR responsibilities set out in the Act.

In setting out the 2014 and onwards Work Plan TRR reviewed and considered:

- the progress made in the sector since the creation of the Office of the TRR in 2008;
- issues which are of concern to the industry and stakeholders through a series of discussions and meetings throughout the previous year(s);
- the National economic and social policies and programs being pursued by the Government;
- the Government's National Information and Communications Technology (ICT) Policy, Cybersecurity Policy and Universal Access Policy (UAP);
- TRR's Vision, Mission and Values; and
- whether new Regulatory instruments are required and the fitness for purpose of the existing instruments.

The Work Plan is centred on the following key themes:

- Economic and social support; in particular, for unserved and underserved areas.
- Telecommunications sector development and promotion of sustainable competition.
- Safeguarding the interests of consumers.
- ICT services transition.
- Institutional strengthening.

Our Work Plan draws on the Government's Priority Action Agenda (PAA), its 2007 Telecommunications Policy Statement actions in ensuring ICT for all, and the Government's approved National ICT Policy, its UAP and its Cybersecurity Policy.

The 2014 Work Plan outlined a set of work items that were the focus and priority of activities managed by TRR this year. Building on the 2013 work plan, TRR's key priorities for the year 2014 were:

1.4.1 Market & Competition

- TRR Implementation of the Government's UAP & all UA and ICT initiatives including connecting schools and connecting community internet cafes
- Develop Telecommunication Market Indicators
- Establish a Market Database

1.4.3 Engineering

- Assessment of industry compliance with the Quality of Service (QoS) Guidelines
- Mobile signal coverage Audit
- Improve TRR's National Telecommunications GIS Database
- Radio Spectrum Audit and Review of the Spectrum Master Plan
- New Radio Apparatus and Spectrum Fees Schedule

1.4.5 Internet Governance

- Establish an Internet Industry Code of Practice
- Vanuatu Child Online Protection Workshop
- .vu ccTLD Management and Administration Regulation

1.4.6 Consumer Affairs

- Promote Consumer Awareness through the Consumer Awareness Protection Plan (CAPP)
- Increasing Consumer Education and Awareness
- Capacity Building for Consumer Community Champions
- Develop a TRR Consumer Protection Regulation

All of these projects have progressed. Most have been finalized and others now have a 2015 time frame delivery.

1.5 Training & Capacity Building

TRR recognizes that training and capacity building is essential for it to develop a strong, experienced and committed team, able to face the ever-increasing pressures and challenges placed on the organization through telecommunications/ICT provision and take-up.

TRR's commitment to enhancing the capacity of all TRR staff remained a key focus and high priority in 2014 and this will continue in to 2015. Our 2014 training plan, developed at the beginning of this year, focussed on ongoing development to build strong and capable, effective, knowledgeable, and more experienced Managers and staff. Both in-house sessions and international participation in conferences, meetings and attachments was a feature of our 2014 training plan.

TRR engaged the expertise of external training providers to conduct two levels of in-house training for TRR staff. Specialized training was established for the staff and, for the Management Team, there was a focus on high performance organizational and management skills.

Staff have undertaken modules on team building, presentation skills, report writing skills, time-management, assertiveness and conflict management, efficiency, and workplace communication.

1.5.1 In-house and National Participation

TRR's Management Team underwent a series of intense half-day monthly training sessions towards development of TRR's first Strategic Plan and other core management needs. A key achievement of this exercise was the incorporation of the 2014 Annual work plan into internal 12-month milestones and 90-day action plans. This training greatly assisted the completion of TRR's 2015 – 2017 Strategic Plan which will be launched in January 2015.



URA and TRR collaboration on regulatory issues at VNPF conference room

Capacity building of staff continued with team building and knowledge transfer with consulting experts and the Regulator. This included guidance and presentations to all TRR staff, and staff presented on their experience and insight gained from participation in training or conferences. Managers and staff gained also from regular one-to-one coaching from the Regulator.

The TRR team also capitalised on training and development through a number of regional ICT workshops hosted in Vanuatu; including the PITA conference (April) and the ITU conducted COP workshop (September).

1.5.2 International training and conferencing

Some TRR staff had the opportunity to gain experience and/or represent TRR and Vanuatu at various conferences and/or workshop meetings internationally. Key experience, events and opportunities included:

TRR's Consumer Affairs Officer: had a 3-week attachment in May with the Consumer Council of Fiji (CCF) with objectives to:

- Enhance TRR's skills in communication, complaints handling process, problem analysis, and developing recommendations for action.
- Provide TRR with insight of consumer affairs development in Fiji, for relevant and appropriate application in Vanuatu.
- Create and strengthen a networking relationship between the Council, Fiji, TRR, and Vanuatu for mutual benefit.

TRR's Manager Technical and Internet Governance: attended the Public Utilities Research Centre (PURC) International Training Program on Utility Regulation & Strategy, in January 2014, in Gainesville, Florida, USA. The training provided knowledge and understanding of the fundamental principles and building blocks for developing a sustainable regulatory system. Topics included general principles of a sustainable regulatory system, market reform, competition, financial analysis, incentive regulation, rate structure, non-price issues, and the regulatory process.

Four TRR staff : completed an 8 weeks, online training program, on Introduction to Internet Governance with the Diplo Foundation program hosted with the University of Malta. The online course was conducted during February to April 2014.

The Technical & Internet Governance (TIG) Team: took an online course with the ITU Academy on Cloud Computing and Next Generation Networks (NGN). This course provided knowledge and an understanding of the NGNs and convergence issues relative to the telecommunications/ICT market in Vanuatu.

TRR Staff: attended the APT Policy and Regulatory Forum, in Fiji, in July.

In October **TRR's Economic Officer** attended an ITU regional forum on Telecom ICT Indicators in Bangkok. This knowledge will enhance the capacity of TRR in its data collection of telecom indicators and easier dissemination of required annual statistics to the ITU. It will also assist TRR to develop relevant statistics and reports which can monitor progress of ICT development and uptake in Vanuatu.

TRR's Manager Market and Competition and the Regulator: were part of the Government's delegation (via OGCI) to the highest conference of the ITU. It was the first occasion that Vanuatu has attended a Plenipotentiary Conference in order to vote for election of officials, and sign off on the final Acts of the Conference. The Plenipotentiary Conference: (i) sets the Union's general policies, (ii) adopts four-year strategic and financial plans, and (iii) elects the senior management team of the organization, the members of Council and the members of the Radio Regulations Board.



TRR's Legal Officer participating in training

TRR's Legal Officer: had a secondment with the Office of the Regulator in Samoa for a month, in November 2014. The secondment enabled her to gain regulatory legal experience in another jurisdiction within the Pacific and to learn from a like regulatory office outside TRR. The training covered legislative frameworks, enforcement and compliance, competition, convergence and regulations, that can now be applied, appropriately, in Vanuatu.

World Bank and Donor Partnership continues to Assist

Vanuatu's PAA to 2015 highlights telecommunications/ICT as essential to the improvement of services. In meeting its Millennium Development Goals, the Government "in conjunction with the private sector, must make available the benefits of new technologies, especially information and communications."¹

Towards this objective, in June 2013 an extended (World Bank) grant was secured from the International Bank for Reconstruction and Development (IBRD) and the International Development Association (IDA); collectively known as the World Bank.

After 18th months of implementation and utilization of the Grant till December 2014, TRR has moved closer to developing the required experience, necessary regulatory tools and skills base towards becoming a knowledgeable, self-sustained telecommunications regulatory authority.

This accessibility to international and high levelled consulting skills made available through this grant has greatly increased TRR's experience and knowledge on telecommunications/ICT regulation, telecommunication and spectrum issues, licensing, and in our development of key regulatory instruments.

TRR is, once again, pleased with the results of a World Bank November financial review which delivered a satisfactory rating for TRR; and so we continue to maintain our status as the leading ICT regulator in the Pacific region.

The Government of Australia continued its support by facilitating the provision of UAP funds in order that we roll out services to under-served and un-served areas under the Government's UAP requirements. UAP funding, the WB Grant funding and budget from TRR are instrumental in ensuring that communities gain access to good telecommunications services, while enhancing the regulatory and service capacity of both TRR and OGCI.

We continue to acknowledge this partnership with the Government of Vanuatu through the OGCI, the World Bank and the Australian Governance for Growth (GfG) program for their confidence in TRR in administering this Grant, and thank them for their support.

TRR provides quarterly and six-monthly written reports to both the World Bank and the Governance for Growth donors, as well having as bi-annual face-to-face meetings with the World Bank and regular meetings with GfG.

¹ Vanuatu Priorities and Action Agenda, 2006-2015, p.44

Government Working Relations

3.1 General

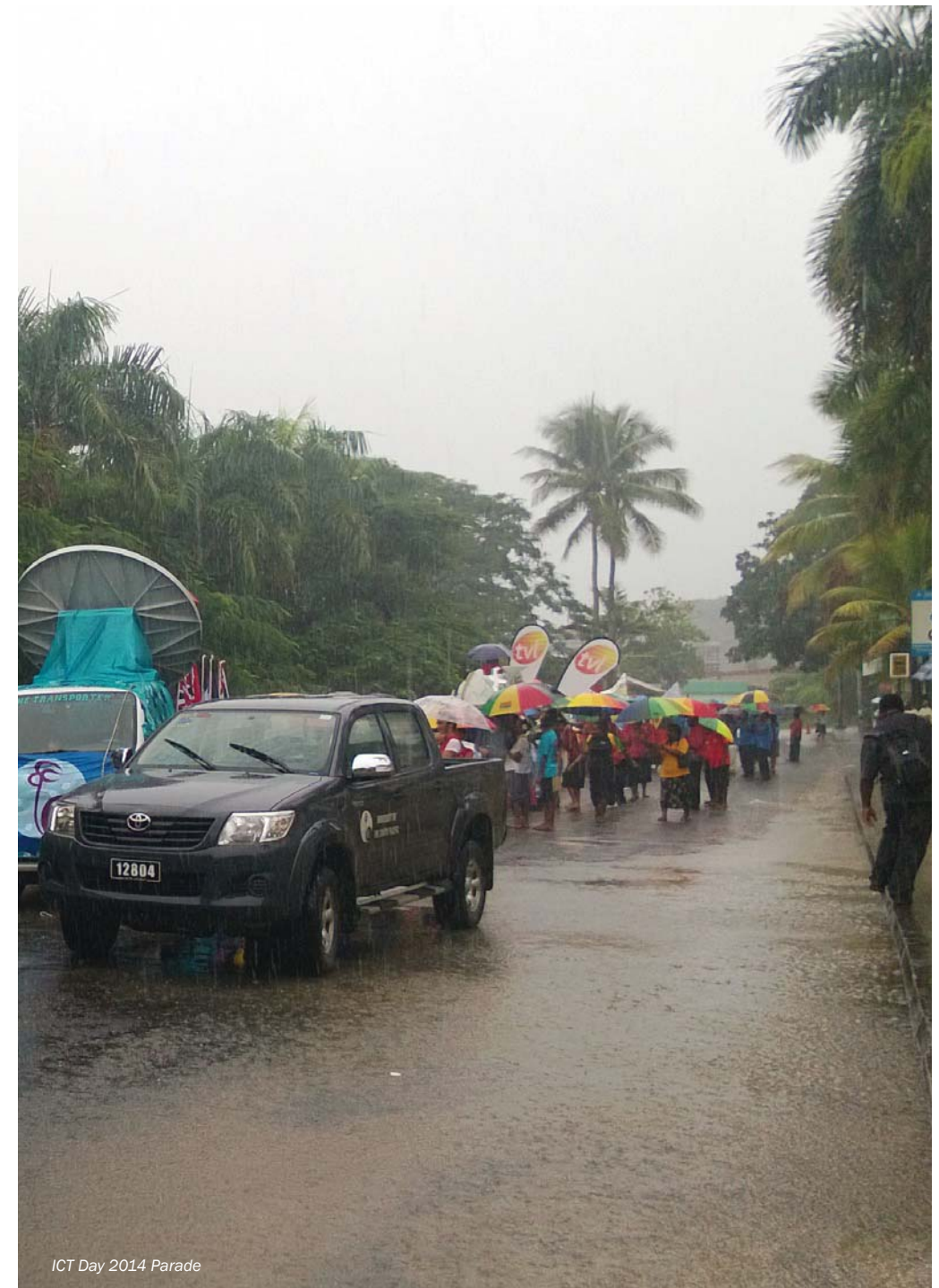
TRR continued to build on its strong, cooperative working relationship with the Government and the OGCIO by providing technical advice and guidance on regulatory and policy issues, whilst ensuring it maintained its independence. Regular reporting and updates on our operations and progress of TRR activity at 3-monthly intervals throughout the year ensured that the Minister responsible for Telecommunications/ICT, and OGCIO are kept abreast of all key matters TRR is addressing throughout the year. TRR also provides six-monthly, in-confidence, Reports to the Minister on the implementation of the UAP.

During this year the Government changed hands in May; just prior to the celebration of National ICT Day. OGCIO continued its close working arrangements with TRR in preparation for that day, which was held on 16 - 17 May 2014. The event was held in cooperation with the world-wide ICT celebrations themed on "Broadband for Sustainable Development". (See also Section 10.3.3 of this Report.)

The first Day of celebrations was opened by newly elected Prime Minister Honorable, Joe Natuman. In his speech, his first policy speech as Prime Minister and Minister for Telecommunications/ICT, he stated his strong support for ICT development and for the National ICT Policy passed under the previous Government. His speech was followed by a video presentation from the Secretary-General of the ITU, and then by Miss Vanuatu, who described how important ICTs were to her working and social life. The opening ceremony was preceded by an ICT parade of over 700 people, who marched valiantly and defiantly in very heavy rain. After the opening, nine separate hour-long panel sessions on all aspects of ICTs were held over two days for the crowd and broadcast throughout the country. The quality of the discussion was praised by all participants and observers, who felt that the panellists and moderators did an excellent job of discussing the issues.

3.2 Cybercrime Legislation

TRR provides a strong assistance and support role to OGCIO in the development of the Government's cybercrime legislation. TRR assisted and provided valuable input to the development of a draft paper, to the Council of Ministers in December, justifying the proposed legislation.



ICT Day 2014 Parade

Universal Access and Services

4.1 General

Through the last 12 months, TRR has achieved important milestones in the implementation of the Government's UAP. The milestones include the release of a TRR Determination to industry, outlining various options and guidance in developing broadband speeds and services in accordance with the Government's UAP requirements.

TRR has also achieved a significant milestone in selecting the first wave of candidates for the three ICT programs under the UAP. The selected candidates are seen as the first set of schools and businesses anticipated to greatly benefit from funding from the UAP Fund. The rural communities have great excitement and are anticipating significant lifestyle changes, and the many potential possibilities, from the three ICT programs.

Telsat Broadband has now been determined by TRR to be a 'Player' following TRR's effective negotiations with it. TRR sees Telsat Broadband joining the two major telecom service providers -Digicel and TVL- as indicative of the wide-ranging industry support for the Government's UAP.

TRR will continue to work positively, enthusiastically and cooperatively with all stakeholders to achieve the Government's UAP deliverables. This can be evidenced through our continuous negotiations and discussions with all 'Players' in finalizing their UAP implementation plans and commitments. TRR thanks the 'Players' for working collaboratively with it in achievement of Government goals in respect of the UAP.

In parallel with the UAP implementation plans, TRR engaged its technical consultant (Challenge Networks) to undertake a telecommunication service coverage audit, covering both mobile signal and internet coverage, and a Quality of Service (QoS) assessment of the current communications network services in Vanuatu. The information gained from this will form a key basis of TRR's monitoring of UAP implementation and commitment from the 'Players' and their compliance with the UAP requirements.

With its strong commitment to working closely with industry and its stakeholders, TRR is ensuring that all UAP programs are meeting the overall objective of the Government's UAP.

TRR has assisted this process through formalizing working arrangements by way of Memorandum of Understandings (MoU's) and, as appropriate, on-going regular discussions with key Players and stakeholders.

4.1.1 Expansion of Mobile Service

TRR continued to monitor TVL's progress with its building of the final UAP mobile site in the northern part of Vanuatu: Loh Island of Torba Province. TVL made good progress this year and has kept its promise to deliver before the calendar year 2014 ended. Pictures below show the community in Loh Island assisting TVL unloading and carrying out the equipment to for the UAP site (mobile) for Loh.

TRR was pleased that the last site in Torba Province, the most remote island of Vanuatu, was commissioned and became operational on 27 December 2014.

TRR played a key role as mediator and facilitated discussions between TVL and representatives of the Emao island community in order to re-build the tower on Emao Island. TRR encouraged TVL and the disputing party to renegotiate the terms and conditions and come up with a compromise position to allow TVL to proceed rebuilding its tower and provide the much needed service to Emao Island and nearby communities. TVL and the Emao people finally reached an agreement to allow TVL to rebuilt the Emao tower. On 23rd October 2014, TVL launched its service on Emao Island.

4.2 UAP Rensarie Broadband project - Telecentre

TRR provided its Rensarie Closure Report on the 16th of April 2014, to its major stakeholders including, the Prime Minister and Minister responsible for Telecommunications/ICT, the OGCI, Australia's GfG, the Director General of the Ministry of Education, and the Director General of the Ministry of Health, the Rensarie Telecentre Chairman, and the Rensarie College Principal. The Pilot Project was officially handed over by the Prime Minister, Honourable, Joe Natuman, to the Rensarie community during the celebration of the World Telecommunications and Information Society Day in Port-Vila on 16 May 2014. Rensarie College representatives received the Rensarie Broadband Pilot Project on behalf of the Rensarie Community.

This Pilot successfully concluded as an ongoing sustainable benefit to the Rensarie community.

4.2.1 UAP Rensarie Broadband Pilot Project Film

Following on from TRR's Rensarie Closure Report, TRR released a documentary film in September to its stakeholders, entitled "Reaching the Rural Community through Broadband Internet – Rensarie Experience". The film documented the journey and the impact of piloting broadband internet access to the Rensarie College and its surrounding community – before and after broadband internet. It includes interviews on the benefits or disadvantages of the service as seen by communities. A copy of the film was sent to VBTC for public broadcasting. The film can also be accessed through TRR's website at this link <http://www.trr.vu/index.php/en/telecom-industry/universal-access/video>.

As an added support, TRR amended the licence exception for Rensarie College in order for it to continue to provide broadband internet services to the community.

The exception does not allow the Rensarie College to provide any form of telecommunications services outside the Rensarie School, the Health Centre and Rensarie community at large, and may be revoked at any time by TRR if Rensarie does not meet the conditions provided.

4.3 Working with industry for achievement of UAP deliverables

In fulfilling its responsibility as the implementing Agency of the UAP, TRR arranged two industry wide meetings and a series of one-on-one meetings with licensees, seeking their commitment and cooperation in working collaboratively with TRR and the Government through the planning and implementation phase of the UAP, to meet the 1st January 2018 requirements.

The kick-start meeting held on 14 January involved all relevant stakeholders, the OGCIO and telecommunication licensees in order to discuss and understand the requirements of the UAP. The major focus was to achieve industry awareness of the objectives and requirements set by the UAP, and to seek implementation buy-in through a cooperative working partnership and framework: as 'Players' or 'Payers'.

During TRR's second meeting with the industry on the 26th of February, 2014, industry was requested to submit to their rollout plans to TRR and provide their interpretations of the broadband speeds specified in section 1.1.3 of the UAP. In addition, industry was informed that it must submit their indication of whether they favour and intend to adopt a 'Play' or 'Pay' approach,

Industry was also informed that it needs to work collaboratively with TRR to develop a plan for presentation to the Government within the UAP reporting timeframes. TRR worked productively and consistently in a coordinated approach with industry towards this objective, and continues to do so through all UAP implementation steps.

TRR continued to hold various meetings with licensees on matters relating to the policy, inter alia, determining the 'Payers' and 'Players', addressing issues on speed interpretation of the UAP policy, roll out plans of 'Players' and identification of unserved areas for the UAP.

4.3.1 Players and Payers

To date, TRR has identified three 'Players' under the 'Play' or 'Pay' approach that have committed to rolling out new services in accordance with the Government's UAP. They are TVL, Digicel, and Telsat who have submitted plans for rolling out new sites and upgrading existing mobile sites. TRR views this willing commitment, from a national policy perspective, as very encouraging and indicative of the immediate success of the Government's UAP; and appreciates the significant financial commitment of industry through cooperative and voluntary means.

Service providers that do not wish to 'Play' must 'Pay'. Under the 'Pay' approach, TRR imposes a levy on those service providers based on section 19 (6) of the Act. Licensees contributing to the implementation of the UAP as 'Players' were given the opportunity to provide and document projects to undertake in 2014 and beyond in terms of overall cost, timetable and impact on population coverage of their various networks. This afforded a potential offset against the UAP levy.

The identified 'Payers' of a 2014 levy were:

- Skycloud Networks
- Incite
- SPIM
- Interchange Ltd
- Wantok Network Ltd

All UAP levies have been paid into the UAP Fund administered by TRR, and they will be utilized to facilitate the overall UAP implementation rollout.

4.3.2 Determination on UAP Broadband Speed

TRR made a Determination on 12 November 2014, on the broadband speed provisions after various consultations made with the industry on 6th May 2014 and, subsequently, on 14th August 2014; where it sought comments and feedback from industry, service providers, Government and interested individuals.

The Determination enforces various matters in relation to the UAP to ensure that it is implemented effectively, whilst encouraging innovation and market development in the UAP areas.

During the initial meeting with industry in February, TRR invited views from the industry on the proposed baseline speed that industry felt might be appropriate and relevant for Vanuatu. That was undertaken to assist TRR to set a practical interpretation of the speeds; including a minimal set of speeds which must be provided to meet the UAP speed requirements.

A wider and more representative response and view from the industry and the general public was obtained through the two separate UAP broadband speed consultation papers. Views and responses from the first consultation were incorporated into the second consultation paper of August.

The operating conditions encountered by licensees and customers in practice will, however, most likely result in them generally experiencing rates below the required UAP speeds. In meeting the required standards, the 'Players' have committed to upgrade their current networks to at least 3G standards.

TRR's proposed interpretation of the Broadband speeds of 21 Mbps download and 12 Mbps upload, as contained in paragraph 1.1 of the Government's UAP Policy, has now been determined to be a minimum of 2Mbps download and 1Mbps upload.

Overall, TRR anticipates a mass up-take of broadband services subject to the network rollouts. Under ideal conditions, the 3G mobile standard is theoretically designed and capable of meeting the UAP Broadband speed requirements.

The overall observations collated from the consultation papers and the Determination, can be viewed and download from TRR's website (<http://www.trr.vu>) .

4.4 Players Roll out plans

All three 'Players': TVL, Digicel and Telsat Broadband, have submitted their roll out plans up until 2018. For both TVL and Digicel, their plans are for the expansion of mobile service in rural areas, while for Telsat it is for broadband internet service provision only. TRR continues to hold discussions with 'Players', given that some of the sites, especially for mobile services, are duplicated. TRR has actively worked with the 'Players', encouraging 'Players' to relocate to other unserved areas to maximize the overall coverage towards the 98 percent target. TRR notes their indicative reviewed rollout plans that are now to be finalized, and looks forward to negotiating a formal contractual agreement with the 'Players' early in 2015.

4.4.1 Identification of unserved areas

TRR conducted an analysis and determined that 25 indicative locations throughout Vanuatu need to be considered as the major unserved areas. These areas represent approximately 5 percent of the population and formed the basis of the target for the UAP rollout. This will be further reviewed throughout the implementation process to fine tune and determine what is actually required to achieve 98 percent coverage.

In the process of identifying the unserved areas, TRR conducted in-house manual test calls to verify preliminary areas identified as unserved. Each TRR staff was assigned specific areas to investigate mobile signal coverage, and was responsible for gathering village ground contacts; particularly those that live outside of the investigated villages who knew the villages well to assist with the manual checks. The test calls were conducted manually by TRR staff with various elements recorded, including, coverage availability in village, ability to conduct a mobile phone call in the village, where and how far a person must travel to make a mobile phone call and whether or not weather conditions affect the ability to make a mobile phone call. (See also section 8.5.2 of this Report.)

As an indication of its commitment to working closely with other Government stakeholders, TRR formerly secured a working relationship with the Vanuatu National Statistics Office (VNSO) in June 2014 through the signing of a MoU. The MoU forms the basis of support that TRR will be receiving from VNSO in relation to the planning, development and implementation of UAP, and other related telecommunications monitoring and planning activities.



During a visit of TRR UAP Officer to Santo. Imagicity Photos – by Graham Crumb

4.5 Other UAP/ICT Initiatives

A tripartite agreement between the Australian GfG Programme in Vanuatu, OGCI and TRR to implement and fund pilot programs under the UAP Fund was signed on the 15th of January 2014 by the Director of the Governance for Growth programme, Mr. Matthew Harding, the Government Chief Information Officer, Mr. Fred Samuel and the TRR Regulator.

The signing signified the tripartite commitment to working together and developing the ICT and telecommunications sector in Vanuatu for the benefit of Vanuatu citizens. It also acts as a stimulus arrangement and demand for the supply of telecommunications services to support UAP rollout.

The focus of this undertaking was developed from objectives established in the Government's National ICT policy and the UAP to extend ubiquitous access of telecommunications services, including fast broadband internet access, to enhance learning and promote ICT as an essential tool to drive economic and social development.

The undertaking was the catalyst for the formation of the Grant Review Committee (GRC) consisting of the three Offices: The Government's Chief Information Officer, Mr. Fred Samuel, is the Chairman of the GRC.

Later in 2014, the GRC was expanded to include a fourth GRC member, the Ministry of Education (MoE). In the initial undertaking, OGCI represented the Ministry of Education as the representative of Government in the GRC. The expansion of the GRC membership to include a representative from MoE was welcomed by TRR and seen as indicative of the excellent collaboration and relationship TRR has with relevant Government agencies. The Vanuatu Peace Corps is also an observer of the GRC and assists it in UAP implementation considerations.

The undertaking agreement focuses on three major programs:

1. A school based Computer Lab & Internet Community Center (CLICC) program;
2. A Tablets for Students (TFS) program; and
3. An Internet Café Support (ICS) program.

All three programs have a primary objective to increase the use of ICT by students, teachers, school administrators, community workers and small business enterprises to enhance their learning by extending access to educational resources and introducing a potential way to promote new business activities.

TRR acknowledges the support and contribution it has received, and continues to receive, from GRC Members.

TRR also acknowledges the support from its GRC partners, particularly the Ministry of Education through the provincial education officers and other Government stakeholders, including Vanuatu Post, during the preparation and distribution of the Grant Application Forms to all schools throughout Vanuatu.

The request for applications for both CLICC and TFS programs exceeded expectations by TRR's receipt of more than 300 applications. The quantity and quality of applications can also be taken as an indication of the scale of incipient demand for affordable and accessible internet, ICTs and automation in education and in the community at large.

In early October, TRR and the GRC announced the first candidates to receive ICT access, Computer Labs and Tablets for Schools throughout the country. The selection of the successful schools and businesses went through a thorough, complete, transparent, neutral and independent process. An independent consultant was engaged on a short term basis to assist TRR to perform this task, and the GRC made all decisions.

Computer Lab & Community Centre (CLICC) program	1	Sarakata Primary & Centre School	Santo
	2	St Patrick's College	Ambae
	3	Matevulu College	Santo
	4	Torgil Vocational Training Institute	Ambae
	5	Sulua Center School	South Maewo
	6	Lambumbu School	Malekula
	7	Lamap Community Schools	Malekula
	8	Ambaebulu Primary & Secondary School	Ambae
	9	Loukakai Primary School	Tanna
	10	College de Walarano	Malekula
	11	Tafea College / Lycee de Tafea	Tanna
	12	College d'Orap	Malekula
	13	Lycee Sanite Anne	Port Olry, Santo
	14	Arep Primary & Secondary School	Sola Banks
	15	Eles Center School	Nguna, North Efate
Tablets for Students (TFS) program	1	Venie Mataipevu School	Santo
	2	Merei Center School	Santo
	3	Matevulu College	Santo
	4	Epi High School	Epi
	5	Arep Primary & Secondary School	Sola Banks
	6	Ambaebulu Primary & Secondary School	Ambae
	7	Lycée Louis Antoine de Bougainville	Port Vila
Internet Café Support (ICS) program	1	Tukunoamauri	Nguna, North Efate
	2	Nali Enterprises	South East Ambrym
	3	Ituani Infomesen Senta	Central Malo

Telecommunications Market and Competition

5.1 Telecommunications Market Developments

TRR has observed active and regular competition in the telecom market throughout the year 2014. Effective marketing and advertisements made throughout the year via newspapers, brochures, billboards, radio, text messages and the social media, has ensured consumer choice and take up of ICTs; in which there is now an increased a variety to choose from.

Additionally, promotions introduced regularly in the market throughout the year, as well as increased advertisements targeted at certain events and consumer groups, further indicate an emerging innovative and competitive market.

This has enabled consumers to be in an advantageous position as they become informed of available telecommunications services they may choose to use to make their lives easier, as well as being up to date with changing technology. For instance, the period up to Mother's Day saw a drop in smart phone prices as well as data prices, which enabled consumers to experience the use of smart phones to access the internet.

TRR's has regularly monitored activities in the dynamic telecommunication market throughout the year, and this enabled us to be across and resolve a number of issues in the following areas:

- Ensuring advertisements and promotions developed by operators abide by TRR's Competition Guideline and other relevant instruments.
- Ensuring the terms and conditions of services offered by service providers are fair at all times.
- Addressing issues faced by consumers with regards to the telecom services being provided to them; such as consumer's concern of Intune services.

The telecommunications market trend for 2014 is interesting; in particular, for the mobile, fixed and internet retail services market. After the landing and operation of the submarine fibre optic cable in January and its utilization by licensees, this has had a significant impact on the market behaviour and competition. Competition in the internet retail services market received significant attention during the year 2014. Digicel, TVL, Telsat and Wantok offered competitive bundles and packages focusing on broader bandwidth and high speed internet; but mostly in urban areas only.

Following on from this announcement, TRR's UAP project team visited all selected schools in November in coordination with the Office of the Principal Education Officers, and the Provincial Government from all six provinces. The primary purpose of these visits was to establish contact with school representatives, announce their candidacy under the programs, brief them and provide further program awareness, discuss preparatory works needed by the school to support implementation of the program and, significantly, to verify and confirm site requirements such as access to power, internet and other existing infrastructure to assist the project team with its deployment planning.

The level of basic awareness concerning the desirability of high technology in education and community can be seen in light of the generally low level of technological knowledge and experience. Because of this, it has proven necessary for the TRR to take a much more active role in the selection, provisioning and deployment and support of equipment and materials.

TRR has compiled all site requirements and, with the assistance of its consultant, launched a total of twelve tender notices, towards the end of 2014, for the procurement of goods and services needed to meet the requirements of each school under the TFS and CLICC program. The tender evaluations and contract awards are expected to be completed in early 2015.

This initiative, and these 3 UAP programs, continues to indicate that Vanuatu has played a leading role in the Pacific with respect to facilitating telecommunications service and internet provision. Divided into three components, the work is designed to provide the framework for what will effectively be a national ICT upgrade.



TRR UAP Officer presenting GRC confirmation letter to Merei School Headmaster witnessed by South Santo ZCA, school chairman, teachers and Merei students (Photo courtesy: Graham Crumb)

In July 2014, TRR, as the Asia Pacific Telecommunity (APT) administration in Vanuatu, assisted the Government and submitted a grant proposal for 2015, to the Japanese Government through the APT J3 Project for a Pilot Project, for realizing full time active volcano surveillance, geohazards monitoring, and creating disaster emergency Information Dissemination Stations, together with the provision of internet wireless broadband services in Vanuatu.

Initially, the project was for three locations in Vanuatu that have active volcanoes and flooding risk areas. However, after site survey by APT technical team, it seems that only one site will now be focussed on. Vanuatu is now shortlisted for 2015; but the final process is yet to be completed by the APT; expected to be early in 2015.

4.5.1 UAP Reporting

As a requirement under the UAP, TRR has already provided three reports to the Minister detailing the key achievements, updates and related information on the implementation of the UAP. The first Report to the Minister was provided on the 4th of March. The second UAP report was provided on the 6th of June, and the third was provided on 5th December. TRR, according to the UAP, is required to provide a Report to the Minister at 6 months intervals. These reports are confidential.

TRR has also developed two public UAP update reports. The reports were developed on the 31 July, and 17th of December. This is in respect of UAP implementation and in securing industry commitment and cooperation in meeting the UAP requirements and objectives. Recognizing the importance of keeping all its stakeholders informed by way of regular reporting on the progress of UAP implementation, Update Reports are published and can be viewed and downloaded on TRR's website (<http://www.trr.vu>).

TRR will now continue to develop reports at six monthly intervals: In-confidence to the Minister, and a public UAP Report.

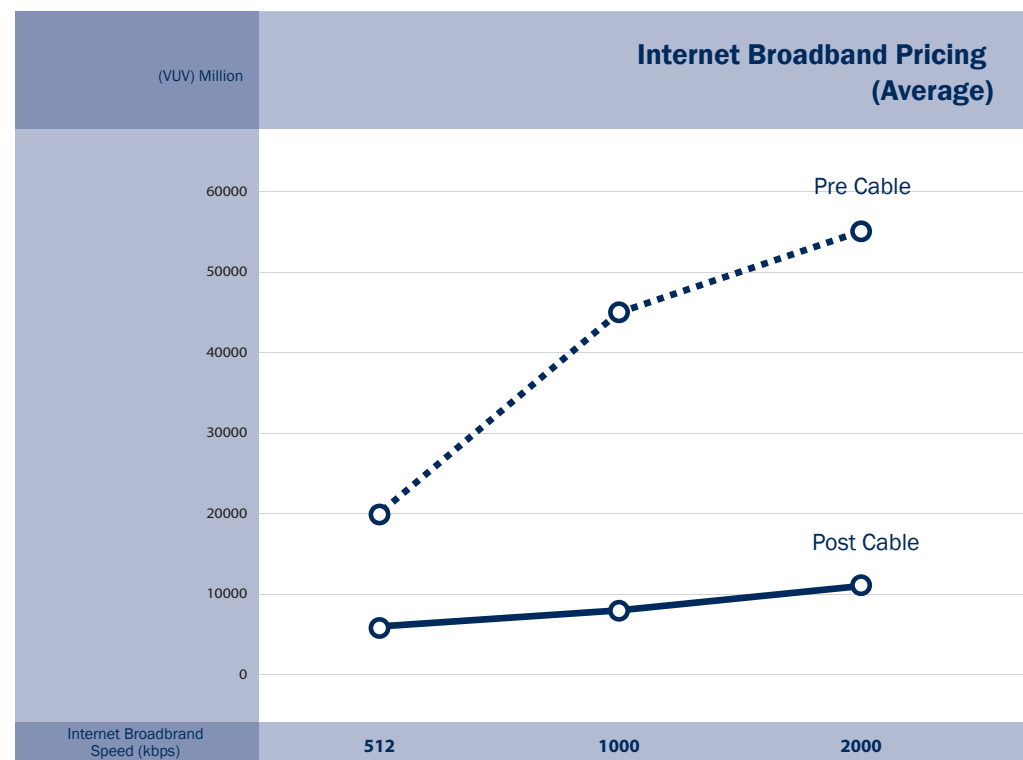
Service providers that significantly reduced their broadband internet pricing are TVL and Telsat Broadband Vanuatu. Digicel, on the other hand, maintained its internet prices while increasing internet speed and bandwidth. For instance, prior connecting to the submarine fibre optic cable, Digicel 1Mbps-package was being sold for VUV37,000. At post-fibre optic submarine cable, Digicel increased the internet speed of the same package to 3Mbps. Our assessment of TVL's prices indicated reduced internet broadband prices of approximately by 63 percent compared to the pre-submarine cable period. In 2014, TVL also introduced four new broadband internet packages for its retail customers, with a range of speed options from 2Mbps, 4Mbps, 10Mbps and 20Mbps.

In keeping with the trend, Telsat Broadband Ltd also reduced its prices significantly. For instance, the price and by introducing five additional internet services with speed ranges from 2Mbps, 3Mbps, 6Mbps, 8Mbps and 10Mbps.

Wantok Network Ltd, post the submarine cable arrival, directed its focus on corporate entities and wholesaling high internet speed packaging ranging between 5Mbps to 20Mbps. Changes can also be seen in other remaining small licensees; but these are minimal.

Overall, by comparing the service providers pricing, the price for Broadband internet services fell significantly by approximately around 70 percent on average as shown in Table below.

Mobile banking was introduced into the sector in 2013. It commenced with Digicel partnering with the National Bank of Vanuatu in May 2013 and has increased after Digicel partnered with ANZ Vanuatu, in 2014, for the utilization of Digicel network to enable a banking service, known as the "goMoney" to be available to the people of Vanuatu. The advantage and contribution of this service to the sector is that it promotes telecommunications as an efficient and safe transaction tool for customers. Customers who sign up for goMoney with the ANZ Bank are able to conduct their everyday banking using their mobile phones; allowing them to send money to family and friends,



pay bills, purchase airtime top-up vouchers, and view their account balances and history over their mobile phones.

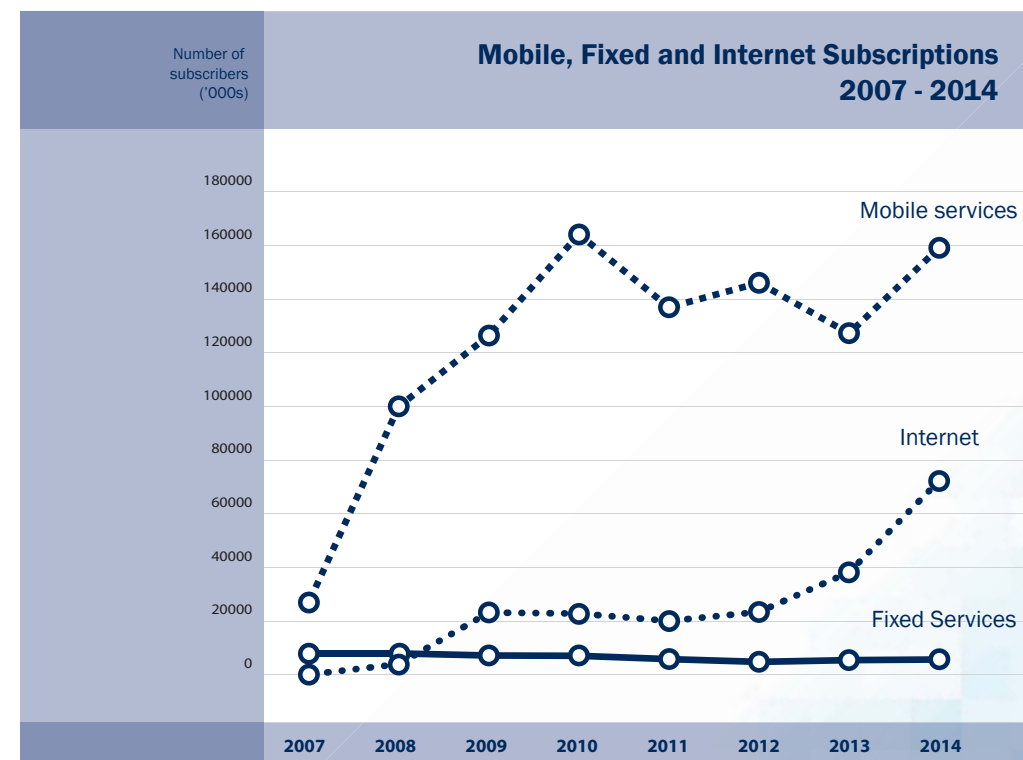
Additional services were also introduced by the major mobile operators to stimulate usage such as the establishment of a mobile phone charging station in Port Vila and Luganville central markets. This initiative enabled consumers to charge mobile phones for a very small fee payable to the local *mama's*.

TRR, during August, focused its awareness program on competition in the sector. An educational program on the telecommunications/ICT market, and competition within it, was conducted through media: in newspapers, publications and radio broadcasting. The aim was to educate the public at large on understanding various services, reading and understanding of advertisements, terms and conditions, consumers' rights and the process of lodging complaints with TRR.

5.2 Market Statistics

5.2.1 Subscriptions

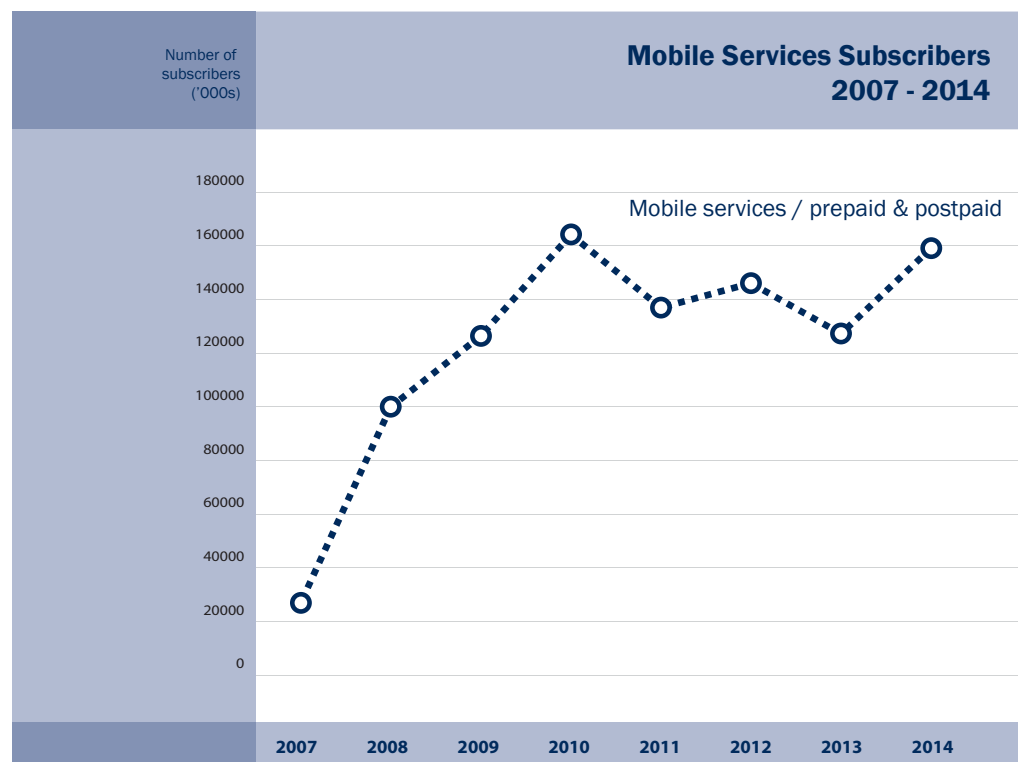
In 2014, the subscriber trends of the three main markets continue to show increases in the number of mobile, fixed and internet subscribers. 2014 subscriptions as compared to 2013 subscriptions have shown that mobile subscriptions has increased by 25% and fixed subscriptions have slowly increased by 4%. Contrastingly, internet service subscriptions have increase by a significant 89% compared to 2013.



5.2.2 Mobile Subscriptions

Mobile subscriptions are one of the key indicators that TRR relies upon to assess the growth of the mobile market. This indicator refers to the number of pre-paid and post-paid cellular mobile subscribers (using 2G, 3G or beyond) that initiated a chargeable event in the last 90 days. The Table below shows the total number of mobile service subscribers since 2007 until 2014.

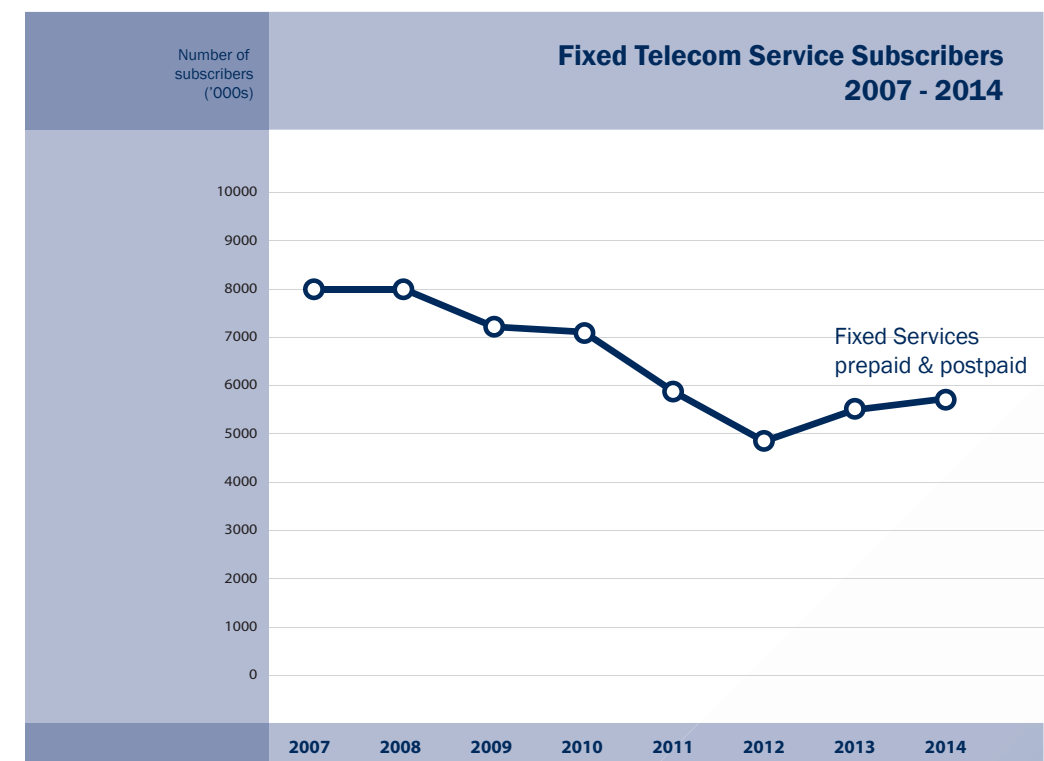
Previous assessment of the mobile market has shown that with Digicel entering the market there was increasing competition between the mobile operators leading to mobile subscribers reaching a peak of just over 160,000 registered subscribers in the period 2007 - 2010.



This figure fell in 2011 due to the market normalizing as more competition from the incumbent occurred to compete against the new entrant, and consumers were then picking their network of preference. The 20 percent increase in registered mobile subscribers in 2014 as compared to the previous year is attributed to consumer awareness, aggressive marketing and more promotions being put in the market. Consumers have also significantly impacted in trend as they switch between the two major mobile operators (TVL and Digicel), and assist driving communication prices lower.

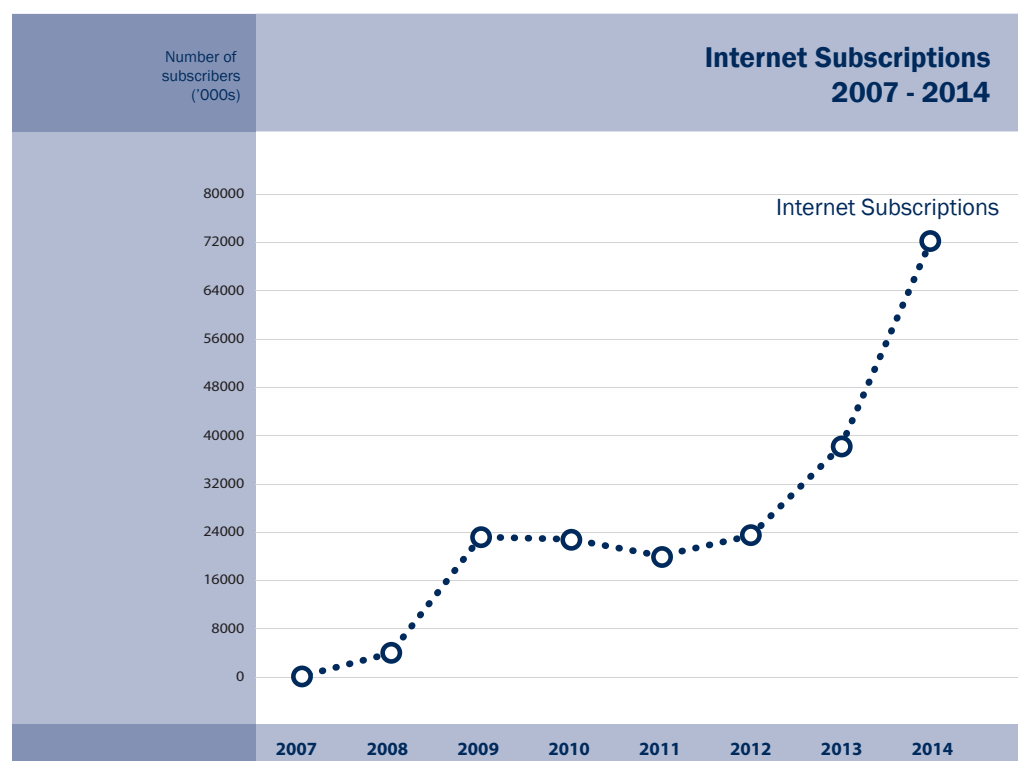
5.2.3 Fixed Subscriptions

Earlier market assessments have shown that as mobile phones were introduced into the market, fixed telephone subscriptions decreased in the period 2007 - 2013 as end-users found it cheaper and much more convenient and efficient to have a SIM card and the mobility mobile phones provide, rather than using a fixed line. Wireless technology (WiFi) being introduced in the market caused further decreased the number of subscribers in this market. The year 2013 - 2014, however, saw the number of subscribers rise in this market with the increase being attributed to Digicel offering fixed services as well as promotional packages being available in the market; such as broadband offers being offered with additional landline options. The increasing popularity for wireless internet and mobile coverage will continue to drive the telecommunications/ICT market and consumers will continue to want more of a 'one-in-all' gadget that meets their demands. As such, it is likely that fixed line subscriptions will continue to have a slow decrease in the future.



5.2.4 Internet subscriptions

As expressed in previous analyses of the internet market, significant changes became apparent in 2008-2009 where competition increased as more internet service providers entered this market. Lower prices have made internet connection available and affordable for residents in Vila and Luganville. 2014 saw a meteoric increase by 84% in internet service subscriptions as compared to 2013. The increase is attributed to the landing of the submarine cable enabling lower prices; improve speeds and capacity as well a more data promotions being available in the market. Consumer awareness of online applications, internet browsing and the increased use of social media such as the *YumiTokTok Stret* forum pull the interest consumers and the use of YouTube and Facebook to chat and connect with friends and families and stream videos online, has contributed to this increase in internet subscriptions and usage.



5.2.5 Telecommunications infrastructure

There is an increase of 10 percent in the number of towers built in 2014 compared to 2013. This is evident given that additional services were provided through out Vanuatu, including those at the far North of Vanuatu-Torres Islands.

Operators continue to invest in fixed properties including buildings. This includes the new shop of Wantok now open in Port Vila town, the improvement of TVL's building at the Post Office, the new building of Interchange Ltd at Mele Bay (the submarine cable landing station) and the newest flagship shop erected in Luganville, Santo, by Digicel Vanuatu.

Investment in infrastructure is also another indicator of market growth and viability.

5.2.6 Employment

The sector provides at least 430 active jobs registered with the Vanuatu National Provident Fund, making up 1.7 percent of the total VNPF registered employees in Vanuatu. This is an increase by 0.3 percent as compared to 2013 telecommunications employment data. Apart from the registered employment, the sector also provides additional jobs to Ni-Vanuatu citizens across the nations in the form of subcontractors, street vendors, resellers; infrastructure caretakers and other employment as well that at large contribute to the welfare of the people of Vanuatu.

5.2.7 GDP Contribution

According to data obtained from Vanuatu National Statistics Office, the 2014 GDP forecast has shown that Information and communications, in which ICTs is a major contributor, is expected to have contributed 5.3 percent to the country's GDP growth for the year. This is significant.

5.2.8 Consultation on Wholesale Exceptions

In December, TRR issued a consultation document on wholesale exceptions. The document sought feedback from licensees, service providers and interested person/parties on the approach the Regulator proposed to take to address the regulation of wholesale service providers in Vanuatu; in particular cable, wholesale service and satellite providers. Since the liberation of the telecommunications sector and the submarine cable from Vanuatu to Fiji has become operational, a number of persons have commenced provision of wholesale internet services in Vanuatu using the submarine cable capacity and satellite services. Currently, those providers are (i) the submarine cable provider - Interchange Ltd. ("ICL"), (ii) Fidelity Communications Corporation ("FCC"); and (iii) Speedcast Pacific Pty. Ltd. ("Speedcast Pacific"). In the consultation document, TRR proposed to issue an authorisation, in the form of an Exception as required under the Act, for the supply of wholesale internet services by ICL, FCC, Speedcast Pacific and any other persons who wish to provide wholesale services within Vanuatu.

5.3 Registry of Operators

5.3.1 Revoked Telecommunications licences / Telecommunications licences

TRR has reviewed its registry with regard to telecommunications licence holders, including the status of their operations whether or not they had been active in accordance with their licence obligations. In doing so, TRR decided to revoke, upon consent by each respective licence holder, seven of the telecommunications licencees. (See also Section 7.1 of this Report.)

All bar one of the revoked licensees were not providing telecommunications service as mandated by the terms and conditions of their licences and, therefore, they were not complying with their legal obligations; particularly with regard to annual fees and the UAP commitments as developed by TRR. Consultation was undertaken with each licensee who consented to the revocation Orders.

Such action by TRR did not affect the telecommunications market, however, and competition remained healthy, active and steady during the year. Continuous growth was visible in more services being introduced to the market and license applications receives.

No.	Names	Issuance Date	Revocation Date
1	Yumi Konneck Project	22/09/2009	30/04/2014
2	Wavecom Limited	22/09/2009	3/6/2014
3	Micoms Limited	10/1/2010	3/6/2014
4	Hotspotz Limited	22/09/2009	3/6/2014
5	eTech LTD	21/05/2010	25/07/2014
6	CNS LTD	20/01/2010	25/07/2014
7	Skycloud	24/10/2013	21/11/2014

Table 1: List of licenses revoked during 2014.

Licencees	National Fixed	International Gateway	Mobile	Internet Broadband	Leased Lines	Mobile internet data services (GPRS, 2.5G, 3G, 3G+etc.)
Telecom Vanuatu Limited	•	•	•	•	•	•
Digicel Vanuatu Limited	•	•	•	•		•
Telsat Broadband Limited		•		•		
Wantok Limited (formerly Can's Holdings Ltd)				•		
SPIM				•		
Incite Limited				•		
Interchange Limited		•				

Table 2: Indicates current licencees at 31 December 2014

Litigation

The Supreme Court finally made a decision on the case involving Digicel Vanuatu Ltd and TRR on a judicial review claim filed by Digicel under the Telecommunications and Radiocommunications Regulation Act of 2009. On the 6th of June 2014 the Court held that Digicel did not have an “arguable case” to claim for judicial review and struck out the claim under the Test set out under Rule 17.8(5) of the Civil Procedure Rules.

The case was then brought to the Court of Appeal by Digicel which, on the 14th of November 2014, with the outcome that the Supreme Court has set aside that decision and decided in favour of Digicel. It was held, among other things, that the Telecommunications and Radiocommunications Regulation Act 2009 did not allow TRR to review an interconnection rate which was set under an interconnection agreement (a private agreement) that was effective prior to the entry into force of the Act itself. The Court of Appeal further awarded costs in favour of Digicel; with such cost ordered to be shared between TRR and TVL.

Orders, Decisions and Determinations made by TRR

7.1 Orders

TRR, in 2014, issued seven (7) revocation Orders. Six of them were as a result of a review made by TRR on the status of their licences since 2008. Those licensees were found to be not operating as required under their licence in that they had not met their legal obligations under their licences such as the payment of their licence fees and the 2014 UAP levy. All licence holders involved were consulted and consented to the revocation. A recent Order made related to a request made by Skycloud Networks for revocation of its license, which TRR agreed to and proceeded to revoke the licence after consulting with Skycloud Networks. See also the Table on page 40.

7.2 Decisions

7.2.1 Decision 01 of 2014

Decision 01 of 2014 was made on the 14th of August 2014 and related to Planning for the 700MHz Frequency Band in Vanuatu. In this Decision, TRR inter alia, allocated the 700MHz band for use by licensees or service providers or potential service providers to provide mobile broadband services using the 4th Generation Long Term Evolution (LTE) technologies, or technologies that will be compatible with LTE services in accordance with the parameters and conditions as set out in the Decision.

7.2.2 Decision 02 of 2014

TRR made this Decision on the 7th of November 2014 on the new Prescribed Fees for Radio Apparatus Licences. It includes a late payment fee of Radio Apparatus Licences and a licence fee for an experimental licence to allow the trial of new technologies, new applications or new services.

Prior to this Decision, TRR has had to implement a Radio Apparatus Licence fee schedule that was established prior to Vanuatu's independence in 1980, and had originally been collected by TVL; when TVL was the monopoly operator. This was at a time prior to the establishment of TRR in 2008, and the passing of TRR Act in 2009 then gave that power and management of spectrum to TRR.

As a system of radio apparatus licence fees is already in place, the new fees do not represent a major shift in policy. Instead, it represents a change to the existing policy to ensure that fees more accurately reflect the costs of managing the radiofrequency spectrum. TRR recognized that the original fee structure and level were not fit for purpose and publicly consulted on a new fee schedule. TRR was particularly mindful that the original fees that had been set had not been based on any actual cost basis, nor had they been adjusted for inflation, and that they had failed to generate sufficient revenues to cover the costs associated with administering the services involved. In particular TRR is required to ensure there is no spectrum interference and that all radio apparatus can operate effectively and safely. Further, the fee structure had not changed to reflect changes more broadly in communications markets since that time.

The Decision on new the prescribed fees was made in 2014 but will come into effect on 1st January 2015.

7.2.3 Decision 03 of 2014

This Decision was made for Fixed Services Band Planning Arrangement in Vanuatu, on the 19th of November 2014. This Decision adopts a plan and guide for the frequency assignment and coordination of terrestrial microwave fixed services in Vanuatu. It provides band planning arrangements for the 1.5 GHz, 5 GHz, 6 GHz, 6.7 GHz, 7.2 GHz, 7.5 GHz, 8 GHz, 10 GHz, 11GHz, 13 GHz, 15 GHz, 18 GHz and 22 GHz bands. It specifies key technical requirements for the use of these bands, including channelling arrangements, assignment guidelines, antenna requirements and protection ratios. Licensees deploying microwave fixed services in Vanuatu must follow these planning arrangements.

7.2.4 Decision 04 of 2014

TRR received complaints from other service providers regarding the use of the term "free" by TVL in its advertisements. Investigations were undertaken by TRR and a consensus was reached between TRR and TVL whereby TVL would rectify all its advertisements using the term "free", for all types of its advertisements used, within a 4-month grace period. Digicel did not agree to that and requested TRR to review its decision; asserting that such a grace period was too long and may affect competition in the market. TRR assessed the request according to the Act, and proceeded with the review. Prior to making a decision TRR performed further investigations and assessments, and concluded that a 4-month grace period should be struck out and, as such, issued a Decision for TVL to amend its advertisements within a much shorter time period.

7.3 Determination 01 of 2014

TRR made a Determination on the 12th of November 2014 on the UAP Broadband Speed Provision as set out in the Government UAP. (See also Section 4.3.2 of this Report.)

Telecommunications and Radiocommunications: Technical and Engineering

8.1 Interconnection and Reference Interconnection Offer

A new TVL and Digicel Interconnection Agreement, was signed on 12 June 2014. The term of this Interconnection Agreement is for 4 years to June 2018.

The new Interconnection Agreement is based on TRR's Nominated Service Provider Reference Interconnection Offer (NSP RIO) developed in 2013 and published on 17 December 2013. The two major operators commercially negotiated and agreed to the new interconnection rates, in good faith, with encouragement from TRR. TRR congratulates both parties on this effort. TRR also acknowledges the combined efforts of TVL and Digicel to use the NSP RIO as a basis for their new Interconnection Agreement.

The new Interconnection Agreement was amended on 16 July 2014 to accommodate the any-to-any principle for calls to Toll Free numbers from either a fixed phone or mobile. The new Interconnection Agreement is published on TRR website <http://www.trr.vu>³.

Full link - <http://www.trr.vu/index.php/en/telecom-industry/market-and-competition/interconnection>

8.2 National Numbering Plan and Procedures

8.2.1 National Numbering Plan Management

A new fixed number range 20- xxx was allocated to TVL in January 2014, while Digicel is yet to complete its full migration of its 7-digit mobile numbers that were assigned to customers with Private Automated Branch Exchange systems, Digi-Fixed, Digi-Home and GSM-Desktop terminals, to 5-digit numbers in the 35 xxx range. Digicel's 35-xxx fixed number range has been listed in the new Interconnection Agreement of 12 June 2014, between TVL and Digicel.

TVL and Digicel, on TRR's initiative and request, are now routing all calls to toll free numbers free of charge; whether the call originates on a mobile or fixed number. TRR is closely monitoring compliance with this change.

In November, TRR allocated 100 Toll Free numbers each to TVL and Digicel respectively in the 0811xx and 0818xx ranges.

8.2.2 Internal Process and Procedures for the Allocation of Numbering Resources

TRR developed, and made effective on 12 June 2014, its internal Process and Procedures for the allocation of numbering resources. This internal document sets out the process and procedures for allocating numbering resources in accordance with the National Numbering Plan and Procedures (NNPP) and will be used by the TRR technical team to carry out all numbering resource allocations and responsibilities.

8.2.3 TRR's Numbering Working Group

TRR set up its Numbering Working Group (NWG) to act in an advisory role and provide advice and guidance to TRR on the development, implementation and administration of the Vanuatu National Numbering Plan (NNP), and to study and raise awareness of any numbering related issues.

The NWG membership includes licencees with allocated numbers, and stakeholders from the business sector, relevant Government agencies, Emergency Services representatives and Consumer Groups. The first meeting of the NWG was held on 29 July when the Group adopted its Terms of Reference. A range of discussion papers on numbering and emergency services issues were also discussed. The NWG will meet regularly at approximately 3 month intervals. It is chaired by the Regulator and TRR is the Secretariat to this group.

The second NWG meeting was held on 9 October, during which the Group agreed for TVL and Digicel to apply for 100 Toll Free numbers each in any range that has been previously utilized for Toll Free services.

8.2.4 Numbering Issues

Numbering resources in Vanuatu are allocated, assigned and managed in accordance with the NNPP.

TRR has in place a list of short codes that are currently assigned to specific services. However, not all stakeholders were aware of the Short Code Assignment Rule (SCAR) in terms of their range and length, under the NNPP. TRR brought the issue of "Non-Compliance with the Short Code Assignment Rule" to the NWG for consideration on 29 July 2014 together with recommendations for remedial action. Some operators are currently in breach of the NNPP requirements and have assigned short codes that are non-compliant with the SCAR. This matter remains under consideration of the NWG and TRR.

In December, TRR successfully intervened following a customer query and liaised closely with the concerned operator to assign a new short code that is in-line with the SCAR.

TRR continued to liaise with operators to rectify the issue promptly and has actively monitored this to ensure that all the short code numbers advertised complied with the SCAR in terms of their range and length.

The NNPP will be converted into a Regulation in 2015 for more effective compliance and enforcement.

8.3 National Emergency Response Group (NERG)

The Vanuatu National Emergency Response Group (NERG) was established in 2011 following an initiative of TRR achievement of the following Goal:

"To meet National, International and License Obligations in a cost effective manner to establish the necessary resources required when individuals or group of individuals within the territorial boundaries of the Republic of Vanuatu, experience an emergency (life threatening) situations on land, sea or air and require expert support to save life."

NERG assisted TRR with the assignment and implementation of the current short codes for emergency services in late 2011. TRR resurrected the NERG again in 2014 and it held two meeting this year.

NERG held its first 2014 meeting on 27 August following reports of increased hoax and malicious calls to emergency services short codes, raised by emergency operators during the first NWG meeting of 29 July. The NERG group has since achieved the following:

- Published notices in English and Bislama in the newspapers as an awareness campaign to discourage hoax and malicious calls to emergency short codes under TRR's banner. The awareness included a Radio Talk Back show on FM 107, in September;
- Written to the Acting Police Commissioner, Lieutenant Colonel Aru Maralau, in September, to support enforcement of emergency short codes and to ensure the Police are represented on the NERG and attend meetings;
- Implemented routing of calls destined for universal emergency numbers 000 and 999 to voice messages, which has contributed to reducing the number of hoax/malicious/nuisance calls to emergency operator Promedical and Vila Central Hospital Ambulance;
- Acceptance of the NERG chairmanship position by the Government Chief Information Officer, Mr. Fred Samuel, in November 2014, which TRR had held as an interim measure prior to that.

During the last NERG meeting of 2014, held on 13 November, discussions focused on the possibility of and potential for a 24/7 National Emergency Centre, and also Maritime Radio Coastal Stations, following the sinking of LC MGY barge near Lelepa Island in July this year.

Since Vanuatu is part of the International community, NERG strongly believes that the appropriate arrangement is to have a permanent 24/7 National Emergency Centre, under the jurisdiction of the Government, that will receive and redirect emergency calls to the appropriate emergency service. The Group agreed to conduct a study for the potential of establishing a 24/7 National Emergency Centre under the leadership of OGCIO. Government awareness of such a project has been reinforced with the appointment of the Government Chief Information Officer as the new NERG Chair.

A meeting was held on Wednesday 17 December 2014 between TVL, Ports & Harbour and TRR to address the issue of TVL customers not being able to access maritime emergency services through emergency number 114; which had been an issue since the end of October 2014. TRR appreciated the cooperation that was shown between TVL and Ports & Harbour and a satisfactory outcome was reached. This was followed by TVL's restoration of the service on Thursday 18 December; which was just in time for the festive and cyclone season.

8.4 Regulating the Import, Sale and Use of Telecom Equipment

Section 7(4) (f) of the Act stipulates that the Regulator may make Regulations "imposing restrictions or limitations upon the importation, sale or use of any equipment used or likely to be used in connection with radiocommunications or telecommunications".

Following on from the 2011 draft Regulation on Restrictions on Import, Sale and Use (Draft Regulation), developed to protect local authorized dealers of certain trademarks/patents rights which might be breached as a result of import and use of unauthorized telecommunications and radiocommunications equipment in Vanuatu, TRR revisited the suspended project this year. A TRR (internal) concept paper on Guidelines on Restrictions on Import, Sale and Use (guidelines) was developed in May 2014. These guidelines included ICT equipment in addition to telecommunications and radiocommunications equipment.

A way forward has now been developed to revisit the Draft Regulation of 2011 and to conduct public consultation to a wider audience, including Government agencies, telecom operators, businesses, civil society, consumers and the general public, of a changed focus of the Regulation towards a Type Approval legal instrument for approving radio communications equipment. Public consultation is planned for 2015.

8.5 Mobile Signal and Internet Coverage and Quality of Service (QoS) Audit

8.5.1 Mobile Signal Coverage Audit

Mobile technology in Vanuatu has evolved from GSM 2G, 2.5G, 3G, 3G+ and 4G broadband enabled technology in more recent times, enabling mobile services to evolve from basic voice and message services to more recently multimedia services including email, access to the internet and the conveyance of real time video. Coupled with the submarine cable capacity this, in turn, allows for many different economic and social sectors in Vanuatu to benefit from enhanced communications, applications and services.

To support the UAP project, TRR conducted a rudimentary mobile signal coverage audit via two tests in May and June, aimed to inform TRR on the current aggregated mobile signal coverage access in Vanuatu.

Unserviced/Underserved Areas

1	Torres Islands	12	South Ambae
2	Ureparapara	13	Central Maewo
3	Mota Lava	14	Central Pentecost
4	Mere Lava	15	South Pentecost
5	Gaua	16	South Epi
6	West Santo	17	East Erromango
7	North West Santo	18	North Tanna
8	North Santo	19	South Tanna
9	South Santo	20	Aniwa
10	North West Malekula	21	Futuna
11	South West Malekula	22	Aneityum

Table showing areas detected and identified as unserved/underserved

The first test involved each TRR member conducting phone calls to ground sources in predefined areas in the islands of Vanuatu (except Efate) with known population count, to determine the presence of mobile signal. The predefined areas/villages around Vanuatu targeted for the tests were determined via a desktop study as potential UAP areas i.e. unserved or underserved of communications services – see Tables above.

The manual test calls recorded elements including, coverage availability in village, ability to conduct a mobile phone call in the village, where and how far a person must travel to make a mobile phone call and whether or not weather conditions affect the ability to make a mobile phone call.

A second rudimentary coverage audit, purposely for Efate, involved a drive test around the island and the villages located along the Efate ring road as well as on the Port Vila CBD area and surrounding suburbs. The tests involved the determination and plotting of 2G and 3G coverage areas by Digicel and TVL. Examples of the results of the Port Vila coverage tests and audit and the different signal strengths are depicted below. The following Table and Maps provide TRR test results of both Digicel and TVL 3G mobile signal coverage for the Port Vila areas tested. The following colour codes have been applied to indicate various signal strengths and are to be read with the maps. The RED colour indicates areas with strongest signal strength.



Figure 8: Digicel 3G coverage in Port Vila

Outcomes from TRR's rudimentary drive test demonstrates that overall the 3G mobile signal in Port Vila is good and it is where mobile data is mostly used. It is, thus, important that there is acceptable QoS for customers and consumers using this 3G service.

Mobile technology is rapidly changing around the world, and to ensure that Vanuatu is not left behind, the use of at least 3G mobile technology to enhance technological development in the country as well as economic and social development, has been encouraged by TRR, and is expected to occur with the UAP rollout.

TRR needs to be aware of and establish a current mobile coverage base so that it is in a position to confirm the UAP deliverables of ensuring 98 percent coverage of the total population by 1 January 2018. As such, TRR has engaged an expert consultant to conduct, onsite, a nation-wide mobile signal and internet coverage and a QoS audit to enable TRR to have a holistic view of the exact availability of mobile and internet services and mobile and internet coverage in Vanuatu.

The onsite audit will enable TRR to address QoS needs and further assist TRR with its spectrum planning and management responsibilities for mobile networks that further evolve to technology such as LTE. TRR's preliminary findings via the rudimentary tests, with the magnitude and effort required of conducting an actual onsite coverage audit, precipitated the need for TRR's engagement of a technical expert firm to provide TRR robust coverage information.

Consultant testing and data analysis, to determine and verify coverage audit in Vanuatu, is planned to begin early in 2015.

Colour	Signal Strength (dB)	Description
Red	>-60	Excellent (Outdoor + Indoor)
Orange	-61 to -70	
Yellow	-71 to -80	Good (Outdoor)
Green	-81 to -90	
Light Blue	-91 to -100	Weak
Dark blue	-101 to -110	Poor Signal
Bold Black	-111 to -120	
Thin Black	No Signal	No Signal

Table 4: Signal Strength Table - TRR

Figures 8 and 9 outline the Digicel's 3G coverage and TVL's 3G coverage in Port Vila as identified by TRR's drive test an is an example of the information obtained by TRR from its testing.



Figure 9: TVL 3G Coverage in Port Vila

8.5.2 Quality of Service (QoS)

Vanuatu's telecommunications market services have leap-frogged, in certain respects, over the last 5 years. We have progressed rapidly from ADSL fixed broadband to wireless broadband (WiMAX, 3G, 3G+, and recently 4G). Consumers are now able to access various broadband packages on offer on 3G networks. In addition, the telecommunications market has been flooded with the latest ICT gadgets including smart phones, androids and tablets that are capable of transmitting information over high speed internet. Mobile and telecommunications users and businesses alike are no longer limited to desktop PCs whether they are located in Vanuatu or overseas.

With these ongoing developments in Vanuatu's telecommunications market, TRR was well aware of the vital need for an effective QoS assessment mechanism to be put in place. This is particularly so since there has not been any QoS measurement carried out, to date, by any of the mobile operators and ISPs. TRR recognizes that it is now timely to conduct a detailed QoS measurement of the mobile and ISP networks.

Similar to mobile signal coverage, TRR has engaged an expert consultant to conduct, onsite, a nation-wide QoS audit to enable TRR to have a holistic view of the actual QoS currently being provided for mobile services and internet in Vanuatu. The QoS measurements will cover all existing telecommunication services: voice, narrowband and broadband Internet services. At least two QoS measurements must be completed by 1 January 2018.

TRR currently has a QoS Guideline which was developed in November 2012, pursuant to Section 7(1) of the Act. It was developed mainly to establish a framework for the provision of information to assist end users with their selection of services and to assist in the maintenance and the improvement of the QoS provided by service providers. Being merely a Guideline, however, TRR has experienced implementation challenges with this regulatory instrument. The QoS Guideline is being reviewed and will be converted to a Regulation. This will enable TRR to, in future, effectively evaluate and benchmark quality levels of telecommunications services offered by mobile network operators and ISPs.

8.5.3 National Telecom GIS Database

TRR has developed and produced GIS maps to include broadband internet coverage, GSM and UMTS mobile coverage, overlaid with villages, population density, schools, medical health centres, roads, wharfs and airstrips. The GIS database has become a vital support information tool in the roll out and implementation of the UAP, as well as reflecting new trends in spatial data, demographic and economic services overlaid for analysis.

Latest data and information received from stakeholders and partners, such as mobile operators, Internet service providers (ISP) and Government institutions; for instance, the Vanuatu National Statistics Office, Education Department and Health Department has been included in the GIS. This data and information has been captured in TRR's GIS database. Working arrangements in the form of partnership MoU's have been developed in order for TRR to access and receive relevant information and data for developing its GIS Database on a regular basis.

8.6 Radio Spectrum Management

TRR engaged the services of a Spectrum Expert in February 2014 under the World Bank grant to assist in various spectrum management-related and monitoring activities. The work includes the revision of radio apparatus fees, spectrum pricing, radio spectrum band planning, and knowledge transfer to the technical team to support TRR's sustainability requirements.

8.6.1 Spectrum Management Principles

The primary objective of spectrum regulation is to ensure that Vanuatu's valuable national spectrum resource is used efficiently and effectively. Therefore, to enhance its radio spectrum management function in line with the Act, and in support of its planning allocation and assignment practices, TRR developed and released its Spectrum Management Principles on 25 November 2014. These high level principles will be used by TRR in its management of the radio frequency spectrum.

8.6.2 700 MHz Band Planning

TRR, in response to increased requests from operators, brought forward its work on 700 MHz Spectrum Band planning. In 2014, TRR developed and consulted on a proposed band plan for the 700 MHz in response to enquiries for access to the band for the deployment of mobile broadband. Various band plans based on the APT 700 MHz Band Plan were proposed for adoption. There was considerable support for the use of the APT Plan⁴ and, as a result, TRR made a decision on how it will organise the allocation and assignment of the band. (See also section 7.2.1 of this Report.)

TRR wanted to ensure that industry was engaged in the planning process and to guarantee timely allocation of 700 MHz lots to operators when required. A draft paper on 'Planning for the 700 MHz Band in Vanuatu' was released for public consultation on 30th April 2014 and closed on 13th June 2014. A range of responses were received from the operators and external stakeholders, including a Government policy view from OGCIO. Work has since progressed resulting in the finalisation of the 700 MHz Band Plan, with TRR issuing its Decision 01 of 2014⁵ on 20th August 2014.

⁴ The APT Plan for the 700 MHz spectrum band can be found at http://en.wikipedia.org/wiki/APT_band_plan_in_the_700_MHz_band

⁵ Decision 01 of 2014 can be found at <http://www.trr.vu/index.php/en/public-register/determinations/decisions/2014>

8.6.3 Fixed Services Band Planning

In 2014, TRR issued a draft paper on Fixed Services Band Planning for public comment. The consultation and receipt of comments closed on 28th July 2014, but was extended to 11th August 2014. Fixed services, otherwise called microwave fixed point-to-point links, provide essential backhaul to a variety of services including mobile base stations, air traffic control radar, electricity distribution systems and internet connectivity.

Planning of these bands is important to ensure that operating systems can be identified and protected, and to also ensure that spectrum dedicated to fixed services is used efficiently. Feedback received on the consultation assisted TRR in finalising the band plan. Of particular importance was the need for TRR to develop two alternative plans for the utilisation of the 7.2 GHz and 7.5 GHz sub-bands, which was necessary to ensure that existing usage by both TVL and Digicel are appropriately accommodated.

Work has since progressed resulting in the finalisation of the Fixed Services Band Plan and TRR issued its Decision, Decision 3 of 2014, on 4 December. (See also section 7.2.3 of this Report.)

8.6.4 Other Spectrum Developments

In other spectrum management and licensing developments, TRR continued to collaborate with and provide the National Disaster Management Office with relevant radio frequency information to assist it in its cell broadcasting project, and with its VHF radio project for the underserved Torres Islands group of Vanuatu; with the intention of facilitating the dissemination of natural disaster alerts and recovery information.

8.6.5 SMS4DC Software

TRR purchased the Spectrum Management System for Developing Countries (SMS4DC version 4) software in July, developed by the ITU.

The software will assist TRR to efficiently and effectively manage Vanuatu's radio spectrum primarily for broadcasting, fixed and land mobile services to support the growing demand of wireless technologies.

8.6.6 Vanuatu National Frequency Allocation Table (NFAT) Review

In October TRR received technical assistance from the ITU to review its current NFAT. Mr Aamir Riaz from ITU Office in Jakarta had a week's attachment with TRR for a workshop and meetings regarding the NFAT review.

The scope of the ITU assistance for this project was to:

1. Study (the English version) of the Telecommunications Law and other relevant Government decrees and issuances in Vanuatu.
2. Review (the English version of) the current NFAT for Vanuatu in order to understand the current spectrum management policies adopted by TRR.
3. Review the outcomes of the ITU World Radio Communications Conference - 2012 (WRC-12), and cross relate the changes required in the current NFAT of Vanuatu; and closely work with TRR project counterpart staff to provide an explanation on the best method/approach for updating the NFAT.

The NFAT update work was finalised on the 1st of December and has been updated to reflect the WRC-12 resolutions.

8.6.7 Spectrum Monitoring and Interference Resolution

TRR has received many interference complaints and reports this year, mainly from the operators, together with a request for support from TRR in the use of its resources to overcome the interference problems being experienced. TRR's spectrum analyser has been effectively utilized by staff, on many occasions, in this respect. TRR conducted regular spectrum interference monitoring over this period in response to operator requests.

On one occasion, TRR received an interference concern of an operator to its 2.3 GHz fixed links by a competing operator at the Water Tanks Area in Port Vila. On another occasion, TRR was alerted by an operator claiming interference to its assigned frequency block in the lower C-band spectrum. Several instances of interference on the lower half of the C-band were identified. TRR addressed the complaint and, via its troubleshooting, worked with VBTC to identify the source which assisted in the affected operator making changes to its transmissions to resolve the interference. TRR developed its analysis and made recommendations that were communicated to the affected licensees.

In December TRR was requested to assist in investigating and resolving a major interference issue on the GSM 900 MHz spectrum assigned to Digicel. Working collaboratively and cooperatively with Digicel and Telsat, and as required with other licensees and the national broadcaster, VBTC, the interference was resolved. Investigations into this interference issue involved programmed disruptions to Telsat's and Digicel's services in order to pinpoint the source of the interference. The person responsible for the supply and installation of the interfering equipment was required to shut the system down, in line with the terms and conditions of the General User Radio Licence (GURL) for Short-range Radiocommunications Devices (SRDs). The major interference issue was, thus, successfully resolved.

The TRR Technical team continues to offer this service to licensees through on-site monitoring using its spectrum analyser equipment, and providing guided instructions and steps in-person, through email and over the telephone. With the help of TRR's spectrum analyser and the good working cooperation with operators, TRR has been able to resolve interference issues in a timely manner in 2014.

8.7 Radio Spectrum and Radio Apparatus Licensing

8.7.1 Spectrum Licences

A number of enquiries and applications for additional spectrum from licensed operators were received in 2014 resulting in a total of seven spectrum licences being issued during this period.

Three licences were issued for broadband, two for the deployment of a 4G distribution network in the 2.3 GHz band, and another for additional broadband capacity in the 3.4 GHz spectrum band utilising fixed WiMAX technology. Two licences were issued for backhaul in the 17/18 GHz spectrum band and one in the 71 GHz band.

Telsat was issued with spectrum licence in the 600 MHz band for the migration of its Pay TV service from its current operation in the 2.6 GHz band.

8.7.2 Radio Apparatus Licences

A total of twenty seven new radio apparatus licences were issued in 2014. Licenses issued were for the categories in; Aeronautical (5), Maritime (12), and Amateur (10).

8.7.3 New Radio Apparatus Licence Fees Schedule

TRR released its new radio apparatus licence fees schedule through its Decision 2 of 2014 made in early November 2014 (See also Section 7.2.2 of this Report.) The revised fees schedule will become effective on 1 of January 2015 and onwards. These new fees are the outcome of two public consultations on 3 May 2013 and 20th August 2014 on the revised fees for Radio Apparatus Licence, which sought comments and views from radio apparatus license holders, interested stakeholders and the public at large, about the level of the proposed new prescribed fees.

TRR has publicised this new fees schedule on its website and communicated its Decision by way of a Public Notice in the newspapers and emails to licensees. Current licence holders are being issued 2015 Radio Apparatus License fee invoices with a copy of the new fee schedule for 2015 onwards.

8.8 Radio Apparatus Licences Compliance and Enforcement

8.8.1 VSAT and Satellite Earth Station information requests to Operators

As part of TRR's compliance and monitoring of telecommunications/ICT products and spectrum management in Vanuatu, TRR requested information from users of Very Small Aperture Terminal (VSAT) and Satellite Earth Stations currently operating in Vanuatu. Such information is necessary for the set up a national registry for telecommunications/ICT equipment; including details of location and associated usage and operations. This will help TRR to effectively manage radio spectrum usage and facilitate an interference free environment for radio communications in Vanuatu. The ITU, which is the global body regulating spectrum usage, also requires from each member country regular reporting on the list of VSAT and Satellite Earth Stations. Information collected was entered in the SMS4DC spectrum management application.

8.8.2 Wi-Fi Services Compliance

TRR appreciates and recognizes that radio signals cannot be confined within the perimeters of premises of businesses providing the service for their clients, and that the public could also access these Wi-Fi services beyond the intended service areas provided they have credit cards. This year, TRR has been working on developing an appropriate regulatory framework to address this matter, and to put in place appropriate measures; including the potential for person(s) to be granted an Exception under the Act.

8.8.3 Maritime Radio Apparatus Compliance

TRR met with Ports and Harbour (P&H) and the State Law Office in late October regarding the compliance and enforcement of the radio apparatus licence in local marine vessels. The meeting outcome was for TRR to draft a MoU for collaboration between the two Offices.

The proposed MoU would give authority to P&H, on behalf of TRR, to conduct and extend inspection of marine vessels to verify the validity of radio apparatus licences and direct ship owners with expired licences to TRR to renew their radio apparatus licences. Additionally, the MOU would grant the parties the opportunity to share information and perform compliance aspects effectively.

Internet Governance

TRR increased its focus in 2014 on promoting, supporting and facilitating the:

- **Creation of an enabling environment for Vanuatu's social and economic development using the internet;**
- **Lawful and respectful use of the Internet as a shared resource; and**
- **Provision of a practical, competitive framework for the provision of Internet services in Vanuatu.**

9.1 .vu Country Code Top Level Domain (.vu ccTLD)

Many organizations, individuals and processes shape the coordination and management of the global internet. Many of these organizations are highly interdependent parts which require significant coordination. The International Corporation of Assigned Names and Numbers (ICANN) is one such organization. ICANN is responsible for coordination of the global internet's unique identifiers; to ensure secure and stable operation of these systems.

TRR's participation at the 49th ICANN Meeting in Singapore in March facilitated a much a better understanding of the importance of securing the Domain Name System (or DNSSec), roles and responsibilities of ccTLD Managers, internet policy development- such as the work on the .vu ccTLD management and administration policy or regulatory framework development that TRR is undertaking. A larger multi-stakeholder issue that TRR gained insight on during this meeting was the U.S. National Telecommunications and Information Administration (NTIA)'s announcement and intention to transition its stewardship over key Internet domain name functions to the global multi-stakeholder community, for which ICANN is facilitating a process with the broad internet community to develop a proposal to meet the criteria set out by the NTIA for the transition. TRR is closely monitoring developments in this area.

During the ICANN meeting TRR also acquired valuable information from New Zealand's Domain Name Commission and was able to finalize a suitable .vu ccTLD structure/model for the development of an appropriate policy/regulatory framework for the management and administration of .vu.

TRR has since developed and released a draft consultation paper and draft Regulation for the management and administration of .vu ccTLD on 19 December of 2014.

In the interim, and prior to implementation of the .vu ccTLD Regulation, TRR has continued to support and encourage TVL to adhere to best practices of ccTLD Managers in its (TVL's) ccTLD Authority role via a formal agreement with ICANN. In terms of the important Domain Name System (DNS) infrastructure of the Internet managed by TVL, TRR observed that no significant DNS service downtime in Vanuatu was experienced or reported by TVL, and this is attributed to the fact that the DNS backup and redundancy system of TVL has improved as advised by TVL. TRR has been in regular discussions with TVL regarding the implementation of DNS Security or DNSSec. TVL confirmed its understanding of the importance of DNS security and backup, and is updating TRR on technical developments in this area.

With regards to educating the public about .vu, TRR developed, printed and distributed simple brochures on understanding domain names; especially .vu domain names and how to acquire and use one.

9.2 Implementation of the Government's Cybersecurity Policy

9.2.1 Child Online Protection

With respect to cybersecurity initiatives and implementation of the Government's Cybersecurity Policy, TRR and OGCI, in collaboration with ITU, IMPACT and the CTO, co-hosted the first regional Capacity Building Workshop on Child Online Protection (COP) in Vanuatu from the 22nd to the 26th of September 2014. The workshop was very successful and drew local and regional participants; including those from civil society, telecom regulators, law enforcement bodies, child welfare and protection agencies, Government ministries, policy makers. Speakers came from around the world.

The Workshop addressed five main pillars:

- 1) Organisational Structures
 - A Sound Research Base and Monitoring Framework,
- 2) Capacity Building – Raising Awareness,
- 3) Legal Measures,
- 4) Implementation and International Cooperation,
- 5) Technical and Procedural Measures – Working with Industry.



For Vanuatu, the outcomes of this workshop assisted in gaining momentum on:

- The Vanuatu COP Assessment Report which was then launched.
- A draft Vanuatu Strategic Framework on COP was developed and is being currently reviewed by stakeholders.
- Appointments of the Regulator and CIO of OGCI to the Government's National Child Protection Working Group, mainly to address the online child protection aspects. (See also section 9.2.2 of this Report.)
- Valuable networking opportunities for all COP stakeholders in Vanuatu.

Radio shows were conducted to promote the safe and responsible use of the Internet by minors, and for promoting the COP Workshop.

Overall, the First Pacific Islands Capacity Building Workshop on COP and the Commonwealth National Cybersecurity Framework highlighted the need for cooperation, and the importance of establishing a framework at the national, but mainly regional, level was recommended as the best way to move forward. Many delegates from the Pacific Island states lauded the timely intervention of their Governments in taking steps to improve Internet access, both in urban and rural areas, and in turn connecting the Pacific Islands to the rest of the world. Governments were called upon to facilitate the establishment of a common national policy that can allow the Pacific Island states to move forward the agenda on child online safety. Regional organizations offered to assist in coordinating national and regional efforts, and convened on the importance to implement appropriate measures.

Consumer Activities

9.2.2 Government's National Child Protection Working Group

Child Protection, through a set of services and policies designed to prevent and respond to issues of abuse, violence and exploitation against children and young people, is a high necessity for any country. For such services to be meaningful they need to be easily and equitably accessible to all children.

The Ministry of Justice and Community Services, through the Child Desk Office, has established the Government's National Child Protection Working Group (NCPWG) to undertake various implementation programmes in support of its National Child Protection mandate and objectives.

The work of the NCPWG is guided by the principles of neutrality, impartiality and independence.

The appointment of the Regulator to the NCPWG, will help address the telecommunications/ICT related or COP matters for Vanuatu, and is a significant outcome of the September COP Workshop.

9.3 Other Cybersecurity Issues

Several phishing attacks have occurred in Vanuatu; in particular, on banking sites. TRR has been in regular contact with relevant ISPs and affected stakeholders in an attempt to eliminate and prevent these attacks. Consumer education in this area already conducted by TRR plays a significant part in minimising the negative impacts of phishing.

The Vanuatu Internet Exchange (VIX) and OGCI have contributed to raising awareness and blocking bad phishing sites, temporarily at least, until Internet Service Providers implement their own blocking or filtering mechanisms on the phishing sites.

9.4 Vanuatu Internet Exchange Developments

The VIX continued to serve its purpose well with more and more web pages being cached at the VIX. This increase can be attributed to the arrival and installation of the submarine cable early in 2014. Figure 10 below, provides a view of web traffic for the month of December 2014, being served by the Google cache server located at the VIX. This had resulted in cost savings for ISPs, better and faster web surfing experience by users during the period.

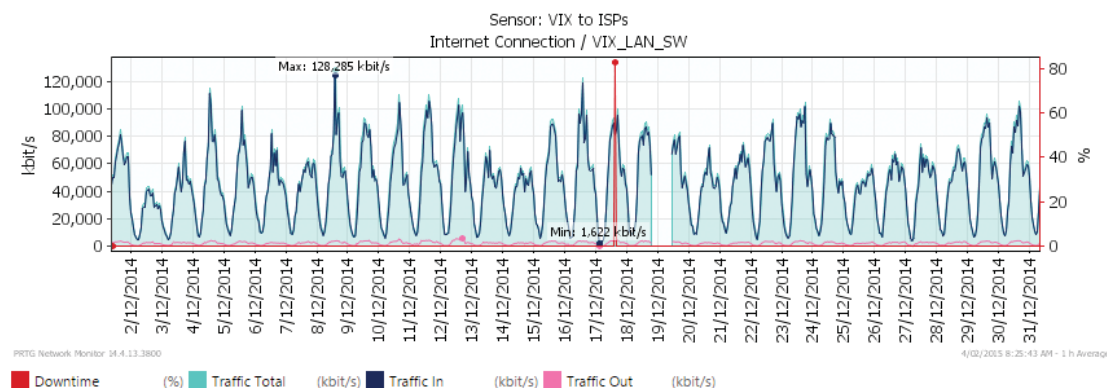


Figure 10: Vanuatu's Internet Exchange Point at a glance, December 2014. (Graph courtesy of Vanuatu Internet Exchange)

10.1 General

TRR enhanced its focus on consumer activities in 2014. In 2013 we recognized the need to more adequately safeguard consumers and make consumer protection, awareness and empowerment a major focus; and we have built further on that critical need in 2014.

TRR's 2014 Consumer Affairs projects are comprehensive and are based on TRR's Consumer Awareness Protection Plan (CAPP), which is derived from the TRR 2014 and Onwards Plan. These projects and initiatives include the matters discussed below.

10.2 Increasing Consumer Awareness and Empowerment

10.2.1 School Career Program

TRR provided education awareness to students on telecommunications and ICT career paths during the Port Vila School Career Program in April. Students from many schools in Port Vila and Efate rural, both secondary and primary, attended specific sessions and visited booths to seek information for future career paths in specific fields.

TRR staff was engaged in providing advice and guidance in telecommunications and ICT career paths as well as enhancing their awareness of common issues that they, as students, needed to be aware of from a user perspective.



TRR's representation during Student Careers Talk

10.2.2 6 Month Media and Radio Program

Through a radio station and local newspaper (FM107 and the Vanuatu Times), TRR coordinated and implemented a 6 month consumer awareness media plan which included monthly articles, monthly 30 minutes, live interviews, an hour talk back program, a 30 seconds segment on specific TRR releases, and a series of consumer awareness jingles between April and September 2014. The topics of focus of our awareness program are listed in the Table below:

Subject of Awareness	Month	Objective for each specific awareness
Consumer safeguards, responsibilities and rights in terms of consumer protection	April	Consumers were informed of their general rights and responsibilities when making any telecommunications choice and were informed of specific services available in the market.
TRR's implementation of UAP	May	Listeners were informed on this important project that TRR is implementing for the Government in accordance with the UAP.
Quality of Service/Use of VSATS and Mobile Coverage	June	The target audience was made aware of what is required from them in terms of radio apparatus licensing. QoS provided by respective operators was an issue raised as a key consumer requirement.
The importance of knowing and using Emergency numbers (short code numbers)	July	Consumers were made aware of the short code emergency numbers (111, 112, 113, 114, 115) provided for their use, and the reasons why these numbers must not be abused.
Benefits of the internet and importance of COP	August	Consumers were made aware of the benefit of accessing the internet; including through smart phones. The importance of establishing and implementing COP in Vanuatu was raised as a critical need.
General consumer awareness, including understanding of promotion messages and control and management of e-waste	September	The need for end users to be aware of their rights and understand the services they are able to choose whilst enjoying the communications services was highlighted; as was the need to not pollute the environment.

10.2.3 Capacity building for Community Consumer Champions

Further to the information in our Highlight Section of this Report, the Community Consumer Champions initiative is a "home grown and TRR developed project".

In the development and the implementation of this initiative, TRR wishes to achieve the following:

- Implementation of one of the Vanuatu Government's top priorities of the National ICT Policy its UAP, and building trust (mitigating risks and threats related to the ICT development);
- Consumer safeguarding, and awareness and protection, which is a key requirement of TRR's role and key element of the Vanuatu National ICT policy and its Cybersecurity Policy;
- Stimulation of a sustainable telecommunications/ICT market in Vanuatu and extension of these services to the rural areas leading to bridging of the digital divide;
- An aware, active and respectfully vocal citizen – in a Vanuatu way – to ensure consumer rights are recognized and protected;

Further, TRR:

- Recognises, must assist, and will play an active role through its education and awareness campaigns in promoting consumer empowerment, consumer safety, consumer enforcement procedures and appropriate redress;
- Is implementing its consumer awareness protection plan;
- Recognises the evolving telecommunications/ICT market and does its best to protect Vanuatu citizens from Digital Shock;
- Is providing an opportunity for Youth Leaders in the rural communities to be part of the global consumer rights advocacy and to be capacity built in Telecommunications/ICT arena; and
- Is leading by example – connecting uninformed with elites through information dissemination using Telecommunications/ICT devices.

Consultation and dialogue on the project began through the Vanuatu National Youth Council (VNYC) and relevant stakeholders, including interested individual youth leaders. The selection and the recruitment of the champions is expected to be completed in early 2015.

10.2.4 Independence Celebrations Awareness

A total of six consumer awareness sessions were held during Vanuatu's Independence week (28 July to 1 August) at various celebration venues around Port Vila and outlying islands. Our main message centered on the need for consumers to understand and know of their rights and responsibilities. Consumers were also informed of understanding promotional messages and where to go if they have an issue with any services provided in the market. Responsible and safe use of the internet and mobile phones, especially texting, were other key messages that the TRR team continued to promote during the celebration week.

10.2.5 2014 International Youth Day (2014 IYD)

During the 2014 International Youth Day (IYD) celebrations which took place in Tanna between 17 to 22 August 2014, TRR participated in the VNYC planned activities and educational programs. TRR's participation focused on educating youth on TRR's functions and its relevance to consumers, consumer rights and responsibilities, reading and understanding promotional advertisements and other relevant issues. A debate was organized and conducted to gauge young peoples' level of understanding on the benefits of ICT. The debate highlighted important issues which TRR will address in strengthening its awareness planning programs and projects. During this time, TRR also took the opportunity to conduct 3 different types of surveys on internet penetration in rural communities, expansion of use of mobile phones and general views about ICT and their benefits.

Towards the end of the celebrations TRR was invited to be part of the Tafea People's Forum in which a 15-Year Development Plan was discussed and drafted.

10.2.6 Mobile Unit

A new TRR initiative - a mobile unit - was implemented in October with the assistance of the Technical and Legal/Market Competition Teams. A mobile unit is an activity in which a TRR Team, led by Consumer Affairs, makes an appearance at a public place to engage the public in discussion, disseminates information, and gauges consumer awareness for two to three hours. It also provides opportunities to consumers who have grievances, but do not know where to direct their grievance too, to become informed. It has proven to be a successful way of initiating community awareness programs and will be continued in 2015.

10.2.7 Consumer Education Program (CEP)

The CEP elements achieved in 2014 included the drafting of a series of 6 Facts Sheets. The draft fact sheets include:

- i. Health Risks of ICTs and the importance of compliance marks;
- ii. Consumer Rights and Responsibilities;
- iii. Becoming a Smart Telecommunications/ICT consumer;
- iv. Importance of reading and understanding advertisements;
- v. How to properly lodge a complaint and;
- vi. Staying protected online.

These draft fact sheets are expected to be finalized and ready for implementation in Q1 of 2015.

These new Fact Sheets, along with existing FAQs and brochures, will be translated into French and Bislama in preparation for use in 2015. A Consumer Handbook and Audio Visual materials were also initiated and will be finalized for use in 2015.



Consumer Affairs Officer presenting during education and awareness program

10.3 Community Consumer Engagement

10.3.1 General engagement

Over the course of the year, TRR initiated a number of major consumer awareness campaigns to facilitate consumer empowerment, safety, enforcement, complaints and redress. A key feature of this is discussed in Section 10.2.

10.3.2 Community visits

Community visits to Luganville and villages of Santo outside Luganville were made. The visits have enriched the villagers' awareness on telecommunications and ICT developments, and proved worthwhile, as the visiting TRR Teams were engaged in schools, colleges, churches as well as in communities with chiefs, women groups and youth groups.

TRR also took the opportunity to meet with the Northern Ward Chiefs for Shefa, and participated actively in their awareness programs.

10.3.3 National ICT Day

TRR, with the OGCI coordinated other consumer related activities during the National ICT day celebrations, primarily through panel discussions on the following topics:

- Status of Submarine Cable – User Experience, where the key operators, the Government through the Office of the Chief Information Officer and the Regulator were involved in the discussions.
- E-Government and how the Government and citizens will benefit from it.
- Global trends in ICT and how they affect Vanuatu.
- Universal Access and School Connectivity.
- Mobile banking in developing countries.
- Cybersecurity in Vanuatu.
- The Rise of social media in Vanuatu political and social life.
- What ICT Consumers Say and Want.
- ICTs in Disaster Prevention, Warning and Response.

The panellists for each session were technical experts in these areas of work whom the moderator questioned for specific views. These panel discussions were the highlights of the celebrations. TRR believes the audience was well informed and left with positive take-home messages. The Regulator, TRR Managers and key staff were Panelists.

10.3.4 Business and Consumer Advisory Groups (BAG & CAG)

TRR continued to hold combined meetings of its Business and Consumer Advisory Group(s) – BAG and CAG - with increasing turnout from members. Many issues of concern were raised and addressed at these meetings. During the meetings, TRR took note of concerns that needed its action to assist and address. For example, QoS for both internet/data and voice, protection of personal information and gambling messages through promotional advertisements.

The BAG and CAG were also effective in their provision of views during the consultation of the draft Consumer Protection Regulation.

The extension of BAG and CAG to Sanma and Luganville town was also trialled but will require more fine-tuning to improve outreach and input.

A CAG for Luganville was established in early 2013 and strengthened in 2014 through two follow up trips by TRR Officers. Regular meetings are also convened by video conference.

Plans are in place for an expansion, in 2015, of CAG to more rural communities throughout the country.



TRR having a video conferencing meeting with Luganville Consumer Advisory Group

10.4 Consumer and Customer Protection

10.4.1 Development of a Consumer Protection Regulation

A critical component for consumer safety, safeguard is a strong consumer protection mechanism being put in place. In recognition of this need, TRR developed and finalized its Consumer Protection Regulation in 2014. This was widely consulted on and was passed to the Minister for approval and gazettal in late 2014. A Regulatory Impact Assessment was also developed to guide and assist understanding of the Regulation.

It will be a very powerful instrument for consumer redress, safety and empowerment in 2015 and onwards.

Financial Statement and Auditor's Report

A detailed financial statement and Auditors Report can be obtained from TRR's official website www.trr.vu, as provided for in accordance with the Act. The same was provided to the Minister responsible pursuant to the requirement of the Act.

10.4.2 Consumer complaints and Resolutions

The complaints received for TRR's mediation in the last twelve months were minimal and have dropped substantially. This reduction is interpreted by TRR as a good sign and an indicator of the success of TRR's consumer awareness efforts to date, as well as licensee's awareness and support for a focus on consumer needs. The formal complaints received by TRR in 2014 have dropped significantly to less than 15 in total.

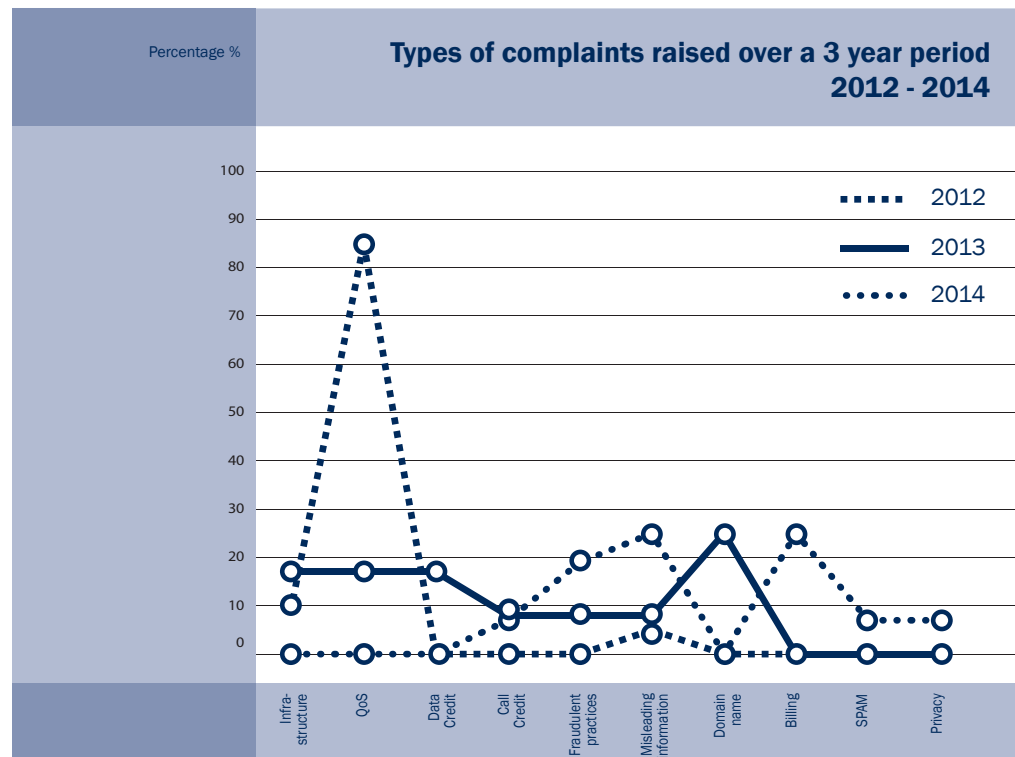


Figure 11: Result of filed complaints to TRR in 2012-2014 and comparisons of complaints.

The above figure shows filed complaints to TRR in 2012-2014 and provides a comparison of complaints received and mediated by TRR in the last three years. As indicated in the graph, billing dominates complaints received in 2014. There is, however a significant drop in complaints related to quality of service in particular voice services (mobile).

TRR also sees this trend as licensees positively responding to consumer complaints which were brought to TRR's attention or the licensee's attention for mediation and resolution. TRR also believes that wider awareness programs have also contributed to the reduced rate of complaints received.

10.4.3 Market competition – Consumer perspectives

TRR continued its monitoring role on the enforcement of Consumer Protection in accordance with the Act and TRR's Advertising Guidelines. TRR sees it as positive that licensees are becoming more aware of their obligations in terms of advertisements and filing their tariffs. TRR has undertaken a range of initiatives and steps to ensure that licensees file all tariffs and, importantly, their terms of services.

Throughout 2014, TRR met regularly with licensees to ensure they appreciate the need for clarity and effective communication of their terms of services to customers, and potential customers.

TRR/WB Financial Statement

Income statement

For the year ended 31 December 2014

Expressed in Vatu

	2014	2013
Operating Revenue	177,754,106	184,249,529
Operating Expenses	(208,195,067)	(167,195,666)
Operating Surplus before payment to Universal Access Fund	(30,440,961)	17,053,863
Universal Access Fund	-	20,000,000
Operating Surplus / (deficit) after payment to Universal Access Fund	(30,440,961)	(2,946,137)

Statement of Financial Position

As at 31 December 2014

Expressed in Vatu

	2014	2013
Current Assets		
Cash and Cash Equivalents	98,679,933	41,398,843
Receivables	28,516,581	51,783,796
Other Assets	3,570,458	12,327,300
Non current assets		
Plant and Equipment	20,089,997	22,269,647
Total Assets	150,856,969	127,779,586
Current Liabilities		
Creditors and Accruals	62,699,661	7,200,297
Provisions	787,899	566,493
Non Current Liabilities		
Provisions	9,131,101	6,005,867
Revolving Funds	33,404,340	38,732,000
Total Liabilities	106,023,001	52,504,657
Net Assets	44,833,968	75,274,929
Accumulated Surplus / (deficit)	44,833,968	75,274,929

UAP Financial Statement

Income statement

For the year ended 31 December 2014

Expressed in Vatu

	2014	2013
Operating Revenue	12,349,663	31,264,543
Operating Expenses	(10,560,030)	(2,061,573)
Operating Surplus / (deficit)	1,789,633	29,202,970

Statement of Financial Position

As at 31 December 2014

Expressed in Vatu

	2014	2013
Current Assets		
Cash and Cash Equivalents	243,211,359	274,556,198
Prepayments	33,134,472	-
Total Assets	276,345,831	274,556,198
Current Liabilities		
Grants funds due to GOA	249,224,547	249,224,547
Total Liabilities	249,224,547	249,224,547
Net Assets	27,121,284	25,331,651
Accumulated Surplus / (deficit)	27,121,284	25,331,651

Annex 1

Register of Consultants

In accordance with section 11 of the Telecommunications and Radiocommunications Regulation Act 2009 (“the Act”), the list below indicates the consultants and advisors engaged with TRR, together with a summary of their expertise and works performed for, and on behalf of, TRR as at 31 December 2014.

Name	Position Held	Area of expertise or project responsibilities
Ronald Box	Regulator	Overall management of the Office of the TRR in accordance with the Act. High level relations with the Government and industry stakeholders. High level representation at meetings of national, regional and international telecommunications regulation and on telecommunications/ICT matters.
Jeanette Yiu Hing	World Bank Coordinator	Coordination of the Grant and ensuring the objectives of the Grant Agreement are delivered. Coordination with OGCI0 in respect of the Grant.
Eric Braun	Legal Specialist	Legal and specialist assistance and guidance to TRR on legal, regulatory and economic policy matters. Eric works closely with the Regulator and TRR's Manager, Legal and Market Competition and his staff.
Alan Short	Interconnection Specialist	Alan works with the Internet & Governance Team on the RIO and interconnection matters.
Incyte Consulting	Telecoms. Competition & Economic Regulatory Expert	Incyte Consulting provides expert telecommunication regulation guidance, analysis and determination of relevant markets, strategic measures for addressing anti-competitive actions, and relevant economic and competition assistance to the TRR team.
Geoff Luther	Spectrum Expert (TRR)	Geoff Luther's engagement with TRR commenced in February 2014, focusing on the provision of expert guidance and analysis of appropriate spectrum management practices including planning, pricing, monitoring, allocation, and economics of spectrum.
Challenge Networks Limited	Mobile Coverage, Internet Signal & QoS expert (TRR)	Recruitment of an expert firm commenced in June and was contracted in October 2014. The consultant will conduct mobile coverage and internet coverage, as well as testing for fixed and mobile services across Vanuatu as a means of verification of current and existing telecommunications coverage. In addition, it will conduct Quality Of Service measurements and will assist TRR to develop a QoS Regulation.



TRR

Telecommunications &
Radiocommunications
Regulator