APNIC EC Meeting Minutes

Face-to-Face meeting, Taipei, Taiwan

Tuesday, 03 December 2019, 09:00 – 15:28 (UTC +8)
Wednesday, 04 December 2019, 09:45 – 14:50 (UTC +8)

Meeting started at 09:00 (UTC +8), Tuesday, 03 December 2019

Present

Benyamin Naibaho
Gaurab Raj Upadhaya, Chair
Kam Sze Yeung
Kenny Huang, Treasurer
Paul Wilson, Director General
Rajesh Chharia, Secretary
Yoshinobu Matsuzaki
Yuedong Zhang

Connie Chan, Senior Executive Assistant (minutes)
Craig Ng, General Counsel
Irene Chan, Financial Controller
Richard Brown, Business Director

Apologies

Nil

Agenda

1. Opening of meeting and declaration of quorum
2. Agenda bashing
3. Declaration of interests
4. Review of minutes of last meeting and record of circular resolutions passed since the last meeting
5. Matters arising from the last meeting
6. Chair update
7. WH&S update
8. Policy endorsement
9. ASO review update
10. NRO Number Council appointment
11. APNIC EC Election Chair appointment
12. Electronic voting system
13. Secretariat report
14. Any other business
15. APNIC Foundation update
16. Financial reports
17. APNIC conference location
18. Financial reports (continued)
19. Risk register update
20. Approval of the 2020-2023 Strategic Plan
21. Approval of 2020 budget and activity plan
22. Next EC meeting

Minutes

1. **Opening of meeting and declaration of quorum**

   The Chair of the Executive Council welcomed all attendees to the meeting.

   Kam Sze Yeung was appointed as the Chair of this Meeting. He declared the meeting open at 09:00 (UTC +8) on Tuesday, 03 December 2019, and noted that a quorum was present.

2. **Agenda bashing**

   The Chair called for comments on the agenda. Two agenda items were added to AOB.

3. **Declaration of interests**

   The Chair asked the EC members to review the Register of Interests (attached), declare any potential conflicts of interests, and for any such declaration to be recorded in the minutes.

   Kenny Huang declared that he was the Chair and CEO of TWNIC.

   Gaurab Raj Upadhaya declared that he was a Board Member of the Internet Foundation Nepal.

   All other EC members present confirmed their entries in the Register of Interests are complete and correct.

   Action item 2019-06: The Secretariat to update the Register of Interests.

4. **Review of minutes of the last meeting and record of circular resolutions passed since the last meeting**

   The following circular resolutions (that require the agreement of all EC members who are entitled to vote on the resolution) were passed by the EC during the period between the last EC meeting and this meeting and are recorded in these minutes for completeness.

   Resolution 2019-26: The EC resolved to adopt the minutes of the EC meeting of 9 September 2019.

5. **Matters arising from the last meeting**

   The following matters were completed:

   Action item 2019-05: The Secretariat to set up a test election within the BigPulse system and compare this with the current APNIC online voting system.

6. **Chair update**

   The EC Chair shared his recent experience and perspective on attending the I* and NRO EC meetings in Montreal. There were discussions on the ASO MOU with ICANN.

The EC Chair presented the EC travel expense report. He noted that 2019 was a very productive year, reaching out to our community. He also reminded that we are committed to the budget targets, and it is important to be more frugal and budget wary.

The EC Chair noted that we will continue to improve the EC procedures and processes. He will be working with Craig Ng to draft a procedure document to clarify the role of the meeting chair.

> *Action item 2019-07: The EC Chair and Craig Ng to draft a procedure document to clarify the role of the meeting chair.*

The EC also discussed the recent events surrounding the proposal by ISOC on the sale of PIR.

7. WH&S update

Kam Sze Yeung spoke to the Workplace Health and Safety quarterly update. There was no major issue to report since the last meeting.

8. Policy endorsement

The EC reviewed the policy proposals that received consensus at APNIC 48 (attached).

> **Resolution 2019-27: The EC resolved to endorse the adoption of policy proposal: prop-131 Editorial changes in IPv6 Policy.**

Motion proposed by Paul Wilson; seconded by Rajesh Chharia. Passed unanimously.

> **Resolution 2019-28: The EC resolved to endorse the adoption of policy proposal: prop-132: RPKI ROAs for unallocated and unassigned APNIC address space.**

Motion proposed by Paul Wilson; seconded by Rajesh Chharia. Passed unanimously.

9. ASO review update

Craig Ng gave an update on the status of the ASO review.

10. NRO Number Council appointment

The EC discussed the appointment process of the NRO Number Council. The EC agreed to run this process earlier in the year so that more notice will be given to the candidate about the appointment.

> **Resolution 2019-29: The EC resolved to appoint Simon Sohel Baroi to the NRO Number Council/ASO Address Council for a one-year term from 1 January 2020 to 31 December 2020.**

Motion proposed by Paul Wilson; seconded by Yoshinobu Matsuzaki. Passed unanimously.

11. APNIC EC Election Chair appointment

The EC discussed the appointment of the election chair for the next EC election, during APNIC 49 in Melbourne.

> **Resolution 2019-30: The EC resolved to appoint Julie Hammer as Election Chair of the next EC election during APNIC 49 in Melbourne.**

Motion proposed by Paul Wilson; seconded by Gaurab Raj Upadhaya. Passed without objection.

Kam Sze Yeung, Rajesh Chharia and Benyamin Naibaho abstained from voting.

12. Electronic voting system

The DG spoke to the proposed electronic voting system presentation (attached).

> **Resolution 2019-31: The EC resolved to endorse the EC election procedures, as presented to the EC at this meeting, subject to APNIC not receiving any adverse feedback about the BigPulse election system from similar Internet bodies such as ARIN, RIPE NCC and ICANN.**

Motion proposed by Gaurab Raj Upadhaya; seconded by Kenny Huang. Passed unanimously.

Action item 2019-08: The Secretariat will hold an open trial of the new voting system for Members who are interested in previewing the BigPulse voting interface before the coming election.

13. Secretariat report

The DG spoke to the Secretariat Report presentation (attached) and the HR Report.

The EC discussed several items in the Secretariat Report. They thanked APNIC staff for their efforts and involvement in the strategic and annual planning process.

14. Any other business

a. AFRINIC update

The DG gave an update on AFRINIC.

b. Status of IPv4 address allocation

With the recent news of RIPE NCC running out of IPv4 addresses, the EC discussed the remaining IPv4 address pools of each RIR.

c. Vote of thanks to Axel Pawlik

The Chair proposed a vote of thanks to Axel Pawlik for his valuable contribution to the Internet numbers community.

Resolution 2019-32: The EC resolved, on behalf of the APNIC community, to record its gratitude and appreciation to Axel Pawlik for his contribution to the Internet numbers community, through his leadership as managing director of the RIPE NCC over the past 20 years.

Motion proposed by Gaurab Raj Upadhaya; seconded by Paul Wilson. Passed unanimously.

15. APNIC Foundation update

Duncan Macintosh joined the meeting via remote participation. He spoke to the Foundation update presentation (attached).

[Confidential material redacted]

[Duncan Macintosh left the meeting at 13:54 (UTC +8)]

16. Financial reports

Richard Brown spoke to the financial report presentation (attached).

17. APNIC conference location

Tony Smith joined the meeting via remote participation. He spoke to the conference update presentation.

[Confidential material redacted]

[Tony Smith left the meeting at 14:40 (UTC +8)]

18. Financial reports (continued)

Andrew McAuley and Patrick Armitage from Credit Suisse joined the meeting via remote participation.

Andrew McAuley spoke to the investment update presentation for the period ending 31 October 2019 (attached). He informed the EC that APNIC's investment portfolio has performed strongly in 2019. He also provided an overall outlook on the market conditions.

Patrick Armitage noted that Credit Suisse will be proposing a review of APNIC's risk profile for the EC's consideration next year.

[Andrew McAuley and Patrick Armitage left the meeting at 15:15 (UTC +8)]

19. Risk register update

Richard Brown spoke to the new risk register, which is a new consolidation from the previous risk register. This work was done recently as part of the strategic review.

It is suggested that the strategic risks and key operational risks can be further consolidated or aggregated. The EC will spend more time reviewing the risk register in the June EC meeting.

Meeting adjourned at 15:28 (UTC +8), Tuesday, 03 December 2019.

Meeting resumed at 09:45 (UTC +8), Wednesday, 04 December 2019.

20. Approval of the 2020-2023 Strategic Plan

The DG spoke to the strategic plan proposal.

The EC discussed the strategic plan at length and provided suggestions. The EC also requested the Secretariat to provide indicators, targets and goals for Workstreams defined in the plan.

> **Resolution 2019-34: The EC resolved to adopt the strategic plan for 2020-2023 (as attached), in particular, the strategic pillars and directions as presented to the EC, but with a direction to the Secretariat to provide specific measurement targets or goals for each activity within a workstream where appropriate and applicable, for further approval by the APNIC EC at a later meeting.**

Motion proposed by Rajesh Chharia; seconded by Kenny Huang. Passed unanimously.

> *Action item 2019-09: The Secretariat to revise the strategic plan for the EC to review before the next EC meeting.*

21. Approval of 2020 budget and activity plan

The DG spoke to the draft Activity Plan for 2020 (attached).

Richard Brown spoke to the 2020 Budget presentation (attached). The EC discussed the proposed budget at length.

[Confidential material redacted]

> **Resolution 2019-36: The EC resolved to approve and adopt the 2020 budget (as attached) that provides authority to the Director General for a total operational expenditure of AUD 24,293,024 and a total capital expenditure of AUD 738,600 for 2020.**

Motion proposed by Kenny Huang; seconded by Gaurab Raj Upadhaya. Passed unanimously.

The EC discussed the proposed fee change at length. The EC decided that the cost of inflation over the past five years required a return to the prior fee structure, to adjust for this inflation.

> **Resolution 2019-37: The EC resolved to amend the Member and Non-Member fee schedule by restoring the Base Rate and the Bit Factor that applied before the changes made in 2015 (that is, by changing the Base Rate from AUD 1,050 to AUD 1,180 for Members, from AUD 1,200 to AUD 1,357 for Non-Members, and by changing the Bit Factor for both Members and Non-Members from 1.308 to 1.300), with effect from 1 January 2020.**

Motion proposed by Kenny Huang; seconded by Gaurab Raj Upadhaya. Passed unanimously.

22. Next EC meeting

Kam Sze Yeung handed the Chair duties back to the EC Chair. From this point, Gaurab Raj Upadhaya chaired the meeting.

The next EC meeting is scheduled for the morning of 18 February 2020 in Melbourne, held in conjunction with APNIC 49/APRICOT 2020. Rajesh Chharia has been appointed as the Chair of the meeting.

The June meeting is tentatively scheduled for the afternoon of 25 and 26 June 2020 in Kuala Lumpur, held immediately after ICANN's 68th Public Meeting.

Meeting closed at 14:50 (UTC +8), Wednesday, 04 December 2019.

Attachments:

    A. **Register of interest**
    B. **Policy proposal endorsement summary**
    C. **EC election procedures presentation**
    D. **Secretariat report and presentation**
    E. **[Confidential material redacted]**
    F. **APNIC Foundation update presentation**
    G. **October 2019 finance report and presentation**
    H. **[Confidential material redacted]**
    I. **October 2019 investment report**
    J. **APNIC portfolio review**
    K. **[Confidential material redacted]**
    L. **[Confidential material redacted]**
    M. **Activity plan for 2020**
    N. **2020 budget presentation**

APNIC EC Register of Interests

Declaration of interests of EC members

This register records the interests of EC members, which may conflict with the EC members' duties to APNIC. This register is accurate as at **21 October 2019**.

Gaurab Raj Upadhaya declared that he currently holds the following positions:

- Employee of Amazon Web Services (AWS/Amazon) as the Principal for Infrastructure/IP Strategy Development
- Founder of the Nepal Research and Education Network (NREN)
- Chairman of Nepal Internet Exchange (NPIX)
- Standing member of the Program Committee of APRICOT, SANOG, and Global Peering Forum

Kam Sze Yeung declared that he currently holds the following positions:

- Member of the HKNOG Program Committee
- Employee of Akamai Technologies, Inc
- Member of the Working Group of Peering Asia

Kenny Huang declared that he currently holds the following positions:

- CEO of TWNIC
- Board of Director, ISOC Taiwan Chapter
- Member of the Advisory Council of DotAsia Organization

Rajesh Chharia declared that he currently holds the following positions:

- President of the Internet Service Providers Association of India (ISPAI)
- Director of the National Internet Exchange of India (NIXI)
- CEO of CJ Online Pvt. Ltd
- Director of Chandra Industrial Company Private Limited
- Founding member of INNOG
- Member of the Internet Governance Forum (IGF) Multistakeholder Advisory Group (MAG)

Benyamin Parulian Naibaho declared that he currently holds the following positions:

- President Director of PT. Cyber Network Indonesia (ISP, NAP, Data Center and VPN Provider)
- President Director oaf PT. Platinum Network Indonesia (ISP)
- Chief of Data Center and Indonesia Internet Exchange (IIX) - APJII (Indonesia ISP Association)
- MAG (Multistakeholder Advisory Group) of ID-IGF (Indonesia Internet Government Forum)
- Treasury of APJATEL (Indonesia Telecommunication Network Provider Association)

Yoshinobu Matsuzaki declared that he currently holds the following positions:

- Employee of Internet Initiative Japan Inc. (IIJ) as a Senior Engineer
- Board of Director of JPNIC
- Board of Director of APIA
- Member of JANOG Committee
- Technical Advisor of JPCERT/CC
- Contact person at IIJ Europe (RIPE member) for RIPE

Yuedong Zhang declared that he currently holds the following position:

- Employee of CNNIC as Assistant Director, under the Ministry of the Cyberspace Administration of China

Paul Wilson declared no conflict of interests.

Request for EC Policy Proposal Endorsement

prop-131: Editorial changes in IPv6 Policy

Proposal text: prop-131-v002

Synopsis

This proposal suggests multiple changes in the IPv6 policy to remove outdated information and simply the policy for better understanding. Removing the normal maximum size of /48 for end site assignment by and LIR and allowing the LIR to make local decision using a value of "n" x /64.

This proposal also allows LIRs to assign multiple /48s to a single end site based on address usage or different routing requirements without a review at the RIR/NIR level. However, LIRs must be able to present documentation justifying the need for such assignments for subsequent allocation request to RIR/NIR.

Current status

Version 2 of this proposal reached consensus at the APNIC 48 Open Policy Meeting and subsequently at the APNIC 48 APNIC Member Meeting.

Consensus was maintained during the four-week comment period with no objections raised. The APNIC Policy SIG Chairs have now formally asked the APNIC EC to endorse the proposal for implementation.

For details of the proposal's progress through the PDP, please see:
https://www.apnic.net/community/policy/proposals/prop-131

Implementation

Changes to the policy document (Sections 5.2.4.2, .5.2.4.3, 5.2.4.4, and 10.1.4.1) and call for editorial comments could follow implementation.

prop-132: RPKI ROAs for unallocated and unassigned APNIC address space (was AS0 for Bogons)

Proposal text: prop-132-v003

Synopsis

This proposal gives APNIC the authority to create AS0 (zero) ROA for APNIC's unallocated address space. If an AS0 ROA is created for APNIC administered unallocated address space and someone tried to advertise this unallocated address space, they would be marked as "Invalid" by networks using RPKI based BGP Origin validation.

Current status

Version 3 of this proposal reached consensus at the APNIC 48 Open Policy Meeting and subsequently at the APNIC 48 APNIC Member Meeting.

Consensus was maintained during the four-week comment period with no objections raised. The APNIC Policy SIG Chairs have now formally asked the APNIC EC to endorse the proposal for implementation.

For details of the proposal's progress through the PDP, please see:
https://www.apnic.net/community/policy/proposals/prop-132

Implementation

Changes to Hostmaster/Helpdesk procedures, RPKI and registration system software, and public website are required before implementation. The proposal provides a reasonable level of detail, but the detailed workflow and communication involved in the AS0 ROA creation will require careful discussion and a comprehensive design and testing. Safety mechanisms and backup workflow will be required for cross-checking AS0 ROA against publicly published extended stats file in an accurate and timely manner.

As already reported at the APNIC 48 Open Policy Meeting, implementation of this proposal may take six to twelve months rather than the usual three months, due to the complexity of this proposal. During the initial impact assessment, a recommendation was made to implement in phases to minimise any unforeseen disruptions to the normal expected service. A detailed proposed implementation plan will be presented during APRICOT2020/APNIC49.

Changes to the policy document and call for editorial comments could follow implementation.

APNIC Executive Council (EC) Election Procedures

Full electronic voting in 2020

- At the last APNIC EC, the EC agreed to introduce a full online voting system for the exercise of APNIC members' voting rights at the APNIC members' meeting

- Resolution 2019-24: the EC resolved to adopt the BigPulse voting system as presented to the EC (option B with no split votes) to replace the entire existing voting system at the APNIC EC election to be held at APNIC 49 in Melbourne, subject to the satisfactory resolution of the software bugs that were identified at this meeting
  - Further testing was completed by the Secretariat and the EC in November 2019

APNIC EC Election Timeline
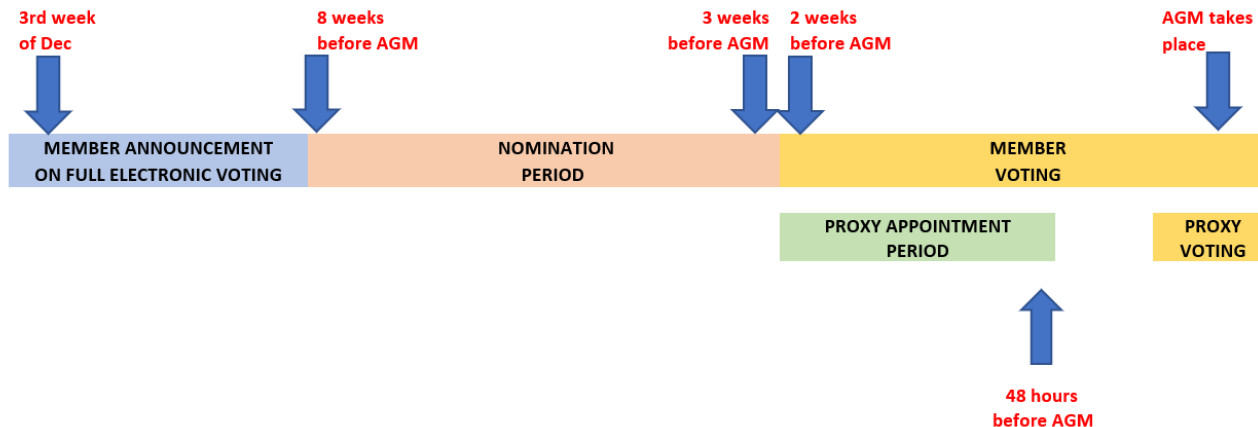
- Nominations open approximately 8 weeks before AGM
- Nominations close approximately 3 weeks before AGM
- Member voting and proxy appointment open 2 weeks before AGM
- Member voting opens continuously for 2 weeks until AGM
- Proxy appointment closes 48 hours before start of AGM
- Proxy voting takes place 09:30-14:30 during AGM

Online EC Nomination Form

- Simplified online nomination process

- Corporate Contacts are required to complete and submit an online nomination form via APNIC conference website
  - No nominations will be accepted via email or post

- Four-week nomination period
  - Starts in early January
  - Ends in early February

Voting Entitlement

- Only current APNIC Member's Corporate Contacts, authorized contacts with voting rights and appointed proxy voters can vote in the online election

- The number of votes are determined by the membership tiers

Membership Tier	Votes
Associate	1 vote
Very Small	2 votes
Small	4 votes
Medium	8 votes
Large	16 votes
Very Large	32 votes
Extra Large	64 votes

Online Voting in MyAPNIC

Online Voting

APNIC Executive Council Election

Online voting closes: "add time and date"

Please cast your vote for the APNIC Executive Council Election by clicking the green button:	<u>Online Voting</u>

Alternatively, if you prefer, you can <u>Appoint a Proxy</u> who can vote on your behalf. If you appoint a proxy, you will lose the right to vote directly for the APNIC Executive Council election.

Online Member Voting

- Corporate Contacts and contacts with voting rights vote online using the independent BigPulse voting system via MyAPNIC
  - BigPulse voting system do not allow split votes

- Two-week voting period
  - Opens in early February
  - Closes at 14:30 on the AGM day

Online Proxy Appointment & Voting

- Corporate Contacts can appoint a Proxy who can vote on behalf of a Member. If you appoint a proxy, you will lose the right to vote directly for the APNIC Executive Council election

- Proxy appointment
  - Email confirmation will be sent to the Corporate Contacts and appointed proxy for verification
  - Opens on the same day as the online voting
  - Closes 48 hours before start of the AGM

- Proxy voting
  - Each appointed proxy voter will receive an email by the start of the AGM
  - Access voting system via APNIC login
  - Closes at 14:30 on the AGM day

Voting enquiries

- Any questions can be directed to the Election Officers who will be available at the voting desk located outside the AGM conference room

Declaration of Result

- Election results will be announced at about 15:30 on the AGM day

- The Election Chair will disclose:
    - Total votes counted
    - Total vote count for each nominee
    - Notice of any disputes and resolutions
    - Disclosure of any communication from the Election Scrutineers regarding any anomaly or issue

Notice of Dispute

- Any complaint regarding the conduct of the election must be lodged in writing with the Election Chair at the conference and be lodged <u>no later than one hour</u> before the scheduled Declaration of the Election

- Notices may only be lodged by Nominees or Members through their authorized voting representatives

- The Election Chair shall resolve the dispute at his or her discretion

QUESTIONS?

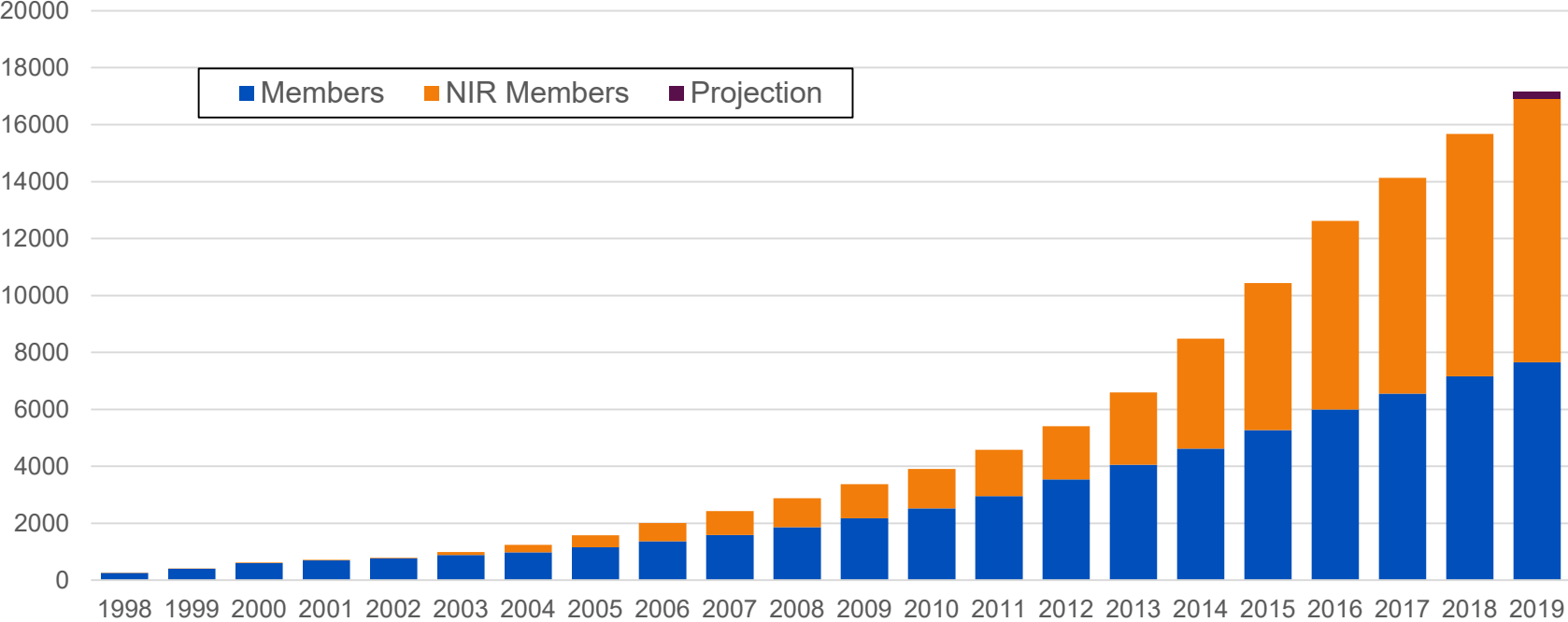# APNIC Secretariat Report

1 Jan to 31 Oct 2019

APNIC EC Meeting, Taiwan
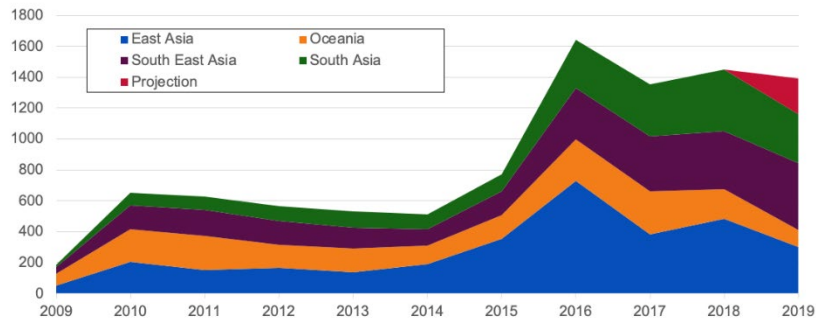3 December 2019

Membership

As at 31 Oct

APNIC

Internet Number Stats

IPv6 delegations

IPv4 delegations
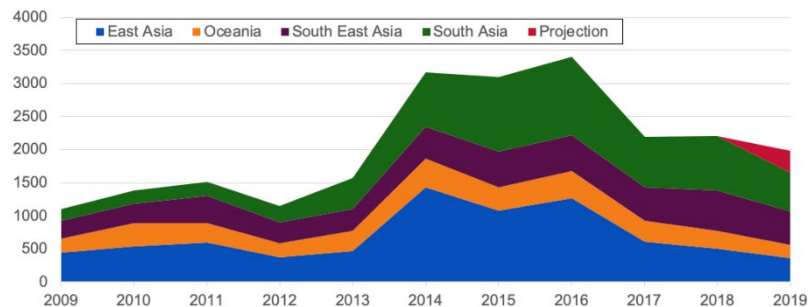
ASN delegations
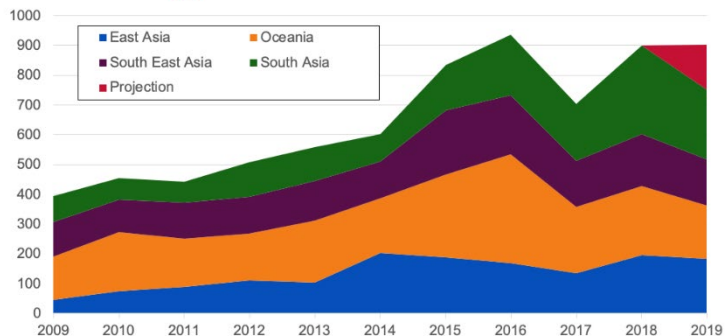
IPv4 transfers
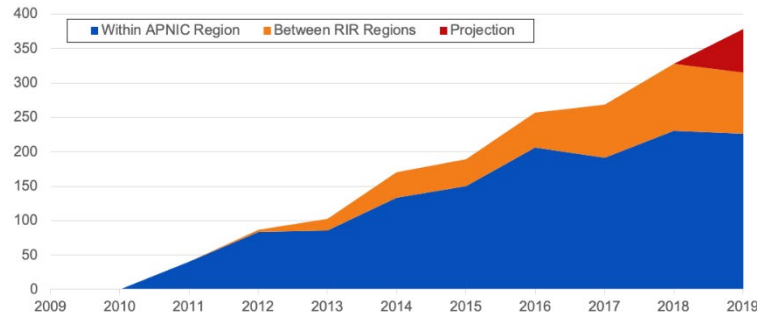
APNIC

As at 31 Oct
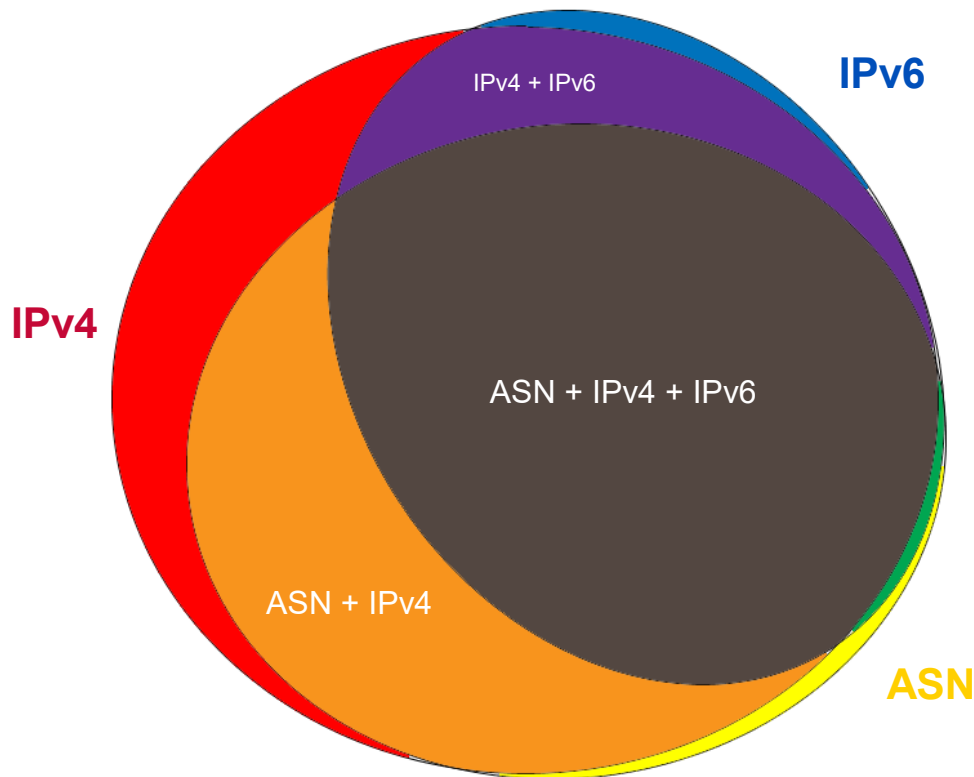
Resource Holdings

Member resource holdings	
IPv4	96%
IPv6	64%
ASN	77%

As at 31 Oct

APNIC

MyAPNIC

apnic.net/myapnic

- IRT and Contact validation integrated
    - 'abuse-c' mirroring of IRT objects complete
    - Phase 2 will expand to IRT objects linked to customer assignments
    - Phase 3 will have MS representation for accounts with more than 10 IRT objects
    - To date, 800 members contacted with 62% confirmation rate
- Improvements and bug fixes on RPKI, DNSSEC, resource transfers, NIR, and whois management features
- User testing for new MyAPNIC interface underway

RPKI

- Supporting NIRs with active RPKI deployment
- 'Validation Reconsidered'
  - Published as RFC 8360
- Resource Tagged Attestation
  - Submitted IETF draft, pilot demonstrated
- 17 routing security workshops/tutorials in 2019
- ROV assistance for Myanmar IX and MYREN
- Preparing deployment plan for prop-132
- Focus at APNIC 48
  - ROV on conference network
  - RPKI Deployathon
  - Dedicated RPKI sessions,
  - ROA signing social
  - New Routing Security SIG

Measure	31/12/2018	To date	Δ
Members with certs	21.9%	26.0%	**4.1%**
Members with ROAs	11.3%	21.1%	**9.8%**
IPv4 under ROAs	6.1%	9.4%	**3.3%**
IPv6 under ROAs	5.6%	8.7%	**3.1%**

READY TO ROA

apnic.net/rpki

RDAP

- Work continues on RDAP services for delegation through NIRs
  - NIR-hosted or APNIC-hosted options available
  - Submitted IETF draft on RDAP mirroring for NIR-hosted RDAP services
  - Code for server and client released

- Work continues with other RIRs on profiles for RDAP data to improve consistency

- Collaboration with RDAP developers worldwide on the standards process, focusing on internationalization and mirroring activity

- RDAP service in early test deployment operating on Google Cloud infrastructure

Resource Quality Check (RQC)

- Formerly known as Resource Quality Assurance (RQA)
  - Automated mechanisms to identify operational issues related to specific address blocks such as route filtering, email and other blacklisting, routing history, and geolocation errors — for use during address resource reclamation and transfer processes

- Webpage updated

- Integration with other tools
  - RQC section created in APNIC NetOX (Network Operators Toolbox)
    - Includes transfer history information
  - Whowas widget under development

Reclaiming unused IPv4

- Responding to the strong support shown at APNIC Survey 2018

- Identify the holders of:
  - Unrouted current resources
  - Unrouted historical resources
  - Unrouted resources under NIR accounts

- Draft specs for listing service of unused IPv4 (supply) in MyAPNIC to be delivered in Q4 to complement the pre-approval (demand) listing service

- Process for contacting impacted groups is being designed with emails drafted and reviewed for use

Service Partner Trial

- Three so far:
  - NEPALREN (one Member referred)
  - MyNOG (no Members referred so far)
  - PCTA (six Members referred)

- Interest expressed in SP trial from existing Members:
  - JBIX (Malaysia)
  - LANIC (Lao PDR)
  - National Communications Authority (Timor Leste)

Technical Infrastructure

Service	Update
Data centres and interconnections	Evaluating remote IXP/peering connections provided by PCCW Global and Megaport into SG and HK, plus alternatives
Maintenance	Working toward gaining non-profit status with TechSoup for better organization discounts; consolidating individual licensing to group licensing for staff
Information architecture	Working with the other RIRs to obtain draft Identifier Technical Health Indicators (ITHI), measuring the health of Internet Number Resource technologies.
Business applications	Okta SSO for all staff internal business applications; new Salesforce registration system launched for APNIC 48 and APRICOT 2020; new HR system (Elmo) prepared for Q4 deployment
Virtualization and cloud	Google Cloud hosting information product services and some product development systems
Software process improvements	Gitlab CI/CD pipelines set up for 10 of APNIC's current software projects; increasing use of Kubernetes cloud deployment methods
APNIC-CSIRT	Updated incident handling draft finalized for ISMS ISO27001; new NRO Public Safety coordination group established

APNIC

Training

Trainees at PacNOG 2018

IPv6 workshop, Beijing

	2019 to date
Face-to-face training	61
Economies	28
Trainees	1,658
Trainee days	4,798
Community Trainers	22
APNIC Academy Users	4,080
Economies	42
Virtual Labs	1,362
Course completions	737
Trainee hours	3,746
YouTube Training views	32,963

APNIC Academy

Free,
Available 24/7

17+ online courses

- New webinar platform
  - 8 webinars, 1,003 participants from 42 economies
- New IPv6 Fundamentals course (5 modules)
- Access to "eduroam": APNIC Members only
- Multilingual support (8 languages)

academy.apnic.net

APNIC Conferences

APRICOT 2019
APNIC 47

APNIC 48

APRICOT 2019

- APNIC 47 / APRICOT 2019
  - 714 attendees from 57 economies
  - IPv6 Hackathon
    - 16 participants (4 female and 12 male)
  - GFCE Triple-I meeting, FIRST TC, APCERT, DotAsia, APIX

- APNIC 48
  - 422 attendees from 54 economies
  - 52 Fellows from 20 economies
    - 27 Professional, 21 Youth, 4 Returning
    - 50% gender split
  - Security and RPKI focus
  - NextGen Careers BoF and RPKI Deployathon for the first time

conference.apnic.net

Next Conferences

2020 APRICOT APNIC 49
25 YEARS
MELBOURNE AUSTRALIA
12 – 21 February 2020

Call for Papers and Registration open now

2020.apricot.net

- APNIC 50 will be held in Dhaka, Bangladesh (dates TBC)
- ISPAB is the confirmed host

blog.apnic.net

Views

2019 Views
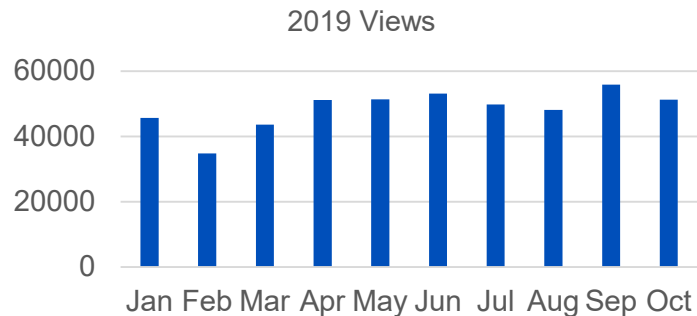
Average: 48,439 / month

Monthly Posts
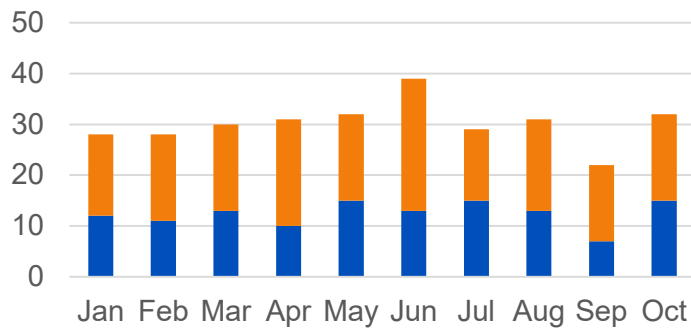
Legend: ■ Guest Posts ■ APNIC Posts

Guest Blog Posts
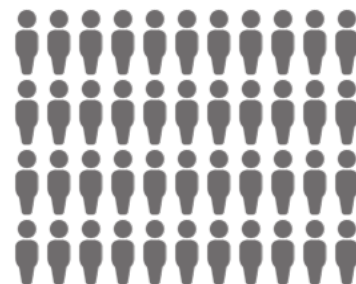
124

Topics

Top 5: Guest Post, Security, IPv6, DNS, BGP

As at 31 Oct

APNIC

Policy Implementation

Policy	Status
prop-125: Validation of "abuse-mailbox" and other IRT emails	Reached consensus at APNIC 46 Implemented August 2019
prop-127: Change maximum delegation size of 103/8 IPv4 address pool to a /23	Reached consensus at APNIC 47 Implemented April 2019
prop-128: Multihoming not required for ASN	Reached consensus at APNIC 47 Implemented April 2019
prop-129: Abolish waiting list for unmet IPv4 requests	Reached consensus at APNIC 47 Implemented July 2019

APNIC

APNIC 48 Policy Proposals

Policy Proposal	Status
prop-124: Clarification on IPv6 sub-assignments	**Did not reach consensus;** returned to author for further consideration
prop-126: PDP update	**Did not reach consensus;** returned to author for further consideration
prop-130: Modification of transfer policies	**Did not reach consensus;** returned to author for further consideration
prop-131: Editorial changes in IPv6 policies	**Reached consensus** at Policy SIG and AMM
prop-132: RPKI ROAs for unallocated and unassigned APNIC address space	**Reached consensus** at Policy SIG and AMM

Technical Community

IDNOG 6

- **NOGs**: Participated in 24 regional NOGs in 2019 (to date)
  - MNNOG – new NOG
  - Assisting KHNOG restart
- **Root servers**: K-root at BTIX; relocation of F-root in FJ to IXP; MMIX (K-root); supporting M-root with WIDE and JPRS
- **R&E**: training at APAN 47, 48 with GEANT (TRANSIT-I)
  - Jamie Gillespie is Co-Chair for APAN Security Working Group

IPv6

IPv6 Deployment workshop, Kolkata

- IPv6 Training
  - 17 face-to-face, 396 trainees
  - New Academy course (5 modules)
- 48 blog posts (to date)
  - IPv6 Week promotion
  - 4 new success stories (35 total)
- TA with Tonga Cable's IPv6 deployment
- IPv6 deployment sessions at APNIC conferences and IPv6-only Wi-Fi
- APNIC Members holding IPv6 resources 63.72%
- Regional IPv6 capability now 28.98% (APNIC Labs)

NOG and Membership Outreach

South Asia	South-East Asia	East Asia	Oceania
SANOG 33 $_{spc}$	PhNOG 2019 $_{sp}$	JANOG 43 $_s$	NZNOG 2019 $_p$
bdNOG 10 $_{spc}$	ThaiNOG 2 $_{sp}$	HKNOG 7.0, 8.0 $_{sp}$	PacNOG 24 $_s$
btNOG 6 $_{spc}$	KHNOG $_c$	TWNOG 3.0 $_{spc}$	
INNOG 2 $_{spc}$	MMNOG $_c$	JANOG 44 $_{sp}$	
SANOG 34 $_{spc}$	MYNOG 8 $_{spc}$	mnNOG 1 $_{pc}$	
LKNOG 3 $_{spc}$	IDNOG 6 $_{spc}$	TWNOG 4.0$_c$	
	SGNOG 7 $_{sp}$		
	PhNOG (July) $_{pc}$		
	VNIX-NOG $_{sp}$		

ConnecTechAsia 2019
PCTA Convention 2019
19th ITCN Asia and Telecom Conference and Expo

- NOG sponsorship (s), presentations (p) and program committee (c) contributions during 2019 so far
- New and re-formed NOGs: mnNOG, mmNOG , khNOG

Security

Adli Wahid

Jamie Gillespie
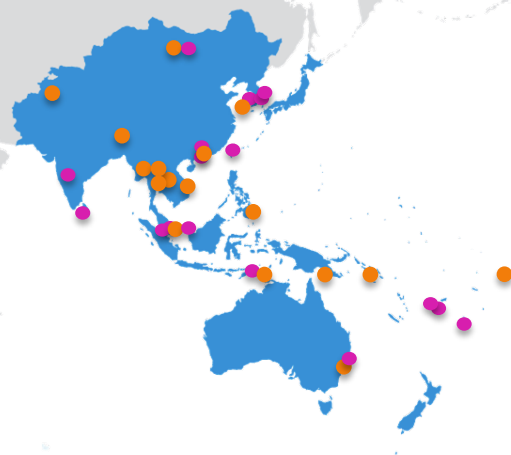
apnic.net/security

- Security engagements
  - 17 face-to-face training sessions
  - CERTs: LaoCERT, CamCERT; APCERT; APISC Annual CERT Workshop; CERT TO; Pacific CSIRT workshop WS, MNSEC 2019 MN, FIRST Annual Conference and Regional Symposia, Bhutan CIRT
  - LEA workshops: Regional Prosecutors, ISCR 2019, Cyber Pasifika, HK Police, Interpol
  - GEANT TRANSITS-I at APAN 47/48
- Security Tracks at APNIC 47/48
- APNIC Community Honeynet – new partners in BT, BD, MY, WS, TO, ID
  - Data being used by DASH
- 80 blog posts

CERT/CSIRTs

- FIRST Security track at APRICOT 2019; incorporated into APNIC 48 program

- Provided trainers for APISC Annual CERT workshop

- Regional CSIRT workshop in Samoa
  - 35 delegates from 9 Pacific economies (APNIC Foundation project)

- Half-day workshop at APCERT 2019

- Community Honeynet Project partner expansion
  - Bhutan, Bangladesh, Malaysia, Samoa, Tonga and Indonesia
  - Presentations with project partners at btNOG 6, IDNIC OPM and MNSEC 2019

- Supported Bhutan CIRT and MNSEC 2019

Information Products
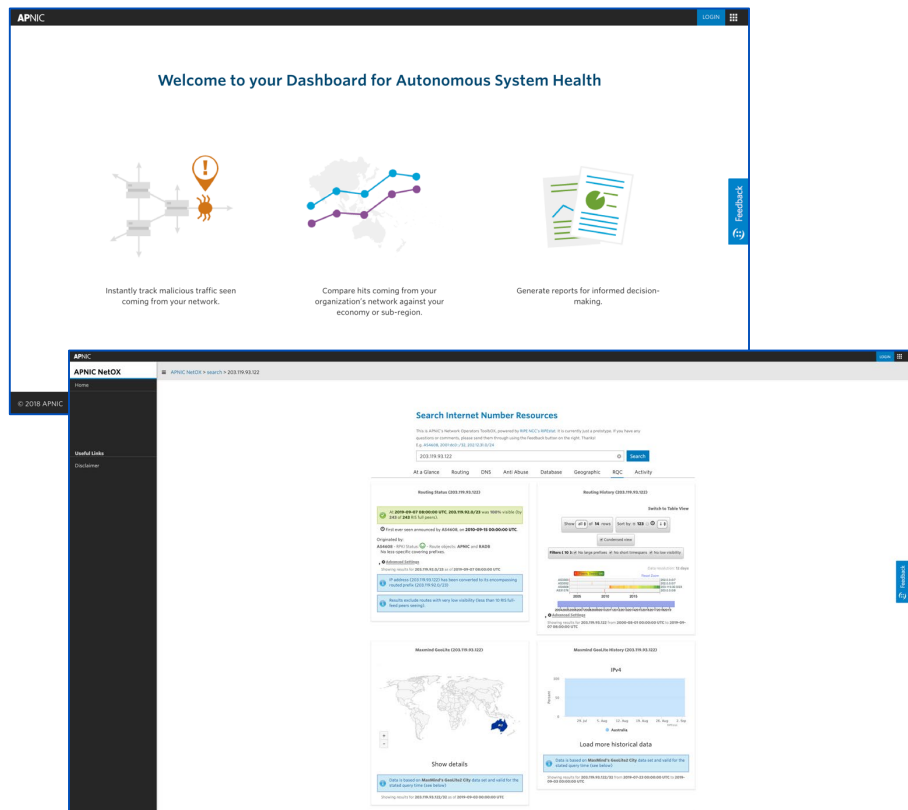
- Internet Directory update
  - V2.1 released
  - IPv6 deployment charts
  - VizAS
- DASH – Dashboard for AS Health
  - Authentication via APNIC SSO
  - Validation and testing
  - Soft launch in November
- NetOX
  - Including RQC functions
  - New widgets

Internet Directory
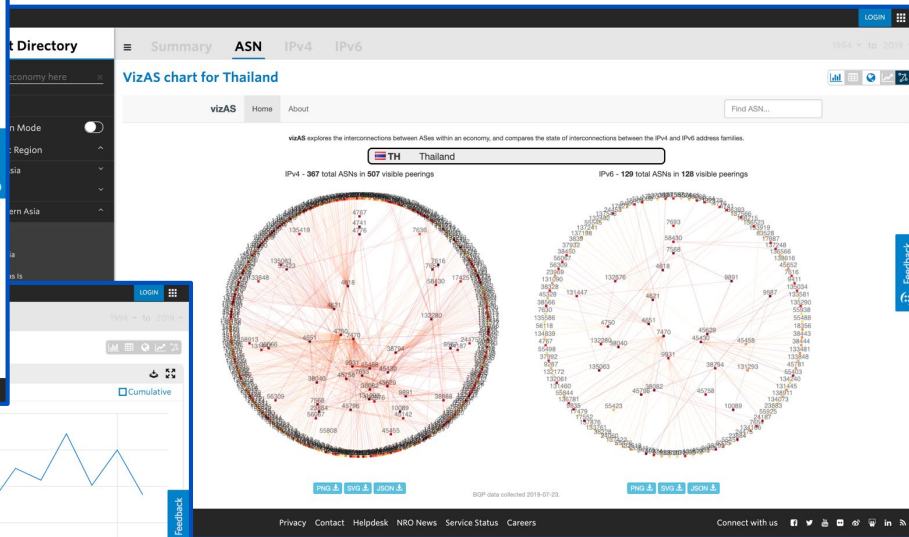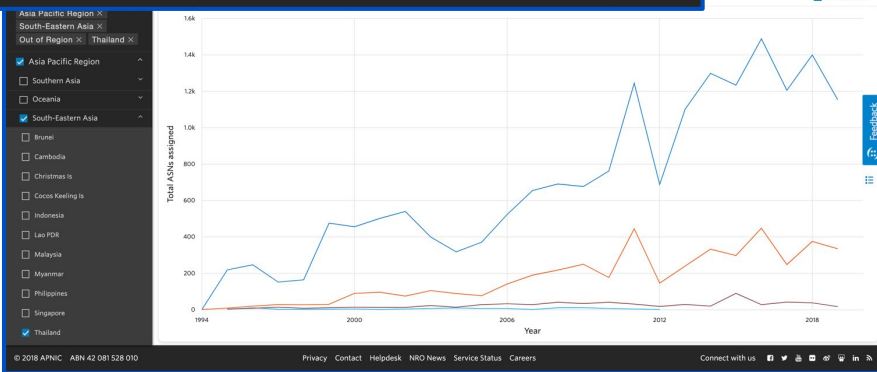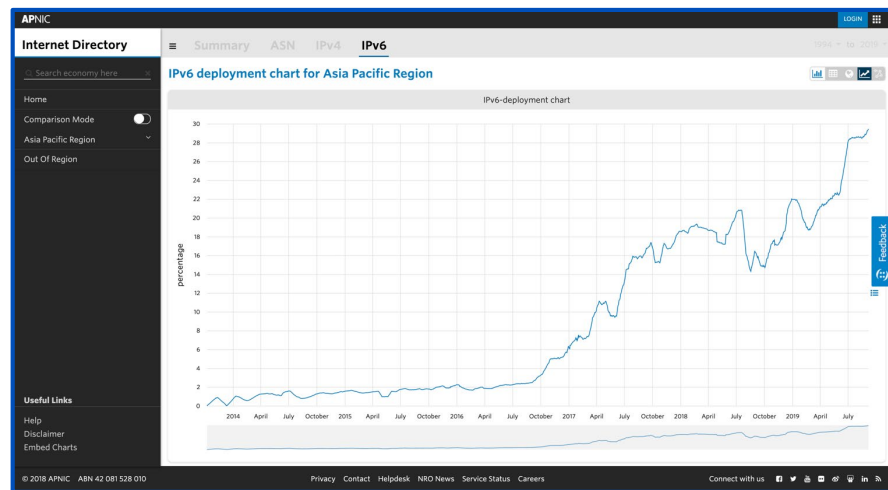
stats.apnic.net

APNIC

Community Participation

Policy
- Presentations at 3 NOGs + APIGA in 2019
- Pre-meeting webinars (851 views)
- Translation of summaries and outcomes
- Newcomers' session with mock Policy SIG

Conferences
- Promotions, blogs, social media
- Translated materials
- Online advertising
- Newcomers outreach to universities
- Youth fellowships
- Student pricing revised
- Next Gen Careers BoF

Sponsorship
- Nine community sponsorships

apnic.net/policy

APNIC 48 Policy SIG

Participate in **APNIC Policy**

▼ YOU   ▶ COMMUNITY   ▶ RESULTS

YOUR VOICE COUNTS
- Everyone can participate – not just your boss
- It doesn't matter how much experience you have
- It's a great way to build your profile and contribute to the Internet
- You can directly impact the way APNIC manages Internet numbers

Get involved in policy discussion!

The first step is to subscribe to the mailing list

SUBSCRIBE NOW!

Government and IGOs

- ASEAN Regional Cyber Norms Workshop (Jun)

- APT-WTSA20-1 (Jun), first preparatory meeting for 2020 ITU World Telecommunications Standardization Assembly

- ITU, Global Symposium for Regulators 2019 (Jul)

- Singapore International Cyber Week (Oct)

- APT PRFP-12 (Oct)

- APEC TEL 60 (Oct); marks 10 years of APNIC engagement on IPv6 and cybersecurity

- WIC 2019, China (Oct)

ASEAN, Cybernorms workshop

APT, WTSA prep meeting

ITU, GSR in Vanuatu

Internet Governance

- VanIGF and Pacific ICT Days (May)
  - First local IGF event in Vanuatu

- APrIGF 2019 (Jul) in Vladivostok

- Paul Wilson nominated for the IGF Chair position

- Sylvia Cadena was reappointed to IGF MAG and Rajesh Chharia was appointed as a new member

- APIGA 2019

- NetHui 2019; APNIC sponsored the fellowship program

- NetThing 2019 (revived auIGF); APNIC sponsored and actively supported the event

APNIC Foundation

'To have a global, open, stable and secure Internet that is affordable and accessible to the entire Asia Pacific community'

apnic.foundation

- Six board members: Edward Tian (CN), Sharad Sanghi (IN), Sylvia Sumarlin (ID), Michael Malone (AU), Danish Lakhani (PK)
    - Jun Murai (JP) appointed in Oct
    - One position vacant
- Second AGM held in May 2019; Sylvia Sumarlin elected as Chair for second and final term
- Second Annual Report including audited financial statements published
- Chinese and Japanese language introductions on APNIC Foundation website

Foundation Activities

- Work continued on the four Pacific projects:
  - Technical training, support for PNG Internet community, PNGCERT, and CERTs/CSIRTs, LEAs in the Pacific

- Community consultations for PNG training project and first workshop in July (16 engagements to date)
  - Additional funding of AUD 140k confirmed

- Successfully held third and final regional workshop for Pacific CERT project with AUD 21k additional funding

- Final workshop in Pacific LEA project completed

- New Pacific training project (DFAT funded) launched in Oct (AUD 500K)

- Completed two technical training workshops in Myanmar (sponsored by KDDI)

Information Society Innovation Fund

Grants

- 70 applications from 17 economies

- Two categories:
  - Internet for Development (2 grants of USD 40k in total)
  - Internet Operations Research (4 grants of USD 80k in total)
  - No Award provided this year; funds redirected to support another grant

- Four technical reports published

isif.asia

WSIS Winner

- ISIF Asia one of 90 ICT-related projects rewarded as WSIS Champion

isif asia

RIR Collaboration

- Two staff exchanges (RIPE NCC and LACNIC)
- RIR policy managers meeting and LACNIC visit
- Conclusion of ASO Review
- New NRO Public Safety Coordination Group
- RIR work on RDAP consistency
- Participation at all RIR meetings and NRO coordination group meetings, including technical liaison to RSCG
- AFRINIC visit to provide technical and process assistance

Global Engagement
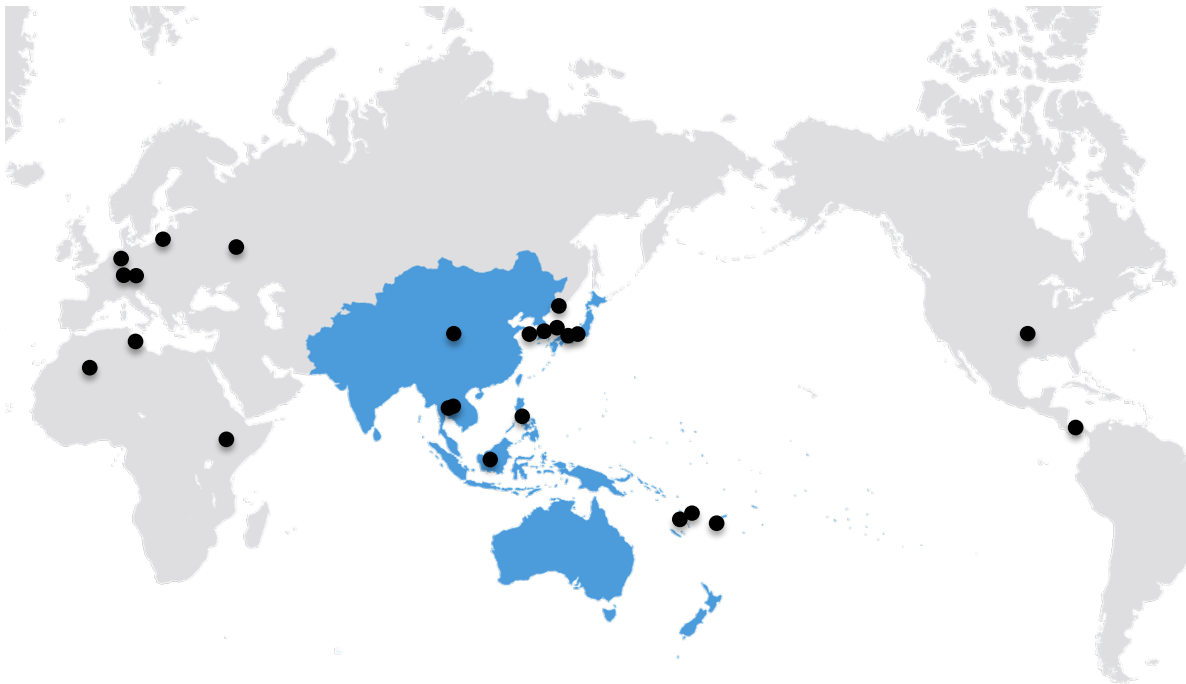
- ICANN APAC TWNIC Forum; ICANN 64, 65; DNS OARC; DNS Symposium, RightsCon Tunis
- IETF 104, 105
- PAM 2019 and ACM IMC 2019
- GSR 2019
- PITA 23rd AGM and Conference
- IGF MAG, ITU-WSIS Forum 2019, APT WTSA20-1
- GFCE Annual Meeting
- APT PRFP-12
- WIC 2019

APNIC Labs

Global IPv6 capability

Geoff Huston
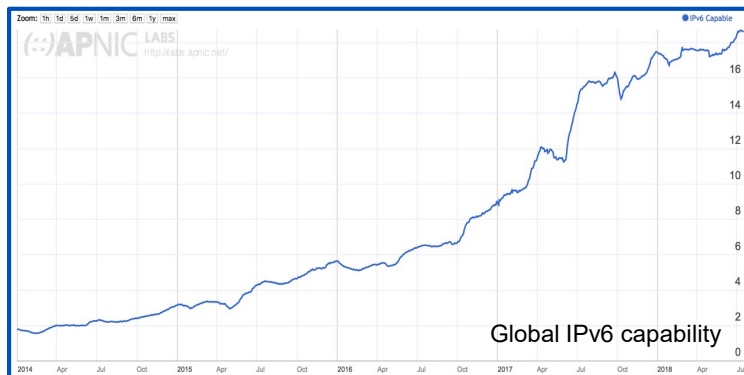
- 25 presentations at RIRs, NOGs, IETF, technical conferences
- 19 research blog posts to date
- Research Projects
  - DNS resolver concentration
  - DNS research with ICANN
  - Ongoing work with ICANN SSAC and RSSAC
  - DNSSEC and NSEC caching
  - Open resolver (1.1.1.1)
  - ITHI DNS measurement
  - BGP update analyser

  labs.apnic.net

External Engagement Summary
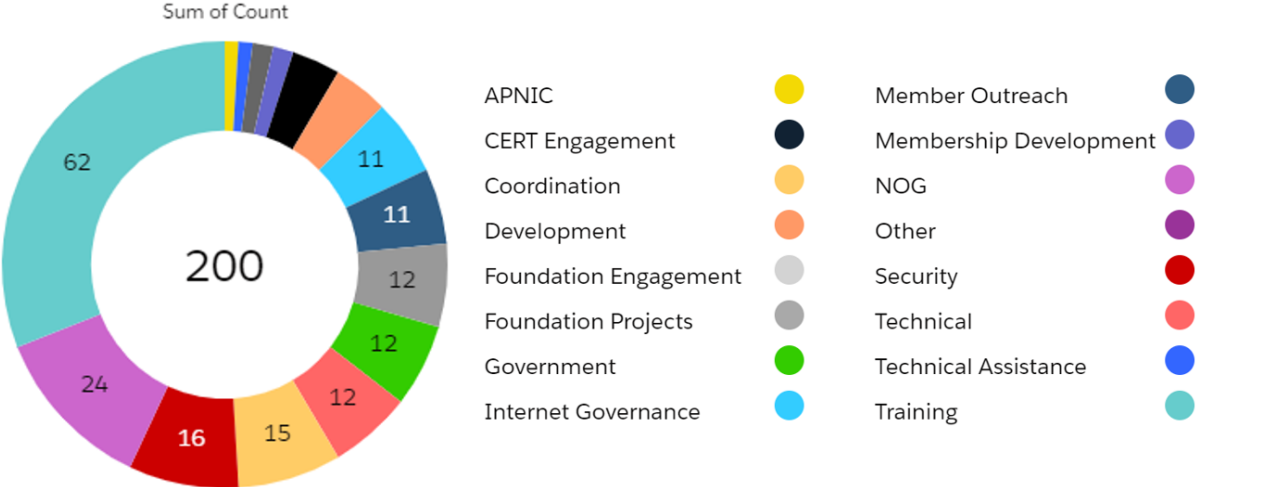
Product Management

- Three cross-functional product teams established with addition of UX specialists
  - Registry
  - Membership
  - Information Services

- Three support teams formalized
  - Web development
  - Platform
  - Devops

- Training provided on Product Management and Agile principles organization-wide, with ongoing coaching
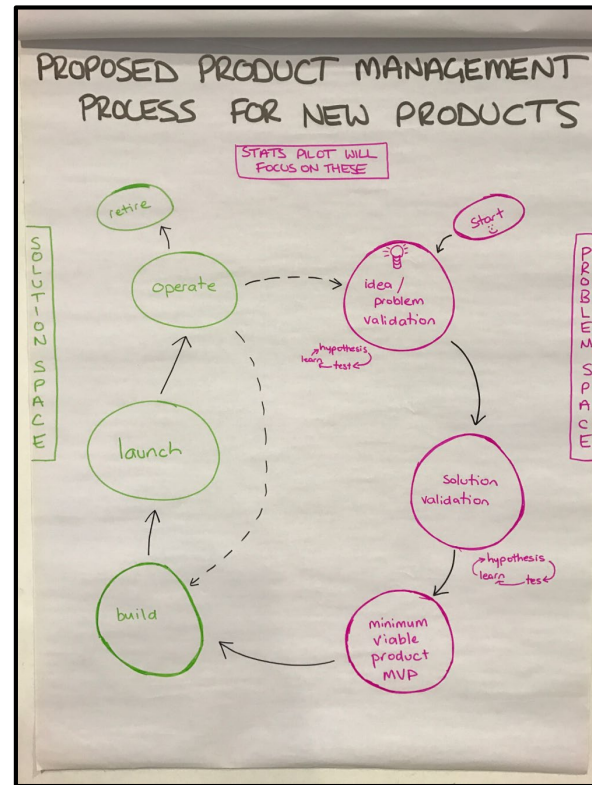
Behind the scenes

- Full recertification (three-yearly) audit of ISO9001 quality management system in August

- New internal systems
  - Expensify for expense management
  - New event registration implemented in Salesforce
  - Egencia for self-service travel booking system
  - Elmo for Human Resource management

- Internal integration and SSO with 2FA for SharePoint, NetSuite, Nexonia, Halogen, Salesforce, Zoom, and many others

- Trial of Western Union as a payment option for Membership fees

- Extended new staff onboarding process, to include extended workforce such as Community Trainers and interns
  - Concise version of the staff policy handbook
  - Online training for compliance and professional development

Thanks!

APNIC Secretariat Report

To 31 October 2019

CONFIDENTIAL DRAFT 1.0

Contents

Figures

Tables

Executive Summary

Introduction

This report is provided to the APNIC Executive Council (EC) for the quarterly face-to-face meeting in Taipei, Taiwan, on 3 December 2019. **It provides a summary of activities from Q1, Q2, Q3 and Q4* up to 31 October 2019**.

This summary provides a list of significant highlights in this reporting period.

Serving Members

- With implementation of policy proposal prop-129 (Abolish waiting list for unmet IPv4 requests) the waiting list for recycled IPv4 space was removed (1.1.1).

- 18.45% of the last /8 (103/8) remains (1.1.1).

- APNIC is working with NIRs on consistency of registry records, and to support implementation of RDAP (1.1.2) and RPKI (1.1.4).

- RPKI Resource Tagged Attestation (RTA) specification draft submitted at IETF, and a trial RTA service is being planned (1.1.4).

- Resource Quality Check (RQC, formerly RQA), webpage published and RQC section added to NetOX (Network Operators Toolbox) (1.1.5).

- Specification of RDAP mirroring standard as IETF draft, to support synchronization of RDAP services (for example, between APNIC and NIRs), and prototype implementation completed (1.1.7).

- APNIC Service Metrics continue to show high satisfaction and SLA results (1.2.1).

- Point of contact verification now integrated with IRT validation (1.2.2)

- APNIC Blog has averaged 48,439 views per month in 2019, a 21% increase on 2018's monthly average of 40,064 (1.2.4).

- Service Partners, NEPALREN and PCTA, have started referring Members. Expressions of Interest were received from LANIC, TL National Communications Authority, and Malaysia's Open DC/Johor Bahru Internet Exchange (1.2.8).

- The RDAP service is in trial deployment operating on Google Cloud infrastructure (1.3.6).

- NRO CSIRT coordination group established (1.3.7).

- Face-to-face training provided to 1,658 trainees in 61 courses, for a total of 4,798 trainee days (1.4.1).

- Twenty-two Community Trainers from 13 economies are now contracted (1.4.2).

- APNIC Academy has supported 737 course completions, 4,080 active users, and the equivalent of 468 trainee days (1.4.4).

Regional Development

- APNIC 48 had 422 registrations, including 52 fellows (2.1.1).

- Dhaka, Bangladesh, was announced as the location of APNIC 50. ISPAB is the confirmed host (2.1.1).

- The EC endorsed the adoption of policy proposals prop-127, 128 and 129 on 9 April 2019 (2.2.1).

- Five proposals were considered at the APNIC 48, and two reached consensus: prop-131: Editorial changes in IPv6 policy and prop-132: RPKI ROAs for unallocated and unassigned APNIC address space (2.2.1).

- K-root server instance deployed in Thimphu, Bhutan; another K-Root deployment now scheduled at MMIX, and F-root at USP Fiji / Fiji-IX (2.2.2).

- RPKI was a focus at APNIC 48, with a large part of the programme dedicated to it (2.2.3).

- APNIC conducted 17 routing security-focused tutorials/workshops (2.2.3).

- APNIC conducted 17 IPv6 deployment workshops and one webinar, and provided IPv6 technical assistance for Bhutan Telecom and Tonga Cable (2.2.4).

- APNIC has supported 26 NOG events in 2019, with sponsorship, presentations, and/or program support; APNIC also helped start one NOG and the restart of two NOGs (2.2.5).

- Adli Wahid retired from the FIRST Board after five years of service but remains involved. Jamie Gillespie was appointed Co-Chair of the APAN Security Working Group at APAN 47 (2.2.6).

- The DASH network security product, including Community Honeynet data (2.2.7), underwent user testing at APNIC 48 and will be launched during 2019 (2.2.8).

- V2.1 of Internet Directory released; deployed new widgets on APNIC's NetOX; conducted user research activities for online community platform (2.2.9).

- 2019 marks APNIC's 10th year of engaging with the APEC TEL community on IPv6 deployment and cybersecurity (2.2.13).

- Completed review of APNIC 48 demographics, which will be used for diversity improvement in 2020 (2.2.16).

- Jun Murai was appointed as the sixth member of the APNIC Foundation board (2.3.1)

Global Cooperation

- APNIC participated in all RIR meetings so far in 2019, as well as a large number of NRO coordination activities (3.1.1).

- APNIC Labs continued contracted work with ICANN on DNS research; and with SSAC and RSSAC (3.3.1).

- Geoff Huston made 26 research presentations at events in 2019 (3.3.1).

- APNIC participated in 200 engagements to date (Appendix A).

Corporate

- Internal Single-Sign-On (SSO) with Two-Factor Authentication (2FA) is now deployed for all important business systems (1.3.4).

- Integrated data architecture for business analysis and reporting, using the Data Vault 2.0 standard, will provide improved metrics for the 2019 Annual Report (1.3.3).

- New Product Management framework implemented, with three cross-functional product teams taking responsibility for Membership, Registry and Information Products (4.1.2).

- New payment facilities established via Western Union, allowing local currency payment in 16 economies (4.2.4).

1   Serving Members

1.1   Registration Services

1.1.1   IPv4, IPv6 and ASN delegation and registration services

Resource pool summary

The following table shows the status of all APNIC number resource pools in the current reporting period.

	Total 1/1/2019	From IANA	Transfers in	Transfers out	Total 31/10/2019	Total allocated	Total free
IPv4 (/24s)	3,471,856	2	7,137	362	3,478,633	3,454,211 99.30%	24,422 0.70%
IPv6 (/32s	1,067,008	0	n/a	n/a	1,067,008	80,832 7.58%	986,176 92.42%
ASNs	17,045	2,048	0	0	19,093	16,569 86.78%	2,896 13.22%

Table 1: Internet number resource summary

IPv4, IPv6 and ASN delegations

The following table and graphs show the number of delegations for each resource type, and the distribution of delegations by sub-region.

Resource	Q1	Q2	Q3	Q4*
IPv4 (103/8)	503	417	455	162
IPv4 (recycled)	27	110	0	0
IPv6	365	319	372	124
ASNs	443	347	442	74

Table 2: Internet number resource delegations
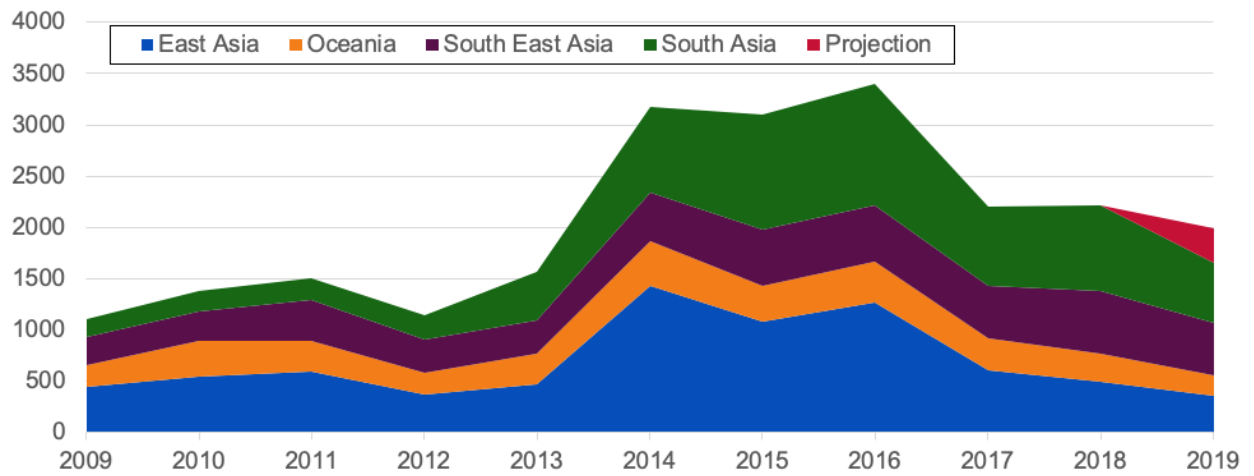
Figure 1: IPv4 delegations
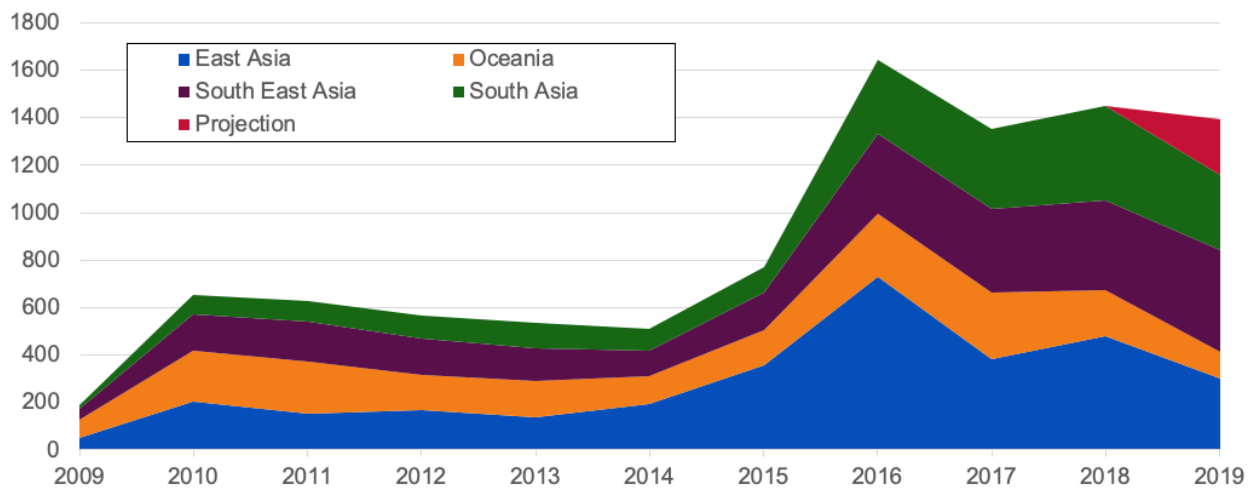
Figure 2: IPv6 delegations
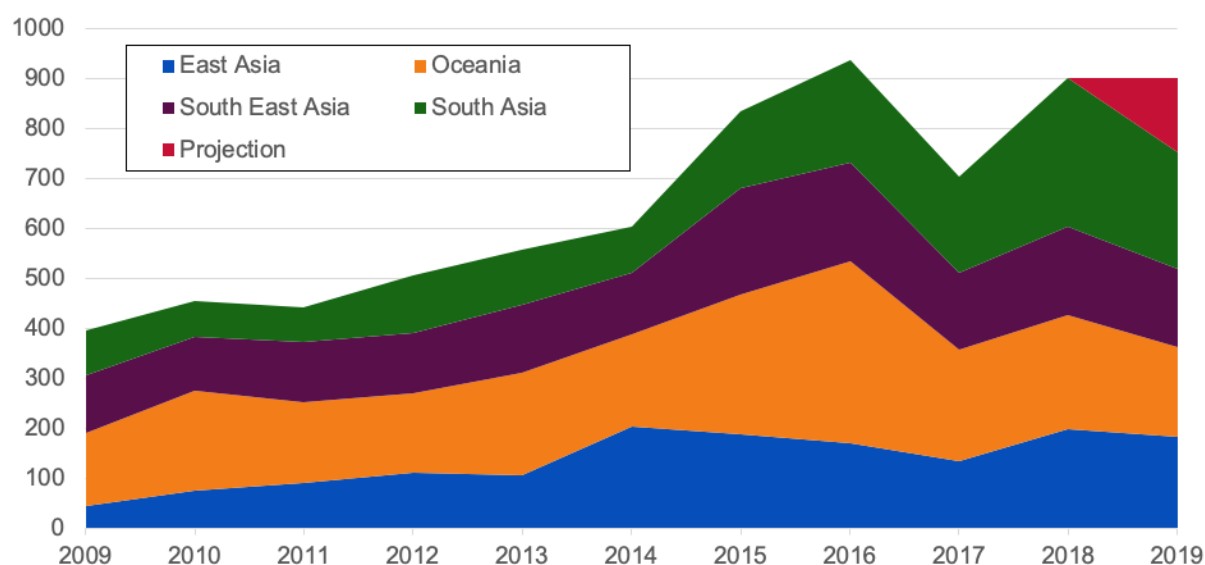
Figure 3: ASN delegations

Member resource holdings

The proportion of APNIC Members holding specific resource types is as follows.

Resource type	Q1	Q2	Q3	Q4*
IPv4 (103/8)	75.84%	76.64%	77.54%	77.92%
IPv4 (recycled)	22.31%	22.58%	22.02%	21.88%
IPv6	62.16%	62.77%	63.54%	63.72%
ASNs	76.67%	77.13%	77.59%	77.75%

Table 3: Member resource type holdings

Status of last /8 (103/8)

The following table shows the number of delegations and the remaining space available in the last /8 (103/8).

Resources	Q1	Q2	Q3	Q4*
Delegations from 103/8 (/24s)	1,413	770	786	278
Remaining 103/8	21.24%	20.07%	18.87%	18.45%

Table 4: Status of the last /8

Status of IPv4 recycled pool

Resources	Q1	Q2	Q3	Q4*
Delegations from recycled space (/24s)	102	413	0	0
Remaining recycled pool (/24s)	3	0	0	0

Table 5: Status of IPv4 recycled pool

Waiting list for IPv4 recycled space

On 2 July 2019, policy proposal prop-129: 'Abolish Waiting list for unmet IPv4 requests' was implemented. The waiting list for IPv4 recycled space has been removed.

In preparation for the policy implementation, APNIC ensured all available recycled space was delegated to the waiting list. This explains the higher delegation count for the recycled pool in Q2.

IPv4 transfers and returns

APNIC resource transfers result from mergers/acquisitions or market transactions. Market transfers may happen within the APNIC region, or to and from other RIRs (ARIN or RIPE NCC only).

Type	#	Q1	#	Q2	#	Q3	#	Q4*
M&A total	24	921	45	1,258	31	3,793	5	304
Market								
▪ Intra-RIR	77	2,025	48	946	75	2,758	26	1,166
▪ Inter-RIR	22	1,702	25	3,984	9	1,562	9	251
Market total	99	3,727	73	4,930	32	4,320	35	1,417

Table 6: IPv4 transfers (/24)

RPKI

Usage of RPKI services has increased during this reporting period, as follows:

RPKI usage	Q1	Q2	Q3	Q4*
Members with RPKI certificates	22.82%	23.75%	25.79%	25.97%
Members with ROAs	8.86%	15.00%	18.34%	21.07%
IPv4 under ROAs	4.98%	7.29%	8.17%	9.36%
IPv6 under ROAs	8.36%	8.61%	8.67%	8.73%

Table 7: RPKI usage

1.1.2 Registry operation and maintenance

Work continues with NIRs to achieve full consistency of registry records, to improve synchronisation of records between APNIC and NIRs, and to support implementation of RDAP.

- Initial consistency checks in registry records with KRNIC completed.

- Checks with JPNIC and TWNIC have started, and data has been shared with JPNIC, TWNIC and CNNIC regarding inconsistencies in registry records.

- Discussions have continued with each NIR since APNIC 48.

- An API specification, supporting automation of resource delegation and sub-account management, was shared with the NIRs, and a testbed was released in June.

- Ongoing registry consistency checks have identified missing records in the whois stemming from a bug fixed previously. The public view of the registry is being restored to ensure consistency between whois, RDAP and delegated statistics. Registry accuracy measures are being developed for the KPI dashboard.

▪ Deployed an initial deployment of 'stub' records for the whois to more accurately report on transfers out from APNIC-managed resources.

Projects

1.1.3   Whois IRT accuracy

Policy prop-125 requires all resource holders to maintain accurate and responsive IRT (Incident Response Team) contacts in the whois database, and APNIC to validate Member compliance with this policy every six months.

Status:

▪ Phase I is operational. To date, over 1,000 email validations have been issued to more than 800 Members, with a 62% confirmation rate.

▪ The 'abuse-c' mirroring of IRT objects in the APNIC Whois Database is complete.

▪ Phase II will expand validation requirements to cover IRT objects linked to customer assignments before the end of 2019.

▪ Phase III will handle any Members with more than 10 IRT objects manually through a Member Services representative and begin before the end of 2019.

1.1.4   RPKI development

This is a project to improve RPKI services and identify opportunities for new services.

Status:

▪ The Resource Tagged Attestation (RTA) pilot was demonstrated at IETF. Work continues on standards specification; the draft was proposed for IETF adoption at IETF 105 in Montreal. MyAPNIC and Public web features to support RTA provisioning is being designed.

▪ Continuing to support three NIRs that run their own RPKI services and assist with operational stability. A fourth NIR (IDNIC) is in a pre-deployment testing phase. NIR RPKI products have been integrated into RPKI coverage reporting in the APNIC region.

▪ Draft on deployment of 'validation reconsidered' was presented at IETF but is unlikely to secure adoption. A call for adoption was requested.

▪ Distinction between RPKI platform (certification of resources given to a holder) and RPKI applications (Resource Origin Validation, Resource Tagged Attestation and so forth) was made clearer in APNIC training and presentation material.

▪ Requests for validation and relying party services are being assessed by the product development team.

▪ There were issues with ROAs created before 2017 not being visible in MyAPNIC. They are being addressed in a joint project between the registry product and services teams.

▪ prop-132: 'RPKI ROAs for unallocated and unassigned APNIC address space' reached consensus at APNIC 48. While waiting for endorsement by the EC, work has begun on planning a model for the deployment, risk assessment and related requirements. A deployment plan will be presented at APRICOT 2020.

1.1.5   Resource Quality Check (RQC, formerly RQA)

Development of automated mechanisms to identify operational issues related to specific address blocks such as route filtering, email and other blacklisting, routing history, and geolocation errors — for use during address resource reclamation and transfer processes.

Status:

- Project renamed Resource Quality Check (RQC) to avoid generating false expectations and legal liability.

- [RQC webpage](#) published on APNIC website.

- RQC section was created in NetOX (https://netox.apnic.net/) including widgets that help assess resource quality.

  - Whowas widget designed to offer delegation history information

- [Disclaimer in NetOX](#) updated to include an RQC specific paragraph.

- Transfer history information from the APNIC Transfer Log included in NetOX RQC section. This will be incorporated into the whowas widget in future.

1.1.6   Reclaiming unused IPv4 address space

The 2018 APNIC Survey requested attention to the reclamation of unused IPv4 space in the APNIC region. This project will develop definitions, approaches and mechanisms for this process.

Status:

- Established specifications and definitions with Services Team, Membership Product Manager and APNIC's General Counsel, including definition of 'unused' IPv4 space as 'A /24 or more of a delegated IPv4 prefix that is no longer needed'.

- Obtained statistics of unrouted IPv4 address based on RIPE NCC RIS and categorized them as:

  - Delegated less than 5 years ago from 103/8 pool

  - Delegated over 5 years ago from 103/8 pool or from non-103/8 pool

  - Unrouted historical resources

  - Unrouted IPv4 addresses under NIR accounts

- Developed draft specifications for listing service of unused IPv4 in MyAPNIC will be delivered in Q4.

- A process for contacting impacted groups is being designed, and emails have been drafted and reviewed by the communications team and legal counsel.

1.1.7   RDAP development

This is a project to further develop APNIC's RDAP service in 2019-2020.

Status:

- Work continues to deploy the RDAP service for NIR delegations. The NIR source data is clearly identified and the model allows NIRs to either run their own RDAP service, or provide data to APNIC's RDAP service. The model aligns whois and RDAP query responses as closely as possible. Data from IDNIC, KRNIC, JPNIC and TWNIC has been integrated.

- Work has begun for a Google Cloud-based APNIC RDAP service.

- Work began on a draft for the IETF on RDAP mirroring to permit NIR-hosted RDAP services to be coordinated effectively with APNIC. Demonstrator Server and Client code has been released. APNIC will continue to develop this system and promote it within the Asia Pacific and worldwide for efficient RDAP mirroring.

- Work continues with other RIRs on profiles for RDAP data to improve consistency. A profile and conformance testing suite have been developed and the profile was discussed with RIRs at IETF 105. APNIC will continue to promote RDAP consistency between the RIRs and align with the ICANN RDAP

usage in the domain name space. The profile is being carried forward into IETF 106 and will be published on the NRO website as an RIR document.

- The IETF REGEXT working group continues to discuss RDAP RFCs. APNIC collaborates with RDAP developers worldwide on the standards process, focusing on the internationalization and mirroring activity.

1.2   Customer Service

1.2.1   Member Services/Helpdesk/Billing

SLA for service requests
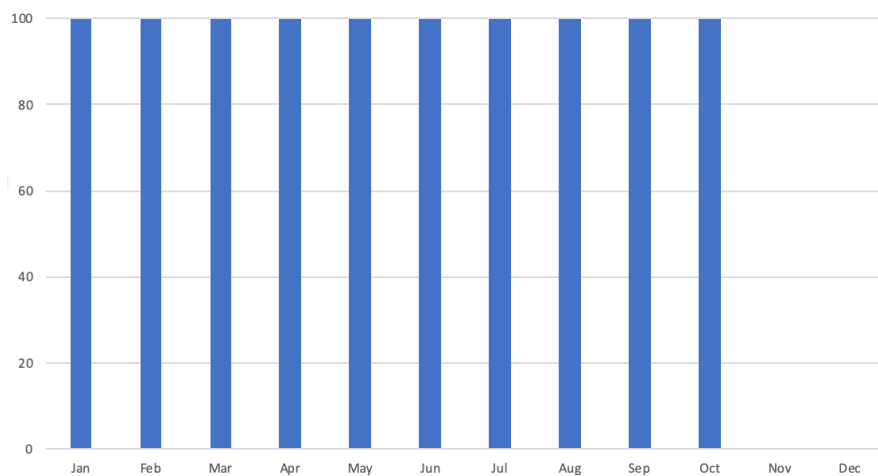
Figure 4: Services SLA

Service satisfaction ratings

New member | Helpdesk | Admin | Chat

Poor	Below average	Average	Above average	Excellent
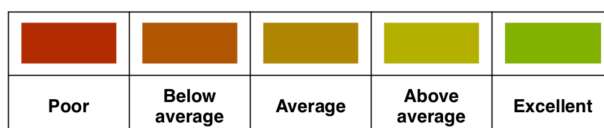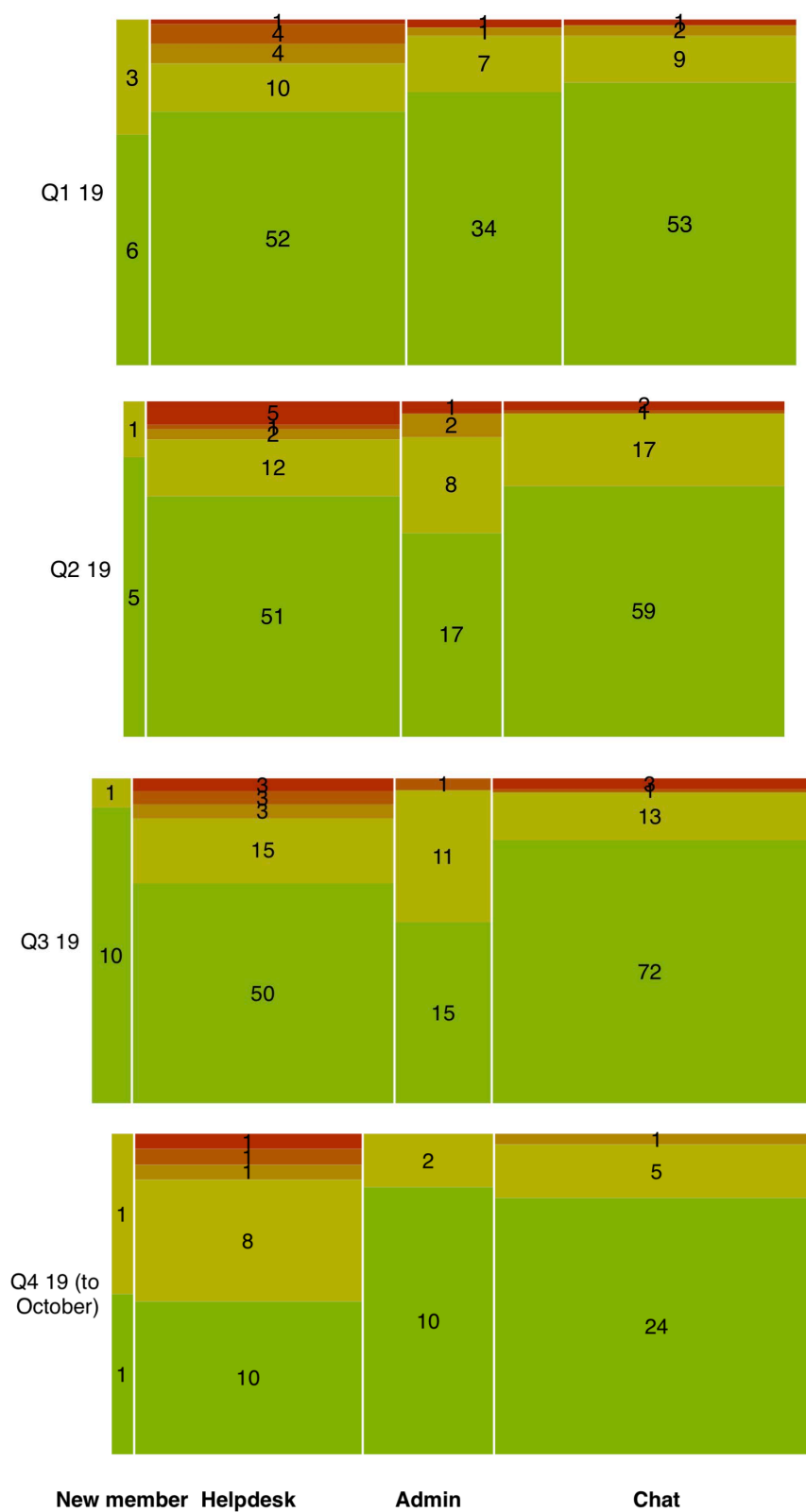
Figure 5: Service satisfaction summary

Type	Q1	Q2	Q3	Q4*
New Members	210	194	210	65
Closed Members	51	44	75	23
Reactivated Members	6	2	1	0
Total Members	7,315	7,474	7,608	7,650

Table 8: Membership transactions
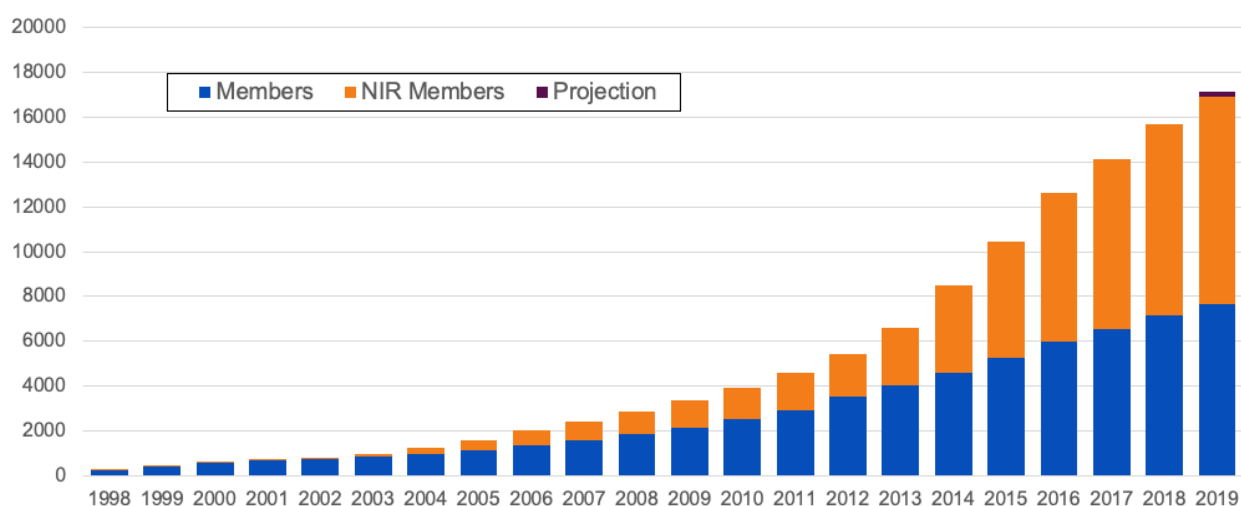
Figure 6: Membership growth
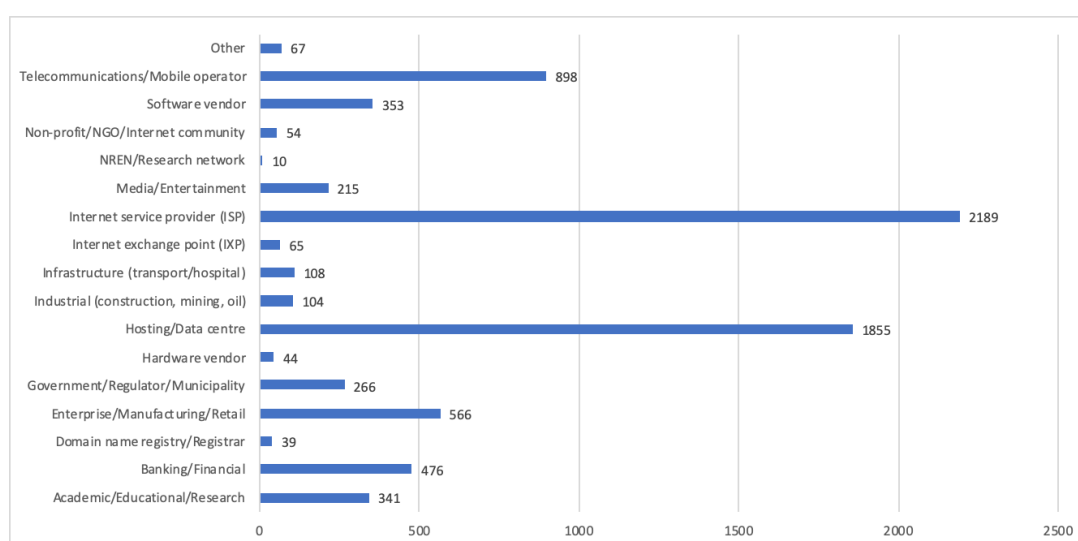
Figure 7: Membership industry type

Fraud cases

Instances of fraudulent applications and requests are summarized as follows.

Type	Q1	Q2	Q3	Q4*
Identity theft	0	0	0	0
Fabricated documents	1	0	2	0
Fabricated needs	1	1	0	0
Total fraud cases	2	1	2	0

Table 9: Fraud cases

1.2.2   MyAPNIC development and maintenance

▪ Point of Contact verification is now integrated with IRT validation (prop-125), which resolves the issue of sending too many emails to Members for validation purposes.

▪ Completed preparation work for digital certificate deprecation. Affected account holders were contacted in mid-September.

▪ User testing underway around transformation of MyAPNIC into a broader self-service and information portal for Community members. Members holding resources from APNIC will have a special section for managing resources.

1.2.3   Improving online experience

▪ Work on the 'RIPE Forum' to improve mailing-list user experience remains on hold, while alternatives are evaluated.

▪ Completed minor UI improvements to Confer.

▪ Improved error messages in SSO to allow users to better understand what to do next.

▪ Demonstrated Big Pulse as a potential new voting platform, and actioning the feedback provided.

1.2.4   APNIC Blog

	Q1	Q2	Q3	Q4*	YTD	All time
Views	123,976	155,518	153,630	51,267	484,391	1,769,674
Posts	86	102	98	32	318	1,950

Table 10: APNIC Blog activity level
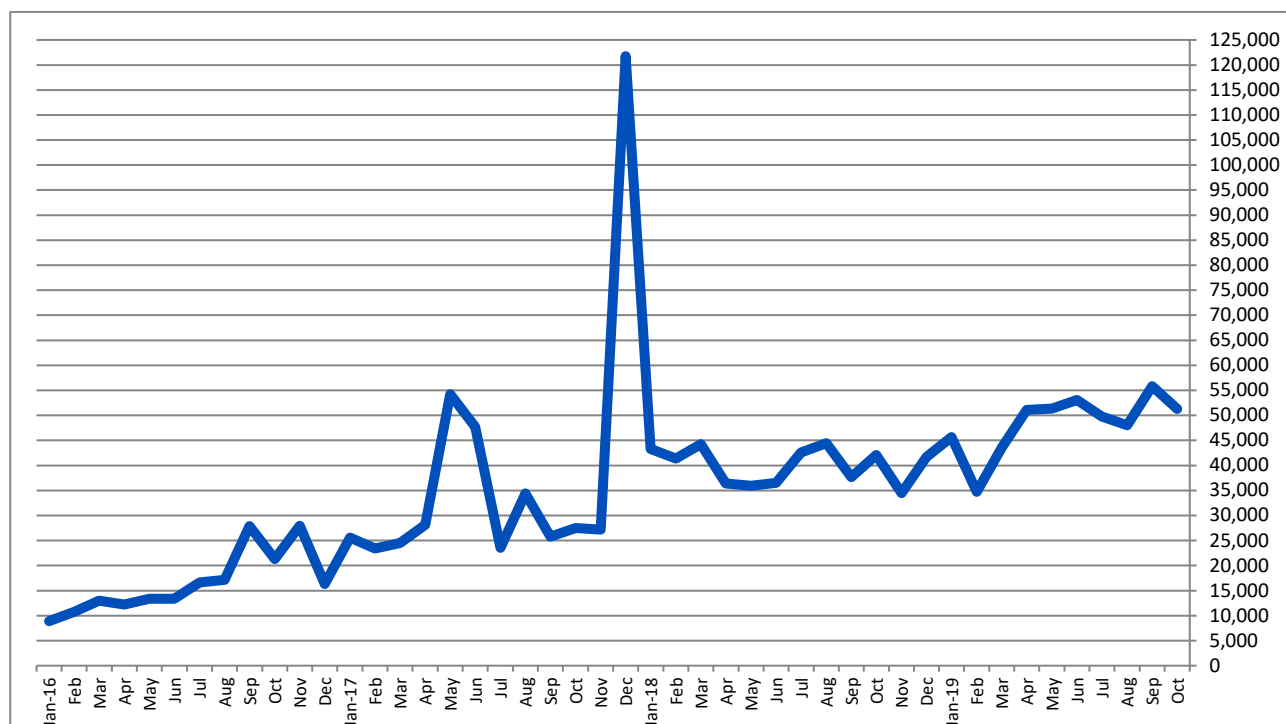
Figure 8: Monthly APNIC Blog views
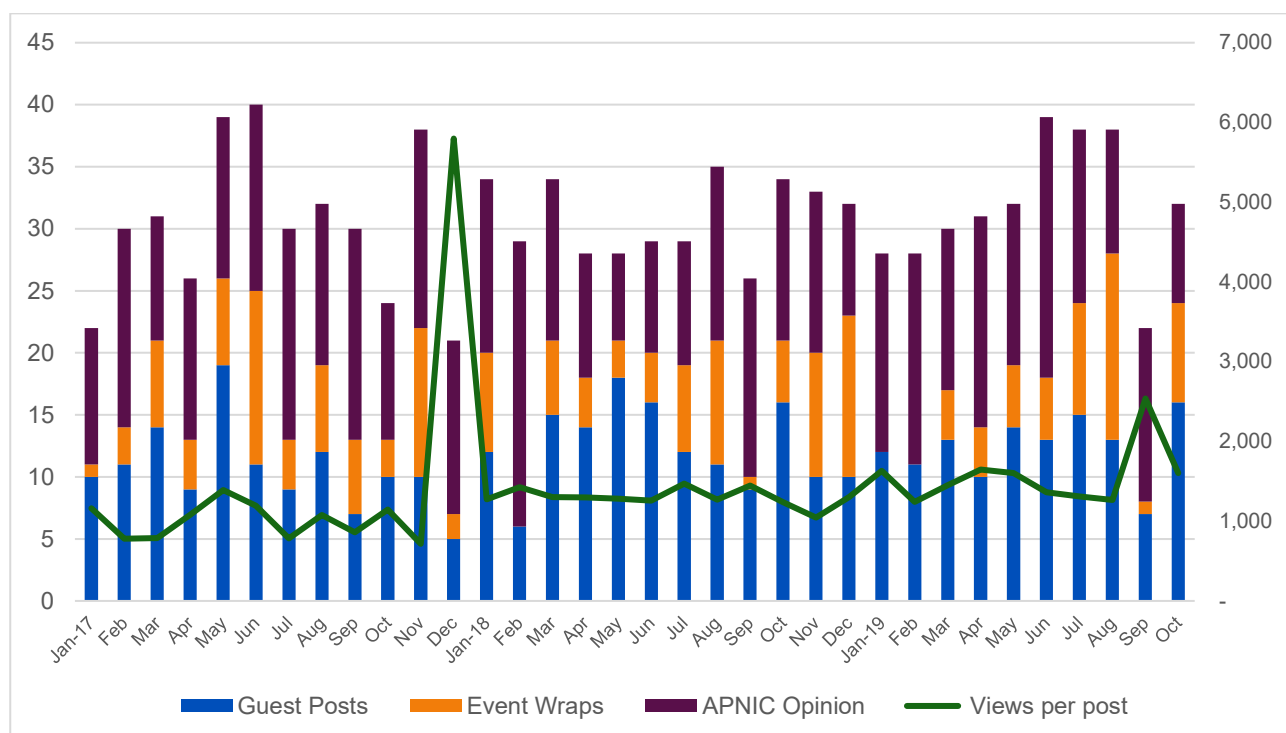
Figure 9: Monthly APNIC Blog post types

The APNIC Blog has averaged 48,439 views per month in 2019 to date, a 21% increase on 2018's monthly average of 40,064.

There have been 124 Guest Posts so far in 2019, representing 46% of total opinion posts. This proportion has declined compared to 2018's Guest Post ratio of 50%.

Popular posts to date have included:

- Reports on BGP leaks/hijacks in May and June that impacted global network operators, written by ISOC's Aftab Siddiqui and Oracle's Doug Madory.

- Two Guest Posts on DNS Flag Day written by CZ.NIC's Petr Špaček and Internet NZ's Sebastian Castro.

- Sarvesh Mathi's Guest Post looking at submarine cable building by content providers.

- The news from APNIC 47 that the maximum IPv4 delegation size will be reduced to a /23.

- Geoff Huston's annual research report on BGP metrics, and his thoughts on DANE in a post on OARC 30.

1.2.5   New membership outreach

APNIC shared information on membership to potential new Members seeking Internet number resources at APRICOT 2019, PCTA Convention 2019, ConnectTech Asia 2019, APNIC 48, 19th ITCN Asia and Telecom Conference and at NOG events including bdNOG 10, SGNOG 7, MYNOG 8, and SANOG 34.

The total number of new Members that have joined APNIC in 2019 is 679 (see 1.2.1).

1.2.6   Quality management

APNIC successfully completed an external full recertification audit (conducted every three years) of its quality management system in August.

1.2.7   APNIC Survey

Planning for the APNIC 2020 survey will begin in Q4.

Projects

1.2.8   Service Partner Trial

There will be continued development of the 'Service Partner' model to improve outreach to APNIC Members according to local needs; support for three Service Partners approved for two-year trial starting in 2018.

Status:

- NEPALREN, MyNOG and PCTA have been signed and trained as Service Partners.

- NEPALREN referred one Member in 2018 and one Member in 2019.

- PCTA referred six Members in 2019.

- MyNOG 8 Conference (July) has not produced any referrals so far.

- Interest was received from Lao's LANIC, Timor Leste's National Communications Authority, and Malaysia's Open DC/Johar Bahru Internet Exchange (all existing Members) to become Service Partners.

1.2.9   Membership lifecycle management

This is a project to continue developing systems for Member lifecycle management, integrating various internal systems to improve service efficiencies and user experiences.

Status:

- The membership application form is being improved with the user interface, backend and API currently under development; user testing feedback from APNIC 48 is being incorporated into the design changes.

- Solutions are being evaluated for the future platform to manage service and helpdesk enquiries and membership application processing, looking for improvements to Membership data management, resource transfers, contact management, account closure and reactivation.

1.3 Technical Infrastructure Services

1.3.1 Data centres and interconnections

APNIC is exploring remote IXP/peering connections provided by PCCW Global and Megaport into Singapore and Hong Kong but is facing difficulties on the remote end. Alternative solutions, such as having a physical presence, are being evaluated.

1.3.2 Maintenance, depreciation and licensing

APNIC continues to work towards gaining 'Non-profit' status with TechSoup to receive better organizational discounts from vendors. The Business IT Team is currently consolidating individual licensing to group licensing for products used by staff, including GitHub, Salesforce and Cloudflare.

1.3.3 Information Architecture

The Information Architecture model has been applied to obtain draft Identifier Technical Health Indicators (ITHI), measuring the health of Internet Number Resource technologies, working collaboratively with the other RIRs through the Engineering Coordination Group (ECG).

1.3.4 Business applications

- Slack was selected as APNIC's primary chat/messaging software and was implemented during Q2.

- A new registration system was launched for APNIC 48 for all conference, workshop and other events. Using Salesforce and the external SSO, the new system is much better integrated with other systems including the APNIC Academy and MyAPNIC.

- The new registration system is also being used for APRICOT 2020, and as of December/January, for the APNIC Foundation events in Papua New Guinea and the Pacific.

- Internal SSO using Okta is in place for all primary applications including Office 365, Salesforce, NetSuite, Slack, Zoom, Jira, Expensify, Egencia and others. Preparations have begun to move all Community Trainers and the EC to Okta.

- A new HR system (Elmo) will replace Halogen and Netsuite HR modules in Q4.

1.3.5 Virtualization and cloud

- The RDAP service is in early test deployment operating on Google Cloud infrastructure. It is hoped that operating the service on a managed platform will increase responsiveness for users.

- Information Product services including the Internet Directory are now hosted on cloud infrastructure, delivering a faster service to users and taking advantage of the economies of scale that a cloud platform can deliver.

- Some Product Development systems have been relocated to Google Cloud, reducing the maintenance burden on technical staff. This has enabled a pilot project to use cloud resources for building software.

1.3.6 Software process improvement

- Product teams continue to add Gitlab Continuous Integration/Continuous Deployment (CI/CD) pipelines to current and new products which allows for faster integration and so faster deployment of new releases.

- We are increasing use of Kubernetes cloud deployment methods.

Projects

1.3.7   Strengthening of APNIC-CSIRT

Strengthening security incident response within APNIC (relating to APNIC systems and services) through improved internal processes and external coordination.

Status:

- The draft of the updated incident handling procedure and process is being finalized for inclusion in the ISMS ISO27001 documents (note, ISO27001 certification is not planned for 2019).

- A proposal for inter-RIR security collaboration was agreed by the NRO, resulting in the creation of a Security group and Incident Response Team.

1.4   Member Training

1.4.1   Training services

	Face-to-Face	APNIC Academy
Courses (by topic)	61 courses/workshops	737 courses / 737 certs
Locations	35 cities / 28 economies	42 economies
Training Days	185	N/A
Student-days/hours	4,798 student days	3,746 training hours
Students	1,658	4,080 active users
Virtual Labs	N/A	1,362 labs launched
YouTube Training Channel	32,963 views / 559 new subs	N/A

Table 11: Training delivery

1.4.2   Community Trainers

APNIC has recruited 22 Community Trainers from 13 economies. Since January 2019, 19 Community Trainers from 11 different economies have assisted at 28 training events in 17 economies (Bangladesh, China, Indonesia, India, Laos, Malaysia, Maldives, Myanmar, Nauru, Pakistan, Papua New Guinea, Philippines, Samoa, Sri Lanka, Thailand, Timor Leste and Vanuatu).

At four of these training events (INNOG 2, an APNIC-organized workshop in Malaysia and Pakistan, and an APNIC Foundation workshop in Papua New Guinea) Community Trainers led the training.

1.4.3   Technical Assistance

APNIC has provided remote technical assistance for:

- Tonga Cable's IPv6 deployment

- MMIX Route Origin Validation (ROV) deployment

- TashiCell's ROV deployment

- PNG IXP (through the APNIC Foundation)

- CNNIC with their rDNS support and whois deployment

- IDNIC with their whois and RPKI deployment

- TWNIC with their RPKI deployment

- VNNIC with their RPKI certification goals (hosted in APNIC's RPKI)

Projects

1.4.4   APNIC Academy

Development of the APNIC Academy as the platform for delivery of online training and technical assistance to APNIC Members continues.

Status:

- Supported 737 course completions, 4,080 active users (from 5,000 registered account holders), 1,362 virtual lab instances and a total number of 3,746 hours of training (468 days of training equivalent) during 2019.

- Launched the new IPv6 Fundamentals online course with five new modules (IPv6 Header Format, IPv6 Extension Headers, IPv6 Address Representation, IPv6 Address Types and IPv6 Neighbour Discovery) at APNIC 48.

- Launched multilingual support on the APNIC Academy website, adding the following languages: Chinese (Simplified), Chinese (Traditional), Indonesian, Japanese, Korean, Mongolian, Thai and Vietnamese at APNIC 48.

- Hosted eight live webinars on APNIC Academy attracting 1,003 participants from 42 economies on topics including network security, DDoS, IXP/Routing, IPv6 and RPKI.

- Commenced the development of a new IPv6 Address Planning course, and development of a new technical assistance platform, to be launched at APNIC 49 in Melbourne.

2   Regional Development

2.1   APNIC Conferences

2.1.1   APNIC Conferences

APRICOT 2019

APRICOT 2019 was held in Daejeon, South Korea, from 18 to 28 February 2019 at the Daejeon Convention Centre.

Conference statistics	
Total number of on-site delegates	714
Economies represented	57
APNIC Member organizations represented	153
Remote Participants – Adobe Connect	196
Remote Participants – YouTube	3,757 views; 30,153 minutes
#apricot2019 tweets	1,194

Table 12: APRICOT 2019 statistics

APNIC held its second Hackathon event at APRICOT 2019 with 16 participants (4 female and 12 male), with a focus on measuring how addressing resources are distributed, routed and used.

Other Internet community events held at APRICOT included a GFCE Triple-I meeting; a FIRST TC; APIX AP*, and APCERT SC meetings; and DotAsia's AGM.

APNIC 48

APNIC 48 was held in Chiang Mai, Thailand, from 5 to 12 September 2019 at the Le Meridien Chiang Mai.

Conference statistics	
Total number of on-site delegates	422
Economies represented	54
APNIC Member organizations represented	198
Remote Participants – Zoom	178
Remote Participants – YouTube	2,559 views; 22,112 minutes
#apnic48 tweets	986

Table 13: APNIC 48 statistics

- The Call for Papers received 34 submissions for nine technical and two tutorial sessions. Thirteen technical presentations, two tutorials, and one BoF submission were accepted. Of the rejected submissions, six were acceptable but rejected due to lack of available space in the program.

- The main program for APNIC 48 incorporated a security track and several dedicated RPKI sessions. One of those RPKI sessions was a Routing Security BoF where the community agreed to create a new Routing Security/RPKI SIG (name to be finalized). A draft charter was created and elections for the Chair and Co-Chair roles will be held at APNIC 49. An RPKI Deployathon was also held for the first time at an APNIC conference, at the end of the workshop week.

- Several Internet community groups held meetings as part of APNIC 48, including an APNG Camp Reunion, GEANT Transits Train the Trainer, APIX, AP*, and a RIPE NCC Joint Board Meeting with the APNIC EC.

- APNIC 48 attracted 18 sponsors that contributed AUD 161,820 to the event.

- The APNIC 48 conference network introduced eduroam for Wi-Fi access, RPKI/ROV route filtering as a demonstration of the technology, and Zoom (which replaced Adobe Connect) for webcasting.

Future conferences

Preparation for APNIC conferences in 2020 have been underway during 2019.

- [APRICOT 2020](#) will be held in Melbourne, Australia, from 12 to 21 February 2020.

- Dhaka, Bangladesh, was announced in July as the location of APNIC 50 following a site visit and meetings with the Minister for Post and Telecommunication, Mustafa Jabbar; BTRC Commissioner, Md Rezaul Quader; the ISPAB Board and several APNIC Members. ISPAB will be the local host and the Bangladesh Government expressed strong support for the event.

2.2   Regional Technical Development

2.2.1   Policy

APNIC 47

- Five policy proposals were considered at the APNIC 47 Policy SIG, and three reached consensus in the SIG and AGM:

  - [prop-129](#): Abolish waiting list for unmet IPv4 requests

  - [prop-128](#): Multihoming not required for ASN

  - [prop-127:](#) Change maximum delegation size of 103/8 IPv4 address pool to a /23

- Regarding prop-127, an interim arrangement was announced by the EC to limit the maximum IPv4 delegation size to a /23 while the four-week comment period was underway.

- Two proposals did not reach consensus and were returned to the mailing list for further discussion:

  - [prop-126:](#) PDP Update

  - [prop-124:](#) Clarification on IPv6 sub-assignments

- One proposal was abandoned before APNIC 47: prop-118: No need policy in APNIC region

- Current Chair, Sumon Ahmed Sabir, was re-elected as Chair of the Policy SIG for a two-year period. There was no other candidate for the election.

APNIC 48

- Five policy proposals were considered at the APNIC 48 Policy SIG, and two reach consensus in the SIG and AMM:

  - [prop-131](#): Editorial changes in IPv6 policy

  - [prop-132](#): RPKI ROAs for unallocated and unassigned APNIC address space

- Three proposals did not reach consensus and were returned to the mailing list for further discussion:

  - [prop-124:](#) Clarification on Sub-Assignments

  - [prop-126:](#) PDP Update

  - [prop-130:](#) Modification of transfer policies

- The community also reached consensus to change the wording of the Policy SIG Charter as follows:

  'The Policy SIG charter is to develop policies which relate to the management and use of Internet number resources within the Asia Pacific region. These include policies for resource allocation, recovery and transfer, and for resource registration within whois, reverse DNS, RPKI, and related services.'

- Aftab Siddiqui was re-elected to the NRO NC/ASO AC from a field of nine candidates.

Policy implementation

- The comment period for prop-127, 128 and 129 concluded with no objections and the EC endorsed the adoption of all three policy proposals on 9 April 2019.

- Prop-127 was implemented immediately and the interim arrangement was lifted on the same day.

- Prop-128 and prop-129 were implemented in July.

- The comment period for prop-131 and prop-132 concluded with no objections and the policy proposals were sent to the EC for endorsement.

2.2.2   Internet exchanges, rootservers and measurement

APNIC has supported the following initiatives during 2019:

- K-root server deployment in Thimphu, Bhutan (hosted by BTIX) in January.

- BKNIX Peering Forum 2019, MMIX Peering Forum 2019 and Peering Asia 3.0, as well as the 30th DNS-OARC Workshop, held in Thailand in May.

- Continuing support for PeeringDB, IXP Manager, and IXPDB during 2019.

- Agreed to sponsor two more root servers (agreements signed and waiting for commissioning to be completed): MMIX (K-root) and USP Fiji (F-root) connecting to Fiji-IX

- Finalizing agreement for future M-root anycast deployment in the Asia Pacific with the WIDE Project and JPRS.

2.2.3   RPKI

APNIC has supported the following RPKI initiatives:

- Seventeen routing security-focused tutorials/workshops to date in 2019.

- Supported TashiCell (Bhutan) remotely with RPKI deployment (to ascertain issues of propagating validation states from border routers running IOS-XE, to iBGP peers running JunOS).

- Remotely supported Myanmar IX with ROV deployment on their route server.

- Remotely supported MYREN with their ROV deployment

- Presented on RPKI at the ICANN-APAC TWNIC Engagement Forum in Taiwan.

- Discussions on RPKI deployment with IDNIC are ongoing.

- APNIC 48 focused on RPKI and ROV deployment: two dedicated RPKI conference sessions, an RPKI keynote presentation, a one-day RPKI Deployathon, an RPKI BoF and a ROA Signing Social.

- Started dropping RPKI invalid routes on the APNIC 48 conference network.

- Eighteen RPKI-tagged posts published on the APNIC Blog in 2019.

- Presented RPKI training at VNIX-NOG in conjunction with JPNIC.

- APNIC and zDNS continue to explore RPKI systems and developments. APNIC hosted a visit from Di Ma (zDNS principal researcher) to discuss validation systems and standards in RPKI.

2.2.4   IPv6

APNIC is supporting the following IPv6 initiatives:

- Seventeen IPv6 deployment workshops in 2019, including one webinar.

- Helped Bhutan Telecom and Tonga Cable resolve issues with IPv6 deployment, increasing Bhutan Telecom's IPv6 usage from 4% to 16%.

- IPv6 deployment sessions at APNIC conferences (with TWNIC's ongoing support). SK Telecom, Chunghwa Telecom, Tonga Communications Corporation (TCC), and Softbank presented on their IPv6 deployment activities during APNIC 47 and 48.

- Providing IPv6-only Wi-Fi during APNIC conferences.

- Forty-eight IPv6-tagged blog posts published.

- 'IPv6 Week' promotional activities during 3 to 7 June included six new IPv6 blog posts, social media promotion, and emails to encourage Members without an IPv6 allocation to obtain one.

- New IPv6 deployment success stories on TCC, IBM, SK Telecom, and China Cache have been published, with two additional IPv6 deployment success stories in production for a 2019 release.

- The ratio of APNIC Members holding IPv6 resources is 63.72%.

- Total IPv6 capability (as measured by APNIC Labs) in the APNIC region was 28.98%.

2.2.5   Network Operator Groups (NOGs)

APNIC supported the following NOGs with sponsorship (s), presentations (p) and programme committee (c) contributions during 2019 so far:

South Asia	South-East Asia	East Asia	Oceania
SANOG 33 spc	PhNOG 2019 sp	JANOG 43 s	NZNOG 2019 p
bdNOG 10 spc	ThaiNOG 2 sp	HKNOG 7.0 sp	PacNOG 24 s
btNOG 6 spc	KHNOG c	HKNOG 8.0 sp	
INNOG 2 spc	MMNOG c	TWNOG 3.0 spc	
SANOG 34 spc	MYNOG 8 spc	JANOG 44 sp	
LKNOG 3 spc	IDNOG 6 spc	mnNOG 1 pc	
	SGNOG 7 sp	TWNOG 4.0 c	
	PhNOG (July) pc		
	VNIX-NOG sp		

Table 14: NOGs Sponsored

Several new and re-formed NOGs have emerged in 2019:

- Mongolia NOG (mnNOG) 1 was held from 16 to 20 September (one-day conference, five-day workshop). APNIC was acknowledged as the only Founding-Partner for our role in helping set up the NOG and being a part of both the PC and coordination team, in addition to NOG sponsorship.

- Based on discussions to revive khNOG since March, there will be a one-day conference on 4 November. APNIC will sponsor the event, in addition to hosting the mailing list and supporting the coordination team and program committee.

- Based on discussions since May this year, Myanmar NOG dates have been confirmed (13-17 Jan 2020). APNIC is hosting the mailing list and the submission system, and is also supporting the program committee.

- Discussions to establish a Lao NOG have been ongoing since June.

2.2.6   Security

APNIC participated at several security-related engagements so far in 2019:

▪ Organized the session 'Cooperating to Contain Security Threats' at APRICOT 2019, and collaborated with FIRST.org, KRCERT/CC and APCERT to organize APRICOT's one-day security track; participated in the Cybersecurity Regional Forum and the GFCE Triple-I Workshop.

▪ Two FIRST.org Board Meetings, in Estonia and Peru, and the FIRST Annual Conference in Scotland (marking the end of Adli Wahid's term as a FIRST Board Member after five years of service).

▪ Support for capacity building and training workshops in public safety and law enforcement, including Regional Prosecutors training in Taiwan, the International Symposium on Cybercrime in South Korea, Cyber Pasifika workshop in Fiji, Hong Kong Police Cyber Command course, and a session with INTERPOL in Singapore.

▪ Sponsorship for the RISE-HK Conference in Hong Kong, the Annual Global Honeynet Conference 2019 in Austria, Threat Con in Nepal, DragonCon 2019 in Hong Kong, MNSEC 2019 in Mongolia, National Cyber Security Week 2019 in Sri Lanka and 2019 Cyber Jawara in Indonesia.

▪ Published 80 security-tagged blog posts in 2019.

▪ Presented case studies from the APNIC community Honeynet Project with project partners at btNOG 6, IDNIC OPM and MNSEC 2019.

2.2.7   CERT/CSIRTs

APNIC has supported the following CERT-related activities in 2019:

▪ FIRST Security track at APRICOT 2019, TRANSITS-I workshops at APAN 47 and APAN 48, and APISC Annual CERT workshop in South Korea (organized by KISA).

▪ Regional CSIRT workshop in Samoa in May for 35 delegates from nine economies (Tonga, Vanuatu, PNG, Cook Islands, Solomon Islands, Kiribati, Tuvalu and Samoa), under an APNIC Foundation funded project to build cybersecurity capacity in the Pacific.

▪ Community Honeynet Project expanded with partners in Bhutan, Bangladesh, Malaysia, Samoa, Tonga and Indonesia, providing data for use by the DASH Network Security Product and for network security training and security engagement activities.

▪ CSIRT engagements and technical assistance in Tonga and Samoa in addition to the FIRST Regional Symposia in Fiji.

▪ Delivered a half-day workshop at the APCERT 2019 Conference in Singapore.

▪ Supported Bhutan CIRT Web Application Security workshop and MNCERT/CC Annual Security Conference (MNSEC 2019).

Projects

2.2.8   Network Security Product

This is a project to develop a prototype 'security dashboard' (DASH) that can support Members' security needs related to IP address holdings.

Status:

▪ DASH MVP developed and tested during APNIC 47. Implemented user experience and interface improvements based on feedback received.

▪ Implemented improvements to the frontend and backend to ensure reliability of the system. Updated authentication to use the APNIC SSO login.

- User interviews to understand motivations and behaviours were conducted during APNIC 48, leading to newly designed user flows with pain points identified and proposed next steps. This will inform further improvement of the product and implementation of new features.

- Drafted email and implemented mechanisms to measure success of the soft launch (Google Analytics, Usabilla and so forth), planned for the end of November.

2.2.9   Internet Directory and other information services

This is a project to continue improving information services about Internet number resources managed by APNIC, including information about how they are delegated and used.

Status:

- Internet Directory: released V2.1, which includes IPv6 deployment charts as web components (that can be embedded), comparison mode for IPv6 deployment charts, download of full Holders table and other improvements and fixes. Proposed alternatives for the Unique Value Proposition statement and ran user validation research during APNIC 48. Processed the outcomes from these user research activities and produced a report on the next steps.

- NetOX: deployed new widgets — CAIDA's AS Relationships widget, Points of Contact widget (consuming PoCs from whois and PeeringDB) and the IRR Explorer widget (consuming data from http://irrexplorer.nlnog.net/ on consistency among BGP routing status, IRR route objects and RPKI data).

- Online community platform: conducted user research activities to validate the problem hypothesis for a shared online platform for network operators. Processed the outcomes from these activities and produced a report, validated the problem hypothesis and explored alternatives for a solution. Performed a comparative analysis of platforms users mentioned during interviews, resulting in a list of features that will inform the development of an MVP.

- Other information services: made improvements to the backend of the RS Dashboard. Improved/expanded internal KPIs page.

2.2.10   Community sponsorship

In addition to 2019 NOG sponsorships (see 2.2.5), APNIC has committed to support these community events:

- APrIGF 2019, Russia

- AINTEC 2019, Thailand

- Pacific ICT Days and VanIGF, Vanuatu

- PKSIG, Pakistan

- inSIG, India

- NetThing, Australia

- NetHui, New Zealand

- Internet Week, Japan

- bdSIG 2019/BD-IGF, Bangladesh

APNIC is a paid member of APT, ITU, PTC and ISOC in 2019.

2.2.11   Fellowship program

APNIC 48 Fellowships opened for applications in May 2019, attracting 439 applications. Fifty-two fellows were selected from 20 economies, comprising 27 Professional Fellows, 21 Youth Fellows and four Returning Fellows. The number of Youth Fellows was the highest number ever selected. The gender split among the fellows was 50% female and 50% male.

2.2.12 Community participation

The following initiatives were completed to promote participation in major APNIC community activities:

- APRICOT 2019: regular email bulletins, social media promotion and advertising, blog posts; translated promotional emails to Members in Japan and China; worked with KISTI, KRNIC and KINX to distribute emails to Korean contacts; promotional slides in NOG and training presentations; 'Save the Date' cards distributed at NOG and technical events in the region.

- Policy: summaries of the policies being discussed at APNIC 47 and 48 (plus summary of results) translated into eight languages; blog posts pre- and post-SIG meeting; Facebook Live policy webinars pre-APNIC 47 and 48 attracted 851 unique views; invitations to Policy SIGs sent to all Members; mock Policy SIG for newcomers held at APNIC 48; policy engagement presentations delivered at bdNOG 10, SANOG 34, INNOG 2, and APIGA 2019.

- APNIC 48: regular email bulletins, social media promotion and advertising, blog posts; translated promotional emails to Members in Thailand; worked with THNIC to distribute emails to Thai contacts; promotional slides in NOG and training presentations; 'Save the Date' cards distributed at NOG and technical events in the region. Additional outreach to encourage youth participation is reported in section 2.2.17.

APNIC authors published 143 posts on the APNIC Blog (see section 1.2.4), with community engagement via APNIC's social media detailed below.

		Q1	Q2	Q3	Q4*
Facebook	Reach	1,087,340	499,871	395,398	84,385
	Likes	28,304	28,646	28,994	29,159
Twitter	Followers	9,840	10,173	10,433	10,610
	Engagement	9,704	10,523	15,411	3,106
YouTube	Views	13,714	6,930	10,674	3,319
	Minutes	95,413	44,427	72,048	25,698
Slideshare	Views	41,413	37,248	42,205	14,156
LinkedIn	Reach	27,347	23,560	33,114	9,900
	Followers	3,530	3,723	4,032	4,134

Table 15: Social Media summary

Cooperation SIG

- The theme of the Cooperation SIG meeting at APNIC 47 was 'Internet Content Blocking and Filtering – Challenges and Way Forward'.

- The Cooperation SIG Chair election was held at APNIC 47 on Monday, 25 February. Joy Chan was elected as the new Chair and will serve a two-year term.

- The theme of the Cooperation SIG meeting at APNIC 48 was 'Internet Jurisdiction'. Joy Chan chaired the session and was joined by four expert speakers who focused on cross-jurisdictional challenges for network operators.

NIR SIG

- The NIR SIG Chair election was held at APNIC 47 on Tuesday, 26 February. Billy Cheon was elected as the new Chair and will serve a two-year term.

- The NIR SIG Co-Chair election was held at APNIC 48 on Tuesday, 10 September. Zhen Yu assumed the role of Co-Chair for a new two-year term following the non-attendance of the two other nominated candidates.

2.2.13   Government and IGOs

- APNIC was invited to present about Internet operations at the ASEAN Regional Cyber Norms Workshop in Malaysia, which included 30+ government officials of different agencies dealing with cybersecurity in the ASEAN region.

- APNIC was offered a speaking slot and participated in the ITU Global Symposium for Regulators in Vanuatu, with 325 participants from 64 economies.

- The 1st APT Preparatory Group for WTSA-20 was held in Japan ahead of next year's ITU World Telecommunications Standardization Assembly (WTSA).

- APNIC attended the annual Singapore International Cyber Week and attended invite-only sessions for high-level governments in the region.

- APT PRFP-12 was hosted in Tonga and APNIC was invited to moderate a panel on 'Connectivity in the Pacific'. This high-level meeting included meetings with senior officials from the Pacific Islands.

- This year marks APNIC's 10th year anniversary engaging with the APEC TEL community on IPv6 deployment and cybersecurity. At TEL 60, APNIC highlighted the growing trend of IPv6 deployment across the APEC region and encouraged attention to IPv6 to be reflected in their new Strategic Action Plan 2021-2025.

- APNIC participated in the World Internet Conference in Wuzhen, China.

2.2.14   Internet governance

- APNIC attended APrIGF 2019 in Russia, with some staff participating remotely from APNIC's office. APNIC co-organized four workshop proposals and contributed actively in the conference.

- APNIC participated in VanIGF in Vanuatu, which ran parallel to Pacific ICT Days, the first local IGF event in Vanuatu.

- Sylvia Cadena was reappointed to the IGF MAG and Rajesh Chharia was appointed as new member. Both attended MAG meetings and Open Consultations in preparation of the 2019 IGF, to happen in November in Berlin.

- Paul Wilson has been nominated for the IGF MAG chair position and received support from both private and technical stakeholder groups.

- Pablo Hinojosa and Srinivas Chendi supported APIGA 2019 in Seoul, Korea. This is an onboarding initiative to young community members interested in Internet governance. Many APNIC fellows have been referred from APIGA.

- APNIC provided sponsorship for the fellowship program and participated at NetHui 2019, New Zealand's annual IGF initiative.

- This year the former auIGF was revived as an event called NetThing, led by a new multistakeholder steering committee. APNIC provided sponsorship and participated at the event.

2.2.15   Research & Education Networks

- APNIC conducted three tutorials and presented on RPKI deployment at APAN 47 in South Korea and worked with GEANT to deliver TRANSITS-I training for R&E CSIRT development under Asi@Connect funding. During APAN 47, Jamie Gillespie was appointed as Co-Chair for the APAN Security Working Group.

- For APAN 48 in Malaysia, in addition to sponsoring the event, APNIC conducted two tutorials and worked with GEANT again to deliver TRANSIT-I training. Peter Blee presented on the APNIC Academy at a Lightning Talks session, and Jamie assisted the APAN Security Working Group meeting as Co-Chair.

- Che-Hoo participated at the Joint AI3 & SOI Meeting in Keio University, Japan upon invitation by Prof Jun Murai, and engaged with participants from Japan and several universities and NRENs from South

East and South Asia. The APNIC Academy was the focus of discussion. APNIC was requested to host the next meeting in May 2020.

- Continued engagement with the R&E community to improve their education curriculum with APNIC training content. APNIC also continues to partner with various R&E organizations on training, under Asi@Connect and other funding sources.

- **Continued** supporting RENs and universities to join APNIC as Members to acquire portable IP addresses and ASNs.

Projects

2.2.16   Community Diversity

This project aims to measure the diversity (including gender, age and language) of community participation in APNIC events and activities. Activities completed to date include:

- Diversity measurements and potential data sources were identified and changes to APNIC forms have been implemented where necessary to begin data collection.

- Completed preliminary data analysis of the APNIC 48 attendee diversity information. This information will be used as part of the development of a diversity profile in 2020 when a larger data sample is available.

2.2.17   Encouraging newcomers

This project aims to encourage new participants in the APNIC community; in particular, the next generation of network engineers. Activities completed to date include:

- Promotion of youth fellowships to the community via social media, mailing lists and the APNIC Blog.

- Promotion of APNIC 48 to technical faculties at universities in Chiang Mai and Bangkok via direct mail and Facebook groups using translated content. An APNIC 48 landing page for Thai students was created and deployed in Thai.

- Student pricing for APNIC 48 was reviewed and lowered for the conference.

- Arranged, scheduled and promoted a ‘NextGen Careers BoF’ at APNIC 48, focusing on career advice / insights from industry leaders. Preparations to repeat the BoF at APRICOT 2020 began in October, with session planning with community organizers and promotion to students underway.

- Reviewed and updated script for a new version of ‘What is APNIC’ video.

2.3   APNIC Foundation

2.3.1   Administrative support

- APNIC continues to provide administrative support (financial services, travel, logistical and other) for the Foundation, in addition to working on implementation of several projects (documented below), mostly on a cost-recovery basis.

- The second meeting of the Foundation's Board was held on Saturday, 4 May, in Singapore. All five Board members attended: Sylvia Sumarlin, Edward Tian (remotely), Sharad Sanghi, and new members Danish Lakhani and Michael Malone.

- In October, Jun Murai — widely recognized as the 'father of the Internet in Japan' — was successfully appointed as the sixth member of the Foundation Board. One board position remains vacant.

- The Foundation's second annual report including audited financial statements was released in September and posted on the Foundation website.

- The Foundation website added Chinese and Japanese language introductions.

2.3.2   ISIF Asia

Grants and awards

- The 2019 Call for Proposals opened on 1 April and closed on 21 June. There were 70 applications received from 17 economies. The Selection Committee decided not to allocate the ISIF Award for 2019, and to redirect the funds to support an additional grant.

- The Internet for Development category focused on power solutions for Internet infrastructure and awarded a total of USD 40,000 for two grants. The projects selected were:

  - Rural Broadband, AirJaldi (India). Telemetering the tell-tale signs of power issues of wireless Internet relays.

  - Royal Melbourne Institute of Technology, RMIT University (Australia). Network remote powering through quasi-passive optical nodes.

- The Network Operations Research category focused on security and reliability and awarded a total of USD 80,000 for four grants.

  - Curtin University (Australia). Modelling and identifying IP address space fragmentation pressure points.

  - Swiss German University, SGU, Badan Siber & Sandi Negara; BSSN and Indonesia Honeynet Project, IHP. (Indonesia). Honeynet threat sharing platform.

  - University of Malaya (Malaysia). Implementation and utilities of RDAP for wider usability among Internet stakeholders.

  - University of Auckland (New Zealand). Network coding over satellite links: scheduling redundancy for better goodput.

- Funding for the 2019 round of grants was provided by APNIC.

- Published technical reports from four grant recipients during this period on the ISIF Asia website and promoted the outcomes and results through the APNIC and ISIF Asia blogs.

  - Yayasan Noken Baliem Mandiri (Indonesia). Community LTE in Papua.

  - ZDNS Labs (China). RPKI monitor and visualizer for detecting and alerting for RPKI errors.

  - Victoria University of Wellington (New Zealand). Scalable traffic classification in Internet of Things (IoT) for network anomaly detection.

  - The University of Newcastle (Australia). Software Defined Networks based security architecture for IoT infrastructures.

2.3.3   Foundation activities

The following Foundation projects and activities have been completed during 2019:

- The second community consultation (14th engagement) of the PNG training project, with an additional AUD 140,000 in funding was confirmed.

- The third and final regional workshop for the Pacific CERT project held in Samoa in May, with an additional AUD 21,000 in funding was confirmed. The final project report was successfully submitted to the Australian Department of Foreign Affairs and Trade (DFAT).

- The final workshop for the Pacific LEA project was completed. The final project report was submitted to DFAT.

▪ The PNG training project completed 10 engagements for the year including three in the northern provincial city of Lae. This included seven workshops, one technical assistance for the local IXP and two community consultations. The project completed 14 engagements in 2019.

▪ Final preparations were completed to provide equipment support for PNGCERT.

▪ A new AUD 500,000 Pacific training project — funded by DFAT — was a launched in October with community consultations in the Solomon Islands, Tonga, Vanuatu and Fiji. The consultations will play a key role in the development in 2020 of training plans for each economy.

▪ The APNIC training team completed two technical training workshops in Myanmar, fully sponsored by Japan's KDDI Foundation and initiated by the APNIC Foundation.

3   Global Cooperation

3.1   Global Technical Community

3.1.1   RIR collaboration

The following RIR collaborations have taken place in 2019:

- Participation in LACNIC 31, ARIN 43, RIPE 78 and AFRINIC 30.

- In May, the NRO-EC had a face-to-face meeting after RIPE 78, together with the RIR Legal group.

- APNIC worked actively to conclude the ASO Review, working with the RIR Legal group to plan the implementation of review recommendations 1 to 17.

- In July, APNIC hosted Rehan Muhammad from the RIPE NCC, for work on registry software architecture and operations.

- Also, in July, APNIC hosted Mathias Ferre from LACNIC, to collaborate on business intelligence analysis and database management.

- Sunny Chendi took part in an RIR policy managers meeting at LACNIC 31 and participated in a staff exchange at LACNIC.

- At IETF 105 Montreal, APNIC presented on RDAP consistency with a draft RIR RDAP profile document and released a conformance checker suite on GIT to the other RIRs.

- Technical liaison from APNIC was added to the RSCG, on behalf of the ECG.

- A new joint NRO incident response team has been established — Public Safety Coordination Group (PSCG). They met for the first time in the ICANN 66 meeting in Montreal.

- Participation at LACNIC 32, ARIN 44, and RIPE 79.

- At LACNIC 32, the NRO Resource Services Coordination Group (RSCG) met to discuss inter-RIR transfers, the ITHI project measures and their 2020 workplan. The HR RIR executives also met to share information.

- Sofia Silva Berenguer took part in a staff exchange at RIPE, working closely on RIPEStat and APNIC's NetOX.

- Two executives from APNIC collaborated with AFRINIC in Mauritius to discuss business continuity, risk assessment and talent management.

3.1.2   I* collaboration

- APNIC participated at ICANN 64 in Kobe, Japan, and a joint meeting between the EC and ICANN Board members.

- APNIC participated at ICANN 65 in Marrakech, Morocco, and in the NRO CCG meeting that was held concurrently.

3.2   Inter-governmental outreach

3.2.1   Inter-governmental engagement

- Sylvia Cadena attended the Internet and Jurisdiction Policy Network 3rd Global Conference.

- ISIF again received a WSIS Champion award, as one of 90 ICT-related projects implementing the WSIS Action Lines around the world.

- Klée Aiken participated at the GFCE Annual Meeting in Addis Ababa, Ethiopia, as a member of their advisory board. Klée facilitated the Task Force on Cyber Incident Management and participated in the Global Commission on the Stability of Cyberspace meeting.

3.3   Global Research

3.3.1   Global research and measurements

Research activities conducted by Geoff Huston and Joao Damas during this period include:

- DNS related research with ICANN (contract extended to 2019).
- Ongoing activity with the ICANN SSAC and RSSAC Committees.
- Investigation of DNSSEC and its role in NSEC caching.
- Open resolver collaboration with Cloudflare.
- ITHI DNS measurement (funded by ICANN).
- Studies of DNS resolver concentration.
- Development of BGP update analyser.

3.3.2   Research presentations

- Why is Securing the Routing System so Damn Difficult? (NZNOG 2019)
- What's the Time? (SANOG 33, APRICOT 2019)
- Securing the Routing System (Keynote, SANOG 33)
- BGP in 2019 (APRICOT 2019)
- DNS Privacy (APRICOT 2019, MMNOG)
- Why is Internet Security so hard? (APNIC 47)
- Unadvertised Addresses in the APNIC Registry (APNIC 47)
- IPv6 Performance Measurement (IETF 104)
- Why DNSSEC (DNS Security Session)
- APNIC's Security Activities (ICANN APAC TWNIC Engagement Forum)
- TCP and BBR (Tech Presentation, AusNOG 2019)
- What part of "NO" is so hard to understand? (DNS OARC 30)
- That KSK Roll (RIPE 78)
- IPv6 Reliability Measurements (RIPE 78)
- BGP in 2018 (RIPE 78, IETF 105)
- 30 years of BGP (IAB Design Expectations vs Deployment Workshop, RIPE 79)
- The Rise (and Fall) of the Internet (Henry Sutton Oration, Telecommunications Society of Australia)
- Detecting BGP Anomalies (APNIC 48, ESNOG 24)
- IPv6 Reliability and Performance Measurements (APNIC 48)
- The Resolvers We Use (ESNOG 24, RIPE 79)

4   Corporate

4.1   Human Resource Management

4.1.1   Recruitment

See separate Human Resources report.

4.1.2   Product Management

The implementation of Product Management methodology is proceeding in 2019 with the formation of dedicated product teams responsible for specific APNIC products and services.

- Created three cross-functional product teams, dedicated to Registry, Membership and Information Services, focused on delivering value to our Members and broader community.
- Developers are using Agile Scrum as our standard methodology.
- Created three support teams for web development, platform and devops support.
- During Q2, extended teams were selected and relocated, and training on Product Management and Agile development principles was provided. Ongoing coaching continues.
- Delivered company-wide training on Product Management principles.

4.1.3   Staff retention and development

Continued professional development, with technical certification and leadership development prioritized. A staff conference was held in August 2019 with a focus on strategic planning for the 2020-2023 period.

Projects

4.1.4   Onboarding development

Onboarding processes have been extended to cover a more diverse and distributed workforce (including interns and Community Trainers) to improve knowledge and awareness of APNIC.

Status:

- Concise policy handbook issued.
- Online training in place to provide both compliance and professional development training.

4.2 Financial and Administration

4.2.1 Financial management

- The routine external audit of APNIC's financial accounts for 2018 was completed in early February, without any substantial findings.

- As required under APNIC's five-year audit rotation policy, the APNIC EC approved the appointment of Deloitte from December 2019.

- To improve operational efficiency, APNIC's internal financial delegation policy has been updated and implemented across all systems, procedures, and policies.

Number of	Oct-19	Avg/Mnth	YTD	2018	2017	2016	2015
Phone Calls (Outward)	219	234	2,336	2,556	3,253	3,500	
RTs Received (Total)	2,274	2,073	20,725	26,915	25,444	21,396	23275
E-Bill	1,647	1,473	14,728	19,406	16,379	15,331	19603
Finance	236	235	2,352	1,894	1,385	1,328	1332
Accounts Payable	131	128	1,277	1,153	1,241	1,261	841
Inward Payment	260	237	2,368	2,516	2,319	2,061	3
Accounts Receivable							
APNIC Member Count	44	50	7,657	7,162	6,547	5,994	5,268
New Members	65	68	675	817	844	1,030	940
New Non-members	1	1	11	16	11	18	24
Receipts Processed	860	792	7,917	8,786	8,061	7,514	6,645
Invoices issued	860	782	7,821	8,897	8,264	7,537	7,271
Credit notes issued	33	30	295	401	550	529	575
Accounts Closed	24	22	221	235	332	322	358
Closure Notice sent	105	90	903	948	994	945	900
Reactivation Members	3	2	23	23	31	45	51
Reactivation fee waived	1	0	2	2	2	8	6
Refund Members	7	5	49	93	73	68	46
Accounts Payable							
Asset Created	7	10	103	164	260	189	156
Asset Disposal	-	3	27	84	76	127	147
PO created by Finance	52	42	423	544	488	213	209
PO Billed	336	216	2,159	2,005	1,957	1,947	1,980
Supplier EFT Payment	76	83	832	880	932	891	946
Reimburse Payment	56	40	404	476	429	386	388
Reimburse Transaction	324	240	2,400	2,080	2,088	1,912	2,322
Journals processed	89	83	827	1,080	833	888	1,005
Cash Advance Request	1	2	17	28	21	18	28
Vendor Request	10	15	148	78	97	141	431
Foundation Support	157	138	1,380	3,217	2,454	1,046	829
NRO Support	27	17	174	289	756	537	609

Table 16: Finance KPI summary

4.2.2   Office management

The office team continues to actively manage office space, facilities and supplies. Several small renovations were completed in 2019 (see 4.4.1 below)

4.2.3   Travel management

The Business Team is working on a trial basis with Egencia to provide APNIC staff a self-travel booking system.

Travel Statistics*

	YTD OCT 2019	YTD OCT 2018	Change %
Travel Booked			
Domestic	66	54	22%
International	320	286	12%
	386	340	14%

*Booked through APNIC's Travel Management Company, excludes external bookings

Figure 10: Travel statistics

Projects

4.2.4   Enhancing Member payment facilities

This is a project to provide efficient ways for account holders to pay their fees by increasing the number of payment options available.

Status:

- Western Union Corporate, currently used for outgoing payments, is being trialled as a payment method for Members (allowing Members to pay their APNIC fees in local currency via credit card or EFT transactions). The Finance Team will continue testing for the remainder of 2019.

- Online partial payment options allow Members to split credit card payments on the APNIC website. The payer will be able to split the invoice into small amounts (minimum AUD 100). The project is in the final testing stage, and implementation is scheduled for 2020.

4.2.5   New expense management tool (new project)

- Expensify was implemented on 1 September 2019, with the application integrated with the ERP system. All expense claims of APNIC employees, SIG chairs and NRO NC members are now processed in the new system. EC members will start using Expensify from Jan 2020.

- Implemented a new streamlined approach to travel allowances.

4.3   Legal and Governance

4.3.1   Legal counsel and business advisors

- APNIC's insurance policies were reviewed and renewed in March.

- The agreement with International SOS for travel support is currently under renegotiation.

- APNIC will complete a routine review of practices and procedures for personal data collection in Q4, to ensure ongoing compliance with privacy principles.

4.3.2   Workplace health and safety

Please refer to the HR report.

4.4   Facilities

4.4.1   Building and office facilities

- During 2019, the front entry stairs to the APNIC office were renovated and changes to the fit out of the bathrooms were completed.

- The workstation configuration was changed to accommodate the relocation of the Product Management teams.

- The APNIC office security system was replaced in May.

- The wall entry to the APNIC carpark was partly demolished to improve visibility for exiting vehicles and pedestrians.

Appendix A

A-1   Community engagement summary
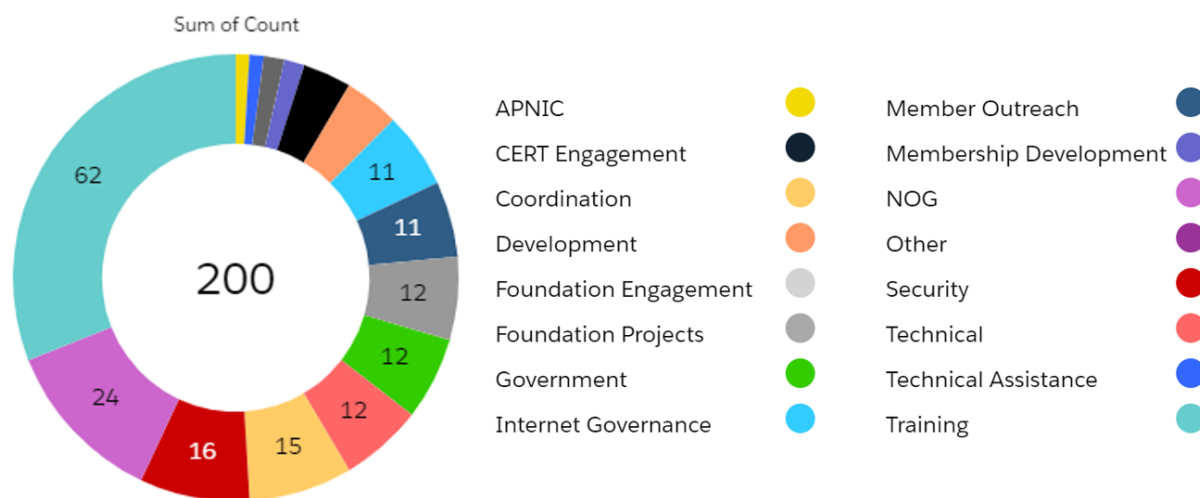
Figure 11: Engagement summary by type
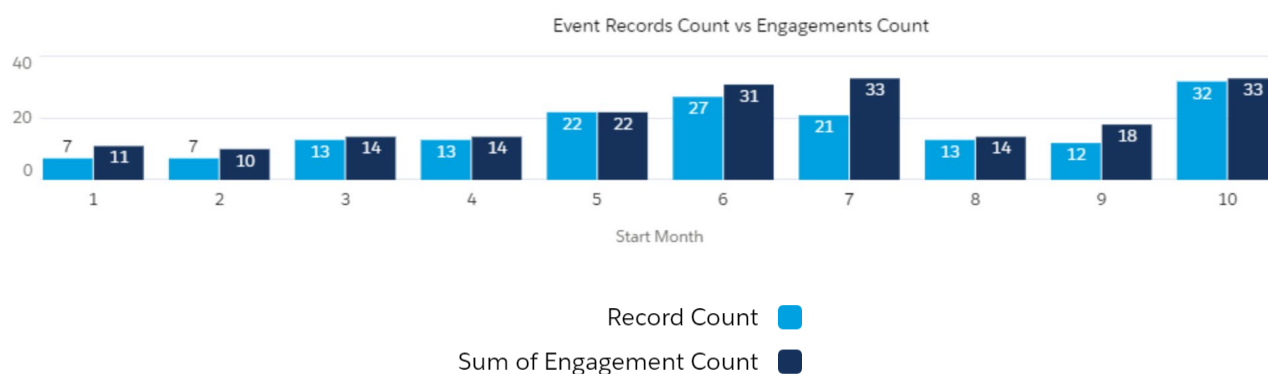
Figure 12: Engagement summary by month

A-2   Events attended Jan – Oct 2019

Month	Event	#	City	CC
Jan	SANOG 33	5	Thimphu	BT
Jan	CAS 25th Anniversary/Member visits	3	Beijing	CN
Jan	Foundation Meetings - Hong Kong	1	Hong Kong	HK
Jan	Linuxconf	4	Christchurch	NZ
Jan	FIRST Board Meeting	1	Talinn	EE
Jan	ELT Quarterly Strategic Meeting	1	Brisbane	AU
Jan	NZNOG 2019	5	Napier	NZ
Jan	1st F2F 2019 Open Consultation and MAG meeting (IGF)	1	Geneva	CH
Jan	AITI SMART Future Forum	1	Brunei	BN
Feb	Cyber Safety Pasifika - Tier 2 Course	1	Nadi	FJ
Feb	Site Visit	1	Brisbane	AU
Feb	Microsoft Ignite	1	Sydney	AU
Feb	RPKI Operational Roundtable 2019 - Cloudflare HQ	2	San Francisco	US
Feb	APAN 47	5	Daejeon	KR
Feb	APRICOT 2019/ APNIC 47	50	Daejeon	KR
Feb	NANOG 75	3	San Francisco	US
Feb	Australasian Aid Conference	2	Canberra	AU
Mar	HKNOG 7.0	2	Hong Kong	HK
Mar	Foundation Meetings - Tokyo	1	Tokyo	JP
Mar	PhNOG 2019	2	Cebu	PH
Mar	Registration Services Coordination Group (RSCG) f2f Meeting	2	Seoul	KR
Mar	Foundation Meetings - Hong Kong	1	Hong Kong	HK
Mar	ICANN 64	4	Kobe	JP
Mar	APNIC Japan's Site Upgrade	2	Tokyo	JP
Mar	Network Security workshop	2	Manila	PH
Mar	Digital ASEAN Workshop	1	Singapore	SG
Mar	HKPF Cyber Command Course	1	Hong Kong	HK
Mar	LaoCERT Engagement	1	Vientienne	LA
Mar	IETF 104	4	Prague	CZ
Mar	Network Security and Packet Analysis workshop	2	Phnom Penh	KH
Mar	Passive and Active Measurement (PAM) 2019 Conference	1	Puerto Varas	CL
Apr	APRICOT2020/APNIC49 Site visit - Melbourne	2	melbourne	AU
Apr	SuiteWorld 2019	2	Las Vegas	US
Apr	PNGTRAINING - Community Consultation and Project Evaluation	2	Port Moresby	PG
Apr	PCTA Convention 2019	1	Pasay City, Manila	PH
Apr	GFCE AB & Working Group Meetings	1	The Hague	NL
Apr	Cyber Security Regional Forum	1	Sydney	AU
Apr	ARIN 43	2	Bridgetown	BB
Apr	PACLEA - Cyber Safety Pasifika Tier 2 Course	1	Nadi	FJ
Apr	IPv4/IPv6 BGP Routing	2	Selangor	MY
Apr	FIRST Board Meeting - Peru	1	Lima	PE

Apr	WSIS Forum 2019 and 2nd F2F MAG Meeting	1	Geneva	CH
Apr	PITA 23rd AGM & Annual Conference	3	Nadi	FJ
Apr	CIPD Asia course HR Business Partner	1	Singapore	SG
Apr	ICANN APAC-TWNIC Engagement Forum	2	Taipei	TW
Apr	US DoJ (OPDAT) for Prosecutors and Judges LEA Training	1	Penang	MY
Apr	bdNOG10	4	Chittagong	BD
Apr	IPv6 Deployment workshop - bdNOG	3	Chittagong	BD
May	Foundation meeting - Singapore	1	Singapore	SG
May	EC Induction	4	Beijing	CN
May	MMIX Peering Forum	1	Yangon	MM
May	Foundation Board meeting	5	Singapore	SG
May	Foundation meetings - Hong Kong	1	Hong Kong	HK
May	LACNIC 31	5	Punta Cana	DO
May	Internet Governance Stakeholder Roundtable	1	Canberra	AU
May	BKNIX Peering Forum 2019	5	Bangkok	TH
May	ThaiNOG 2	4	Bangkok	TH
May	Site Visit	3	Chiang Mai	TH
May	ICANN DNS Symposium	4	Bangkok	TH
May	30th DNS-OARC Workshop	3	Bangkok	TH
May	Foundation Planning Office Visit	1	Brisbane	AU
May	PACCERT – Regional Workshop 3	1	Apia	WS
May	LEA Training with Prosecutors	1	Taipei	TW
May	LACNIC Office Visit	1	Montevideo	UY
May	RISE-HK	1	Hong Kong	HK
May	ELT Quarterly Strategic Meeting	2	Brisbane	AU
May	Stockholm Internet Forum	1	Stockholm	SE
May	Pacific ICT Days / VanIGF	1	Port Vila	VU
May	RIPE 78	8	Reykjavik	IS
May	KISA Member Visit	1	Naju	KR
May	IMEX Conference	1	Frankfurt	DE
May	International Symposium on Cybercrime Response (ISCR) 2019	1	Seoul	KR
May	IPv6 Deployment workshop - TWNIC	2	Taipei	TW
May	PNGTRAINING - Lae event planning	1	Lea	PG
May	AusCERT 2019 Conference	3	Gold Coast	AU
Jun	btNOG 6	2	Paro	BT
Jun	Information Security-Intermediate workshop	2	Port Vila	VU
Jun	Internet & Jurisdiction Policy Network 3rd Global Conference	1	Berlin	DE
Jun	EC Retreat	8	Brisbane	AU
Jun	Internet Architecture Board (IAB) DEDR Workshop	1	Helsinki	FI
Jun	The Future of Digital Government	1	Incheon	KR
Jun	3rd MAG IGF meeting	1	Berlin	DE
Jun	IPv6 Deployment workshop	2	Kolkata	IN
Jun	AIS'19 (with AFRINIC 30)	0	Kampala	UG
Jun	Foundation meetings - Berlin	1	Berlin	DE
Jun	RightsCon Tunis	1	Tunis	TN

Jun	APT-WTSA20-1 / ASTAP-31	1	Tokyo	JP
Jun	ASEAN Regional Cyber Norms Workshop	1	Kuala Lumpur	MY
Jun	INTERPOL Pre-operational Meeting on Cryptojacking	1	Singapore	SG
Jun	ISIFGENDER – Evaluation & Communication workshop at CHC	0	Phnom Penh	KH
Jun	AFRINIC 30	5	Kampala	UG
Jun	FIRST Annual Conference	2	Edinburgh	GB
Jun	Network Security workshop	2	Vientiane	LA
Jun	ConnecTechAsia 2019	4	Singapore	SG
Jun	IPv6 Deployment workshop	2	Beijing	CN
Jun	Henry Sutton Oration 2019	1	Melbourne	AU
Jun	32nd TWNIC IP OPM	3	Taipei	TW
Jun	TWNOG 3.0	3	Taipei	TW
Jun	PacNOG 24	6	Apia	WS
Jun	ICANN 65	4	Marrakech	MA
Jun	Meeting with RIPE NCC Legal Counsel	0	Amsterdam	NL
Jun	AVPN Conference 2019	2	Singapore	SG
Jun	IDNIC OPM/APJII National Meeting 2019	1	Medan	ID
Jun	LAO ICT EXPO 2019	2	Vientiane	LA
Jun	Network Monitoring and Packet Analysis workshop	1	Brisbane	AU
Jun	CNNIC OPM (China Internet Resource Conference) and IPv6 Training	1	Beijing	CN
Jul	INNOG 2	4	New Delhi	IN
Jul	Member visits - BN	2	Brunei	BN
Jul	IXP workshop - INNOG 2	2	New Delhi	IN
Jul	IPv6 Deployment workshop - INNOG 2	2	New Delhi	IN
Jul	PNGTRAINING – Information Security	2	Port Moresby	PG
Jul	MYNOG 8	3	Kuala Lumpur	MY
Jul	APISC Annual CERT Workshop (KISA)	1	Seoul	KR
Jul	ISP Essentials workshop	2	Manila	PH
Jul	Member Visits - TL	1	Dili	TL
Jul	Global Symposium for Regulators (GSR) 2019	1	Port Vila	VU
Jul	Coaching and Leadership Workshop	1	Melbourne	AU
Jul	SGNOG 7	2	Singapore	SG
Jul	APrIGF 2019	2	Vladivostok	RU
Jul	APRICOT 2021 Site Visit	1	Manila	PH
Jul	IPv4/IPv6 BGP Routing workshop	3	Male	MV
Jul	IPv6 Deployment workshop	2	Karachi	PK
Jul	PhNOG 2019 (July)	3	Manila	PH
Jul	APNIC 50 site visits	3	Dhaka	BD
Jul	IETF 105	5	Montreal	CA
Jul	IDNOG 6	2	Jakarta	ID
Jul	APAN 48	4	Kuala Lumpur	MY
Jul	SDN tutorial - APAN 48	1	Putrajaya	MY
Jul	Salesforce Training	1	Gold Coast	AU
Jul	JANOG 44	2	Kobe	JP

Jul	Hands-On Tutorial on ROA/ROV for Secure Routing - APAN 48	1	Putrajaya	MY
Jul	Development Meetings with SGNOG & Higher Ed People	2	Singapore	SG
Jul	6th IRINN OPM 2019	2	Kolkata	IN
Jul	SANOG 34	7	Kolkata	IN
Aug	Network Security workshop - SANOG 34	1	Kolkata	IN
Aug	Introduction to Routing workshop - SANOG 34	2	Kolkata	IN
Aug	JICA cybersecurity project planning meetings	2	Jakarta	ID
Aug	IPv6 Deployment - APT	2	Nay Pyi Taw	MM
Aug	APIGA 2019	2	Seoul	KR
Aug	Network Security and Advanced Routing workshop	2	Dili	TL
Aug	US DoJ LEA Training for Prosecutors (VN)	2	Ho Chi Minh	VN
Aug	IPv6 Deployment workshop	2	Vientiane	LA
Aug	Networking Essentials workshop	2	Nauru	NR
Aug	PNGTRAINING - IXP engagement and technical assistance for 2019	1	Port Moresby	PG
Aug	BtCIRT Web Application Security Workshop	1	Paro	BT
Aug	RPKI workshop - VNiXNOG	2	Nha Trang	VN
Aug	VNIX-NOG 2019	4	Nha Trang	VN
Aug	3rd AP Information Superhighway (AP-IS) Steering Committee 2019	1	Bangkok	TH
Aug	PNGTRAINING – Information Security	2	Lae	PG
Sep	APNIC 48	45	Chiang Mai	TH
Sep	IPv6 Deployment workshop - APNIC 48	3	Chiang Mai	TH
Sep	Network Security workshop - APNIC 48	6	Chiang Mai	TH
Sep	Introduction to SDN workshop - APNIC 48	3	Chiang Mai	TH
Sep	Advanced BGP plus RPKI Deployathon workshop - APNIC 48	3	Chiang Mai	TH
Sep	AusNOG 2019	4	Melbourne	AU
Sep	HKNOG 8.0	1	Wan Chai	HK
Sep	PNGTRAINING - IXP and Routing workshop	2	Port Moresby	PG
Sep	MNNOG 1	5	Ulaanbaatar	MN
Sep	Member visit - Telkomsel	2	Jakarta	ID
Sep	19th ITCN Asia and Telecom Conference and Expo	2	Karachi	PK
Sep	Network Security & Packet Analysis workshop - MNNOG	1	Ulaanbaatar	MN
Sep	Annual SSAC (Security & Stability Advisory Committee) Workshop	1	Los Angeles	US
Sep	Network Security workshop	2	Macao	MO
Sep	Introduction to Security Incident Response Teams	2	Macao	MO
Sep	APCERT Annual Conference & AGM	3	Singapore	SG
Sep	Member Visits - MV	2	Male	MV
Oct	IPv6 Deployment workshop	2	Bandar Seri Begawan	BN
Oct	SICW 2019	1	Singapore	SG
Oct	APT PRFP-12	2	Tonga	TO
Oct	LKNOG 3	3	Colombo	LK
Oct	SDN tutorial - LKNOG	1	Colombo	LK
Oct	NetHui 2019	2	Wellington	NZ
Oct	RPKI tutorial - LKNOG	1	Colombo	LK
Oct	MNSEC 2019	1	Ulaanbaatar	MN

Oct	RSCG F2F Meeting (LACNIC 32)	1	Panama City	PA
Oct	Member Visits - IN	2	Hyderabad	IN
Oct	Information Security workshop	2	Yangon	MM
Oct	GFCE Annual Meeting 2019	1	Addis Ababa	ET
Oct	LACNIC 32	3	Panama City	PA
Oct	IPv6 Deployment workshop	2	Puchong	MY
Oct	7th EUROPOL-INTERPOL Cybercrime Conference	1	Hague	NL
Oct	ESNOG 2019	1	Barcelona	ES
Oct	APEC TEL 60	2	Seoul	KR
Oct	PNGTRAINING - Advanced Routing	2	Port Moresby	PG
Oct	CERT Tonga Workshop and Engagement	1	Nuku'alofa	TO
Oct	RIPE 79	6	Rotterdam	NL
Oct	Introduction to SDN workshop	2	Colombo	LK
Oct	World Internet Conference (Wuzhen Summit)	4	Wuzhen	CN
Oct	PNGTRAINING - Routing	1	Lae	PG
Oct	ACM Internet Measurement Conference 2019	1	Amsterdam	NL
Oct	GNTC Global Network Technology Conference 2019	1	Nanjing	CN
Oct	The 50th AI3 & SOI Asia Joint Meeting (2019 FALL)	1	Tokyo	JP
Oct	CERT Samoa Planning / Discussion	1	Apia	WS
Oct	NANOG 77	2	Austin	US
Oct	NetThing 2019	8	Sydney	AU
Oct	PACTRAINING - Community Consultation 1	3	Honiara	SB
Oct	ARIN 44	3	Austin	US
Oct	DNS-OARC 31	1	Austin	US
Oct	Network Monitoring and Packet Analysis	1	Honiara	SB

Foundation update

Contents

1. Funded projects

2. New funding proposals

Project update (1)

Project: PNG training (start: 07/18; end: 03/20)

Donors: Asia Foundation (USA); DFAT (Australia); MFAT (New Zealand)

Economy: Papua New Guinea

Funding: USD 343,323. USD 108,408 in additional funding from Australia in 2019

Impact

20 community engagements so far including workshops, technical assistance and consultations (since August 2018)

Project update (2)

Project: PNGCERT support (start: 11/18; end: 3/20)

Donor: DFAT (Australia)

Economy: Papua New Guinea

Funding: USD 56,506

Impact

Provision of equipment to PNGCERT

Project update (3)

Project: Pacific technical training (start: 9/19; end 12/20)

Donor: DFAT

Economies: Fiji, Solomons, Tonga and Vanuatu

Funding: USD 336,000

First community consultations held in Solomons, Tonga and Fiji

Impact

Technical training and assistance in the Pacific

Project update (4)

Project: Myanmar university network training

(start: 1/19; end 12/19)

Donor: KDDI Foundation (Japan)

Economy: Myanmar

Funding: USD 29,144

Full cost recovery for APNIC for two workshops and two trainers

ISIF Asia

- 11th year of operation

- USD 120,000 allocated via six grants to five economies

- Thanks to the EC for your continuing support

- Grants in 2020 will focus on network operations

Funding to date*

Year	Donor	Project	Amount (USD)
2019-2020	Australian Department Of Foreign Affairs and Trade (DFAT)	Pacific technical training	336,000
2019	APNIC	ISIF Asia	115,000
2019	DFAT	PNG Training	100,408
2019	KDDI Foundation (Japan)	Myanmar university training	29,144
Total 2019			601,703

* Funding in red is sent directly to APNIC

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Funding to date

Year	Donor	Project	Amount (USD)
2018	The Asia Foundation (USA), New Zealand Ministry of Foreign Affairs and Trade and DFAT	PNG training, IXP and CERT	343,354
2018	DFAT	Pacific LEA training	81,486
2018	DFAT	PNG CERT	56,506
2018	DFAT	Pacific CERT (2nd Phase)	77,126
2018	APNIC	ISIF Asia	118,410
2018	APNIC	ISIF Asia Remain Fund	54,281
Total 2018			731,162

Funding to date

Year	Donor	Project	Amount (USD)
2017	DFAT	Pacific CERT (1st phase)	73,819
2017	APNIC	ISIF Asia	122,800
2017	IDRC - Canada	ISIF Asia	79,376
2017	ISOC (USA)	ISIF Asia	33,333
Total 2017			309,328
Grand Total			1,642,193

Thanks

APNIC FOUNDATION

Finance Presentation APNIC EC Meeting

EC Meeting - Taipei

Dec 2019

APNIC

Financial Performance

Year to date Oct 2019

APNIC

Financial Highlights YTD Oct 2019

- Equity Position increased by 10% to date in 2019

- Revenue tracking $193k above budget

- Expenses tracking $49k above budget

- Operating surplus forecast at $46k, $199k below budget

- Cash Flow - $590K to date in 2019

- Activity expenditure in line with budget estimates

- New Member Growth close to budget assumptions

All amounts in AUD – Australian Dollars

APNIC

Statement of Financial Position

Amount (AUD)	31/10/2019	Year End 2018	Change	% Change
ASSETS				
Total Current Assets	10,331,354	10,119,457	*211,896*	*2%*
Total Non-Current Assets	35,202,346	32,620,117	*2,582,230*	*8%*
TOTAL ASSETS	**45,533,700**	**42,739,574**	**2,794,126**	*7%*
LIABILITIES				
Total Current Liabilities	13,131,859	13,213,692	*-81,833*	*-1%*
Total Non-Current Liabilities	792,032	704,897	*87,136*	*12%*
TOTAL LIABILITIES	**13,923,891**	**13,918,589**	**5,303**	*0%*
NET ASSETS/ TOTAL EQUITY	**31,609,809**	**28,820,985**	**2,788,824**	*10%*

All amounts in AUD – Australian Dollars

APNIC

Statement of Financial Position

Net Equity position has increased by 10% ($2,789k) to 31 October 2019

- Current Assets increased by 2% ($212k)
  - Decrease in cash by $590k
  - Membership renewals effect on receivables increased by $551k
  - Expenses incurred for NRO to be recovered increased by $321k
  - Prepayment of deferred expenses and taxes increased by $86k

- Non-Current Assets increased by $2,582k
  - Reduction in Property & Equipment of 253k
  - Investment portfolio increased by $2,835k

All amounts in AUD – Australian Dollars

APNIC

Statement of Financial Position

- Current Liabilities decreased by 1% $82k
  - Staff Leave Provisions increased by $152k
  - Accounts Payable decreased by $644k
  - Unearned Revenue increased by $410k
    - Prepaid Sponsorship decreased by $10k
    - Members Prepaid fees increased by $420k

- Non-Current Liabilities increased by 12% $87k
    - Long Service Leave Provisions increased by $87k

All amounts in AUD – Australian Dollars

Financial Stability Measure

	YTD 2019	2018	2017	2016	2015
Total Equity (AUD)	$31,609,809	$28,820,985	$27,708,013	$25,647,507	$23,319,460
% Equity covered by Cash/ Cash Equivalents	112.5%	115.6%	111.0%	110.6%	121.6%
Forecast/ Actual Daily Operating Expenses (AUD)	$63,643	$58,122	$53,909	$49,430	$46,077
Number of Months of expenses covered by Equity	**16.33**	**16.30**	**16.90**	**17.01**	**16.64**

Target of 18 Months
- Based on Budget expenses
- Expected to improve over the year

All amounts in AUD – Australian Dollars

APNIC Capital Reserve
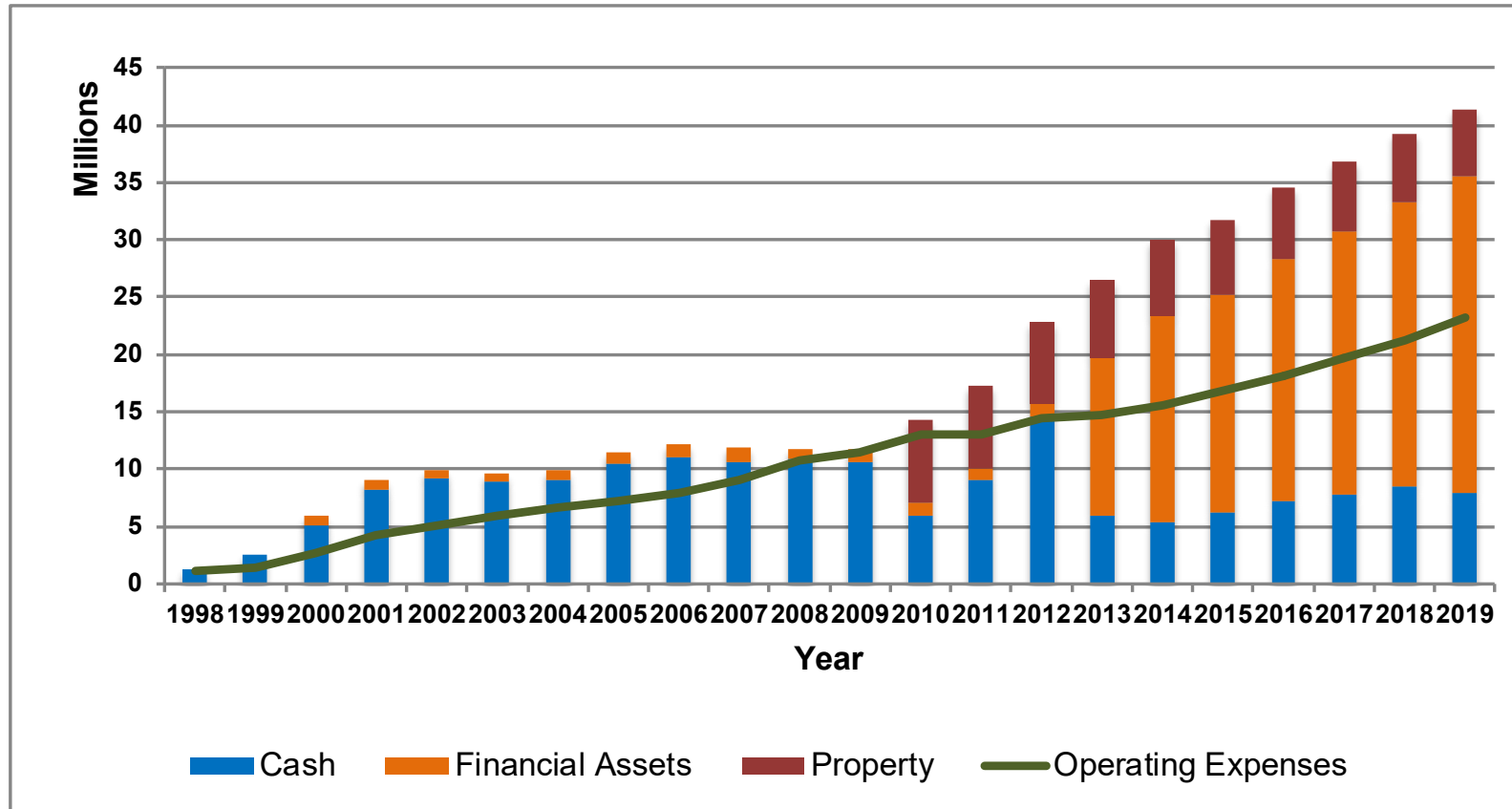
All amounts in AUD – Australian Dollars

Statement of Income – Revenue

Amount (AUD)	YTD Actual Oct 2019	YTD Actual Oct 2018	Variance %	Budget 2019	Forecast 2019	Budget Variance %
Membership fees	17,496,383	16,781,065	4%	20,959,575	21,052,094	0%
Non-members fees	214,249	208,683	3%	258,112	257,271	-0%
Reactivation fees	14,700	21,000	-30%	25,000	16,788	-33%
Sign-Up fees	282,000	282,000		351,000	338,000	-4%
Transfer fees	141,896	141,606	0%	185,000	172,726	-7%
Sundry income	371,210	425,418	-13%	345,892	420,782	22%
Operating Revenue	**18,520,437**	**17,859,771**	**4%**	**22,124,579**	**22,257,660**	**1%**
Investment income	934,872	799,866	17%	1,049,000	1,018,040	-3%
TOTAL REVENUE	**19,455,309**	**18,659,637**	**4%**	**23,173,579**	**23,275,700**	**0%**

All amounts in AUD – Australian Dollars

APNIC

Statement of Income – Revenue

- Operating Revenue tracking $193k above budget
- Fair value surplus on financial assets $2,177K

- Investment income $61k above budget

- Membership Fees $94k above budget
  - New Member growth continues below budget estimates
    - 674 Actual vs 690 Budget to 31 October
  - Offset by reduction in account closures
    - 180 Actual vs 320 Budget to 31 October
  - Impacting on Sign-Up fees $11k below budget
  - 23 Reactivations
  - Around 36.8% of new Members from LDC's compared to Budget 30%

- Transfers below budget by $12k

- Sundry income above budget by $4k
  - Training and workshop registration receipts
  - Sponsorship receipts for the APNIC conference
  - The provision of consulting services and Foundation support

Investment Fund Update

Market Value as at 31 October 2019

	Market Value
APNIC Portfolio	A$27,692,613

Performance as of 31 October 2019

APNIC Portfolio				
	Portfolio	Benchmark	Relative	CPI + 2.5%
Month	-0.24%	-0.15%	-0.09%	0.35%
3 Months	0.55%	0.68%	-0.13%	1.05%
Year To Date	11.32%	11.27%	0.05%	3.44%
1 Year	11.49%	11.36%	0.13%	4.20%
3 Years pa	6.52%	6.66%	-0.14%	4.37%
Since Inception pa	5.87%	6.03%	-0.16%	4.43%

* Performance is after fees but before franking

All amounts in AUD – Australian Dollars

Membership Tracking

Membership	Total Dec 2018	YTD New Oct 2019	Reactivation Adjustment	YTD Closed Oct 2019	YTD Size Change Oct 2019	Total Oct 2019	% Total
Extra Large	24	0	0	0	0	24	0%
Very Large	44	0	0	0	2	46	1%
Large	143	2	0	-2	1	144	2%
Medium	483	5	0	-12	16	492	7%
Small	3,376	170	1	-68	94	3,583	44%
Very Small	2,967	484	0	-76	-132	3,232	43%
Associate	125	13	0	-22	19	136	2%
TOTAL	7,162	674	1	-180	0	7,657	100%

Membership Growth

Membership Tracking – Closures by Economy

Economy	Market transfer	Membership transfer to NIR	Merger & Acquisition	Non Payment [Uncontactable]	Non Payment [Contactable]	Voluntary member closure	Grand Total	IPV4 Resources Reclaimed (/24's)	IPV6 Resources Reclaimed (/32's)	ASN Reclaimed
AF				2		1	3	8		3
AP	1		1	4	1	5	12	15	1	
AU	2		14	8	8	18	50	158	12	22
BD			1	3	4		8	24	3	7
CN	3			1		1	5	12	3	3
CX				1			1			
HK	4		2	3	1	18	28	19	5	7
ID		1					1			
IN		2	2	6		2	12	86	2	6
JP		1	7	8	1	1	18	24		
LA						1	1	1		1
MM						1	1	8		1
MN				1		1	2	2	0	2
MY			2	2		1	5	42	1	3
NC						1	1			
NP			1	1		1	3	8	2	2
NZ			2			5	7	3	1	4
PF			1				1			
PH				3		2	5	15	0	5
PK				2			2	5		2
SG				3	2	3	8	17	2	1
TH			2	1		2	5	14	0	3
TW		1					1			
Grand Total	10	5	35	49	17	64	180	461	32	72

Membership Tracking – Closures by Year Joined

Year Joined	Market transfer	Membership transfer to NIR	Merger & Acquisition	Non Payment [Uncontactable]	Non Payment [Contactable]	Voluntary member closure	Grand Total
1999						1	**1**
2000	1		2				**3**
2001			1				**1**
2002	2						**2**
2003		1		1			**2**
2004			2				**2**
2005				1		2	**3**
2006			4	1		1	**6**
2007			2	1			**3**
2008				1		1	**2**
2009		1		1	1	3	**6**
2010			2	1		4	**7**
2011		1	3	3		2	**9**
2012			4	1	1	3	**9**
2013	2		8	4	1	13	**28**
2014	4		5	5	2	10	**26**
2015				7	2	2	**11**
2016	1	1		4	4	7	**17**
2017		1	1	12	4	5	**23**
2018			1	6	2	10	**19**
Grand Total	**10**	**5**	**35**	**49**	**17**	**63**	**180**

Statement of Income - Expenses

Amount (AUD)	YTD Actual Oct 2019	YTD Actual Oct 2018	Variance %	Budget 2019	Forecast 2019	Budget Variance %
Bank service fees	171,564	161,819	6%	203,000	209,979	3%
Communication expenses	461,056	460,827	0%	599,524	565,702	-6%
Computer expenses	891,485	657,375	36%	1,050,390	1,071,356	2%
Contribution to APNIC Foundation	603,798	540,686	12%	746,208	738,166	-1%
Depreciation expense	717,398	713,216	1%	841,892	861,532	2%
Doubtful debt expenses	17,193	-4,832	-456%	25,000	21,363	-15%
ICANN contract fee	219,488	232,388	-6%	260,000	263,382	1%
Insurance expense	174,306	159,363	9%	192,500	206,520	7%
Meeting and training expenses	395,880	370,295	7%	466,550	452,242	-3%
Membership fees	55,701	40,620	37%	54,218	63,496	17%
Office operating expenses	286,204	282,591	1%	363,235	339,605	-7%
Postage & delivery	34,533	41,603	-17%	48,500	36,943	-24%
Printing & photocopy	30,236	27,158	11%	39,500	34,986	-11%
Professional fees	1,498,606	1,174,350	28%	1,673,800	1,863,375	11%
Recruitment expense	86,868	176,068	-51%	120,000	106,868	-11%
Salaries and personnel expenses	10,266,434	9,440,961	9%	12,993,111	12,973,111	-0%
Sponsorship and Publicity expenses	445,782	559,046	-20%	828,350	720,728	-13%
Staff training/ Conference expenses	310,506	127,979	143%	301,500	344,124	14%
Translation expenses	6,062	6,763	-10%	22,500	6,392	-72%
Travel expenses	2,170,421	1,755,345	24%	2,099,000	2,350,000	12%
TOTAL EXPENSES	**18,843,520**	**16,923,622**	**11%**	**22,928,778**	**23,229,870**	**1%**

All amounts in AUD – Australian Dollars

APNIC

Statement of Income - Expenses

Expenses tracking 49k (0.1%) above budget

- **Salaries & Personnel expenses –** below budget by $94k
  - Resignations
  - Timing taken to recruit vacant positions
  - Timing of staff leave
  - Expected to be close to, or slightly below the budget estimate

- **Professional fees** above budget by $126k
  - Engagement of consultants to guide APNIC through the development of the 2019-2023 Strategic Plan
  - Product Management consultants to assist in the implementation of Product Management framework
  - Contractors to continue the development of the Internet Directory, which were not budgeted.
  - Forecast to be over budget by $190k

- **Recruitment expenses** tracking below the original budget by $13k, recent recruitment is less reliant on outside agencies. Overall costs are expected to be less than budget at the end of the year.

- **Travel expenses** are above budget by $196k at the end of October due to the timing of events and significant amount of global travel. It is forecasted that travel will be above budget by 12%

- **Computer expenses** continue to track higher than budget. The forecast shows it will be above budget at the end of 2019 by $21k
  - Additional Salesforce licenses
  - Mew HRIS, Payroll System, and VMware licensing
  - Academy virtual labs, and Research cloud computing costs are higher than budget

APNIC

Capital Expenditure

CAPITAL (AUD)	YTD Actual Oct 2019	YTD Actual Oct 2018	Variance %	Budget 2019	Forecast 2019	Budget Variance %
Equipment & Software	366,175	347,346	5%	759,411	552,713	-27%
Office Furniture & Fittings	105,787	30,093	252%	115,000	87,098	-24%
Total - Capital Expenditure	**471,963**	**377,439**	**25%**	**874,411**	**639,811**	**-27%**

All amounts in AUD – Australian Dollars

APNIC

Cash Flow YTD October 2019

Amount (AUD)	YTD Oct 2019
Operating Activities	
Net Income	**2,788,824**
Adjustments to Profit/(Loss)	
Accounts Receivable	-551,016
Other Current Asset	-251,370
Accounts Payable	-130,693
Sales Tax Payable	-4,961
Other Current Liability	53,821
Total Adjustments to Profit/(Loss)	**-884,219**
Total Operating Activities	**1,904,605**
Investing Activities	
Fixed Asset	252,564
Other Asset	-2,834,794
Total Investing Activities	**-2,582,230**
Financing Activities	
Long Term Liability	87,136
Equity	0
Total Financing Activities	**87,136**
Net Change in Cash for Period	**-590,489**
Cash at Beginning of Period	8,456,000
Cash at End of Period	**7,865,511**

Expenses by Activity

YTD Actual vs Budget by Activity Code
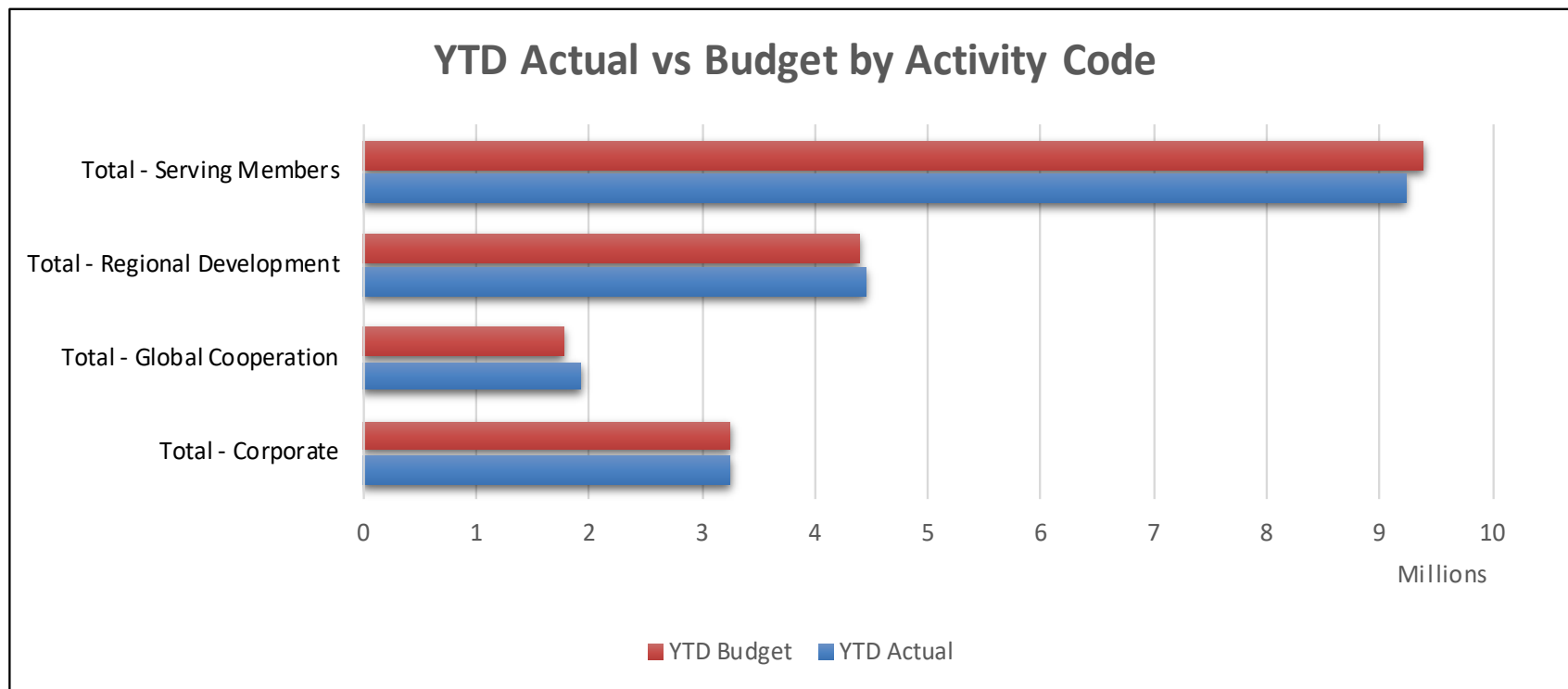
All amounts in AUD – Australian Dollars

Expenses by Activity – YTD October

CAPITAL EXPENSES (AUD)	YTD Actual Oct 2019	YTD Budget Oct 2019	Variance $	Variance %
Customer Service	26,925	30,250	-3,325	-11%
Member Training		44,170	-44,170	-100%
Technical Infrastructure	302,375	328,440	-26,065	-8%
Total - Serving Members	**329,299**	**402,860**	**-73,561**	**-18%**
APNIC Conferences		2,500	-2,500	-100%
APNIC Foundation	2,714		2,714	
Regional Technical Development	12,638	166,670	-154,032	-92%
Total - Regional Development	**15,352**	**169,170**	**-153,818**	**-91%**
Global Research	9,985	50,000	-40,015	-80%
Total - Global Cooperation	**9,985**	**50,000**	**-40,015**	**-80%**
Facilities	105,787	95,830	9,957	10%
Finance & Administration	8,733	7,920	813	10%
Human Resource Management	2,807	2,920	-113	-4%
Total - Corporate	**117,327**	**106,670**	**10,657**	**10%**
Total - Capital Expenses	**471,963**	**728,700**	**-256,737**	**-35%**

All amounts in AUD – Australian Dollars

Questions?

Monthly Financial Report

(in AUD)

October 2019

APNIC

Table of Contents

1   Executive Summary

This report provides financial status up to the end of October 2019, compared with the 2019 budget provisions, and actuals for same period last year. Forecast figures have been derived from a detailed review of the expected revenues, committed and planned expenditure for the remainder of 2019. It shows year to date operating surplus of $612k before the financial asset revaluation. The strong recovery in domestic and international markets since the beginning of 2019 has seen the value of APNIC's investment portfolio increased by $2,177k.

The operating surplus for 2019 is forecasted to be $46k, lower than the approved budget by around $199k. Whilst revenue remains in line with the 2019 Budget, expenses are tracking above as explained below.

Revenues:

- **Membership fees and Sign-Up fees**: Membership growth at the start of 2019 is tracking as anticipated with overall income higher than the budget estimate.

  New member growth up to the end of October was 674, which is in line with budget assumptions. There were 180 closures over the period similar to budget provisions.

- **Investment income:** The APNIC portfolio was slightly lower in October as AUD bonds fell -0.49% during the month as yields rose. Global equities rose 0.47% in AUD terms on the back of trade optimism and improving economic data. While Australian equities defied the global trend, falling -0.35% in October as a disappointing reporting season weighed on the share market.

  Since inception, the portfolio has returned 5.87% against the benchmark (CPI +2.5%) of 4.43%.

- **Sundry Income –** Includes Meeting and Training/Workshop Registrations, Sponsorship, and Foundation receipts.
  - Sponsorship income for the APNIC conferences are significantly above 2019 budget by $80k. APNIC 48 sponsorship receipts were the biggest contributor, at $143k.
  - While training and workshop registration income are tracking $41k higher than budget, Foundation receipts and Training Receipts (Consultancy/Cost Recovery) are tracking below budget.

Expenses:

- **Communication expenses** are forecast to be below budget by 6%. Costs for backup cloud storage, peering and anycast global RDAP and Whois will be less than anticipated in the budget during the last quarter of 2019.

- **Professional fees** – While Accounting audit fees will end 2019 close to budget, other Professional fees will exceed budget by 11%. This is due to unbudgeted costs related to support of the 2019-2023 Strategic Planning, Product Management, Internet Directory and the APNIC Academy.

- **Salaries and personnel expenses –** the latest projection estimates that 2019 expenses will be close to the budget estimate.

- **Staff training expenses** are tracking above the budget provision and are forecast to be over budget by around 14%, primarily driven by investment in training for Product Management and Strategic Planning.

- **Sponsorship and publicity expense** tracks below budget by 13%. Actual cost for NRO expense were less than accrued at the end of 2018.

- **Travel expenses** are continuing to track above budget, and it is anticipated that they will be above budget by approximately 12% at the end of 2019.

Fair Value Surplus: As outlined in Investment income above, the strong recovery in domestic and international markets since the beginning of 2019 has seen the capital value of APNIC's investment portfolio increase by $2.2m.

Capital Expenditure on equipment and software is tracking below budget. CAPEX is expected to be around 27% below budget by the end of the year.

Expenses by Activity Code: Global Cooperation activity is tracking above budget by 8%.This variance is primarily caused by travel costs to meetings outside the APNIC region such as ICANN, IETF, RIPE, AFRINIC, ARIN and LACNIC meetings. It is expected that the costs for this activity will align more closely with the budget by the end of the year. Costs for google ads (by APNIC Labs) are also tracking above budget provisions.

2   Statement of Financial Position

Amount (AUD)	31/10/2019	Year End 2018	% Change
CURRENT ASSETS			
Cash/ Term deposits	7,865,511	8,456,000	*-7%*
Receivables	1,597,200	984,890	*62%*
Others	868,642	678,567	*28%*
TOTAL CURRENT ASSETS	**10,331,354**	**10,119,457**	***2%***
NON-CURRENT ASSETS			
Other financial assets	27,696,020	24,861,226	*11%*
Property, plant and equipment	7,219,789	7,472,353	*-3%*
Deferred tax assets/ liabilities	286,537	286,537	*0%*
TOTAL NON-CURRENT ASSETS	**35,202,346**	**32,620,117**	***8%***
TOTAL ASSETS	**45,533,700**	**42,739,574**	***7%***
CURRENT LIABILITIES			
Payables	597,645	1,241,761	*-52%*
Provisions	1,895,973	1,743,961	*9%*
Unearned revenue	10,638,242	10,227,970	***4%***
TOTAL CURRENT LIABILITES	**13,131,859**	**13,213,692**	***-1%***
NON - CURRENT LIABILITIES			
Deferred Tax Liabilities	450,313	450,313	*0%*
Total Provisions	341,719	254,584	*34%*
TOTAL NON-CURRENT LIABILITIES	**792,032**	**704,897**	***12%***
TOTAL LIABILITIES	**13,923,891**	**13,918,589**	***0%***
NET ASSETS	**31,609,809**	**28,820,985**	***10%***
EQUITY			
Share capital	1	1	*0%*
Retained earnings	28,820,984	27,708,012	*4%*
Net Income	2,788,824	1,112,972	*151%*
TOTAL EQUITY	**31,609,809**	**28,820,985**	***10%***

Table 1. Statement of Financial Position

3 Statement of Income

Amount (AUD)	YTD Actual Oct 2019	YTD Actual Oct 2018	Variance %	Budget 2019	Forecast 2019	Budget Variance %
Membership fees	17,496,383	16,781,065	4%	20,959,575	21,052,094	0%
Non-members fees	214,249	208,683	3%	258,112	257,271	-0%
Reactivation fees	14,700	21,000	-30%	25,000	16,788	-33%
Sign-Up fees	282,000	282,000		351,000	338,000	-4%
Transfer fees	141,896	141,606	0%	185,000	172,726	-7%
Sundry income	371,210	425,418	-13%	345,892	420,782	22%
Operating Revenue	**18,520,437**	**17,859,771**	**4%**	**22,124,579**	**22,257,660**	**1%**
Investment income	934,872	799,866	17%	1,049,000	1,018,040	-3%
TOTAL REVENUE	**19,455,309**	**18,659,637**	**4%**	**23,173,579**	**23,275,700**	**0%**
Bank service fees	171,564	161,819	6%	203,000	209,979	3%
Communication expenses	461,056	460,827	0%	599,524	565,702	-6%
Computer expenses	891,485	657,375	36%	1,050,390	1,071,356	2%
Contribution to APNIC Foundation	603,798	540,686	12%	746,208	738,166	-1%
Depreciation expense	717,398	713,216	1%	841,892	861,532	2%
Doubtful debt expenses	17,193	-4,832	-456%	25,000	21,363	-15%
ICANN contract fee	219,488	232,388	-6%	260,000	263,382	1%
Insurance expense	174,306	159,363	9%	192,500	206,520	7%
Meeting and training expenses	395,880	370,295	7%	466,550	452,242	-3%
Membership fees	55,701	40,620	37%	54,218	63,496	17%
Office operating expenses	286,204	282,591	1%	363,235	339,605	-7%
Postage & delivery	34,533	41,603	-17%	48,500	36,943	-24%
Printing & photocopy	30,236	27,158	11%	39,500	34,986	-11%
Professional fees	1,498,606	1,174,350	28%	1,673,800	1,863,375	11%
Recruitment expense	86,868	176,068	-51%	120,000	106,868	-11%
Salaries and personnel expenses	10,266,434	9,440,961	9%	12,993,111	12,973,111	-0%
Sponsorship and Publicity expenses	445,782	559,046	-20%	828,350	720,728	-13%
Staff training/ Conference expenses	310,506	127,979	143%	301,500	344,124	14%
Translation expenses	6,062	6,763	-10%	22,500	6,392	-72%
Travel expenses	2,170,421	1,755,345	24%	2,099,000	2,350,000	12%
TOTAL EXPENSES	**18,843,520**	**16,923,622**	**11%**	**22,928,778**	**23,229,870**	**1%**
Operating Surplus	**611,790**	**1,736,015**	**-65%**	**244,801**	**45,829**	**-81%**
Fair value surplus on financial assets	2,177,034		-		2,177,034	-
SURPLUS	**2,788,824**	**1,736,015**	**61%**	**244,801**	**2,222,863**	**808%**

Table 2. Statement of Income

4 Capital Expenditure

CAPITAL (AUD)	YTD Actual Oct 2019	YTD Actual Oct 2018	Variance %	Budget 2019	Forecast 2019	Budget Variance %
Equipment & Software	366,175	347,346	5%	759,411	552,713	-27%
Office Furniture & Fittings	105,787	30,093	252%	115,000	87,098	-24%
Total - Capital Expenditure	**471,963**	**377,439**	**25%**	**874,411**	**639,811**	**-27%**

Table 3. Capital Expenditure by Category

5   Activity Reporting

5.1   Expenses by Activity Code

EXPENSES (AUD)	YTD Actual Oct 2019	YTD Budget Oct 2019	Variance $	Variance %
Customer Service	3,285,263	3,230,480	54,783	2%
Member Training	1,503,317	1,643,512	-140,195	-9%
Registration Services	1,563,434	1,576,964	-13,530	-1%
Technical Infrastructure	2,873,931	2,938,008	-64,077	-2%
Total - Serving Members	**9,225,944**	**9,388,964**	**-163,020**	**-2%**
APNIC Conferences	1,287,533	1,259,934	27,599	2%
APNIC Foundation	651,264	636,840	14,424	2%
Community Engagement	915,089	825,895	89,194	11%
Regional Technical Development	1,602,932	1,662,326	-59,394	-4%
Total - Regional Development	**4,456,817**	**4,384,995**	**71,822**	**2%**
Global Research	674,746	613,206	61,540	10%
Global Technical Community	1,017,358	903,547	113,811	13%
Inter-governmental Outreach	230,601	260,548	-29,947	-11%
Total - Global Cooperation	**1,922,704**	**1,777,301**	**145,403**	**8%**
Facilities	558,468	533,746	24,722	5%
Finance & Administration	1,031,215	1,180,738	-149,523	-13%
Human Resource Management	935,815	884,402	51,413	6%
Legal & Governance	712,556	644,582	67,974	11%
Total - Corporate	**3,238,054**	**3,243,468**	**-5,414**	**0%**
Total - Expenses	**18,843,520**	**18,794,728**	**48,792**	**0%**

Table 4. Expense by Activity Code
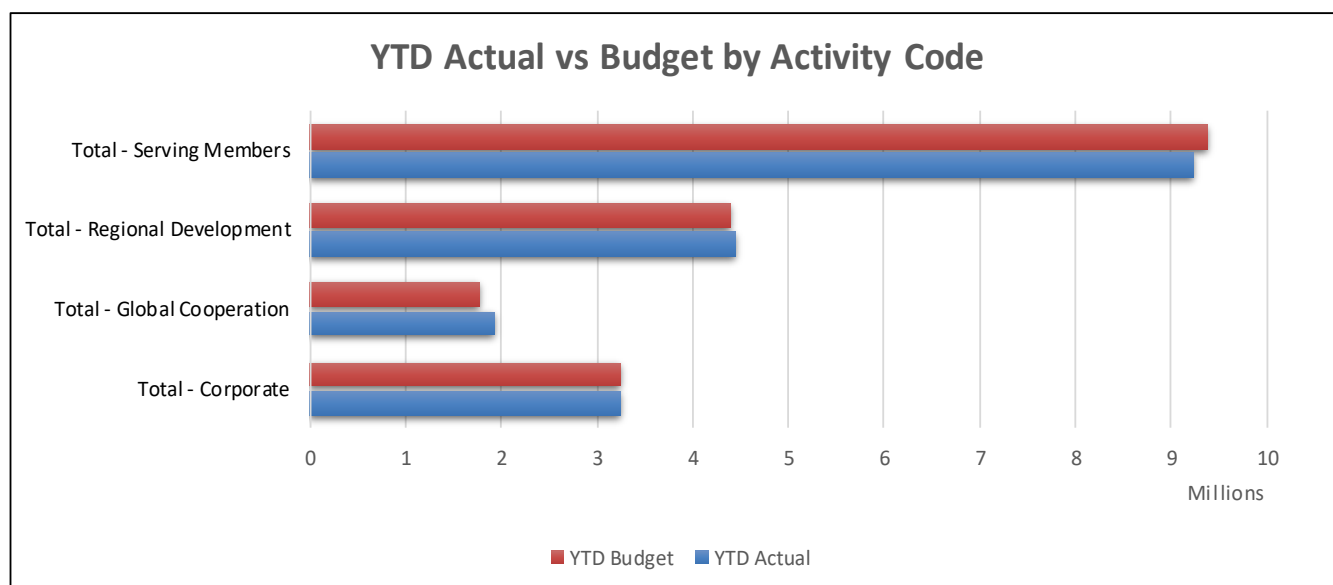
Figure 1. YTD Actual vs. Budget by Activity

5.2   Capital Expenditure by Activity Code

CAPITAL EXPENSES (AUD)	YTD Actual Oct 2019	YTD Budget Oct 2019	Variance $	Variance %
Customer Service	26,925	30,250	*-3,325*	*-11%*
Member Training		44,170	*-44,170*	*-100%*
Technical Infrastructure	302,375	328,440	*-26,065*	*-8%*
Total - Serving Members	**329,299**	**402,860**	***-73,561***	***-18%***
APNIC Conferences		2,500	*-2,500*	*-100%*
APNIC Foundation	2,714		*2,714*	
Regional Technical Development	12,638	166,670	*-154,032*	*-92%*
Total - Regional Development	**15,352**	**169,170**	***-153,818***	***-91%***
Global Research	9,985	50,000	*-40,015*	*-80%*
Total - Global Cooperation	**9,985**	**50,000**	***-40,015***	***-80%***
Facilities	105,787	95,830	*9,957*	*10%*
Finance & Administration	8,733	7,920	*813*	*10%*
Human Resource Management	2,807	2,920	*-113*	*-4%*
Total - Corporate	**117,327**	**106,670**	***10,657***	*10%*
Total - Capital Expenses	**471,963**	**728,700**	***-256,737***	***-35%***

Table 5. Capital Expenditure by Activity Code

6 APNIC Reserve

6.1 Cash Flow Statement

Amount (AUD)	YTD Oct 2019
Operating Activities	
Net Income	**2,788,824**
Adjustments to Profit/(Loss)	
Accounts Receivable	-551,016
Other Current Asset	-251,370
Accounts Payable	-130,693
Sales Tax Payable	-4,961
Other Current Liability	53,821
Total Adjustments to Profit/(Loss)	**-884,219**
Total Operating Activities	**1,904,605**
Investing Activities	
Fixed Asset	252,564
Other Asset	-2,834,794
Total Investing Activities	**-2,582,230**
Financing Activities	
Long Term Liability	87,136
Equity	0
Total Financing Activities	**87,136**
Net Change in Cash for Period	**-590,489**
Cash at Beginning of Period	8,456,000
Cash at End of Period	**7,865,511**

Table 6. Cash Flow Statement

6.2   Capital Reserve
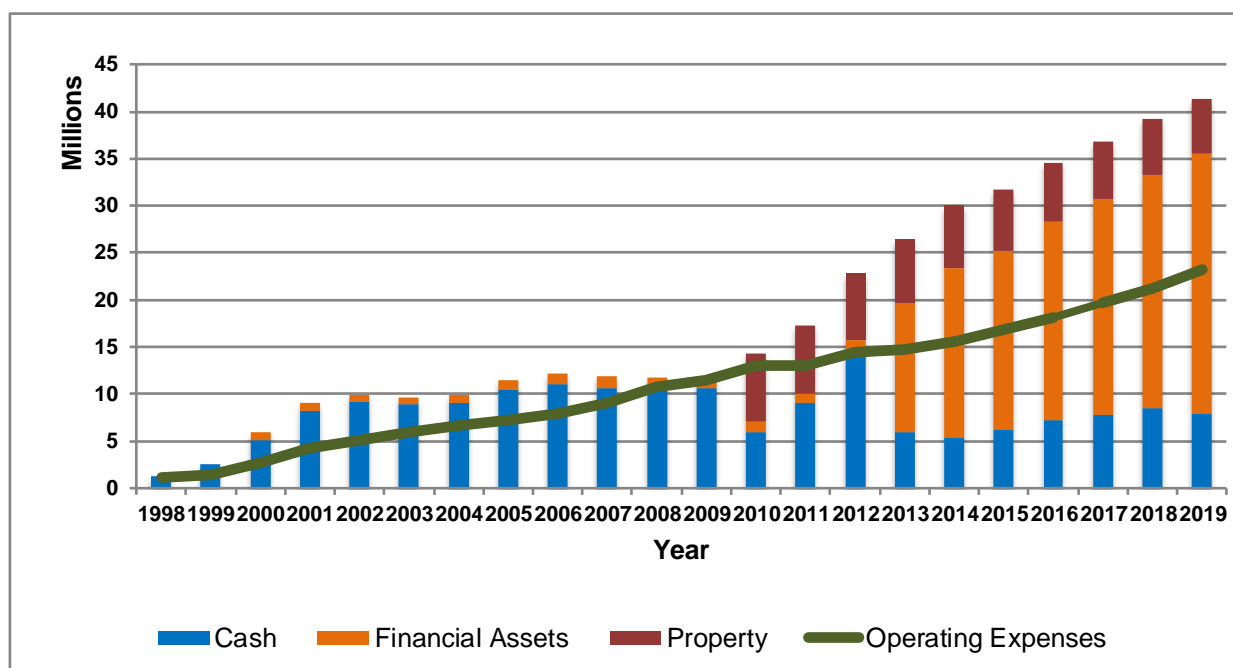
Figure 2. APNIC Reserves

6.3   APNIC's Equity and Reserves

By comparing the Total Equity (including retained earnings and unrealised capital gains), the Daily Operating Costs, the number of month's coverage of operational expenses is set out below:

	YTD 2019	2018	2017	2016	2015
Total Equity (AUD)	$31,609,809	$28,820,985	$27,708,013	$25,647,507	$23,319,460
% Equity covered by Cash/ Cash Equivalents	112.5%	115.6%	111.0%	110.6%	121.6%
Forecast/ Actual Daily Operating Expenses (AUD)	$63,643	$58,122	$53,909	$49,430	$46,077
Number of Months of expenses covered by Equity	**16.33**	**16.30**	**16.90**	**17.01**	**16.64**

Table 7. Equity and Reserves

7   Membership

7.1   Membership by Category

Membership	Total Dec 2018	YTD New Oct 2019	Reactivation Adjustment	YTD Closed Oct 2019	YTD Size Change Oct 2019	Total Oct 2019	% Total
Extra Large	24	0	0	0	0	24	0%
Very Large	44	0	0	0	2	46	1%
Large	143	2	0	-2	1	144	2%
Medium	483	5	0	-12	16	492	7%
Small	3,376	170	1	-68	94	3,583	44%
Very Small	2,967	484	0	-76	-132	3,232	43%
Associate	125	13	0	-22	19	136	2%
TOTAL	**7,162**	**674**	**1**	**-180**	**0**	**7,657**	**100%**

Table 8. Membership by Category

7.2   Membership Growth
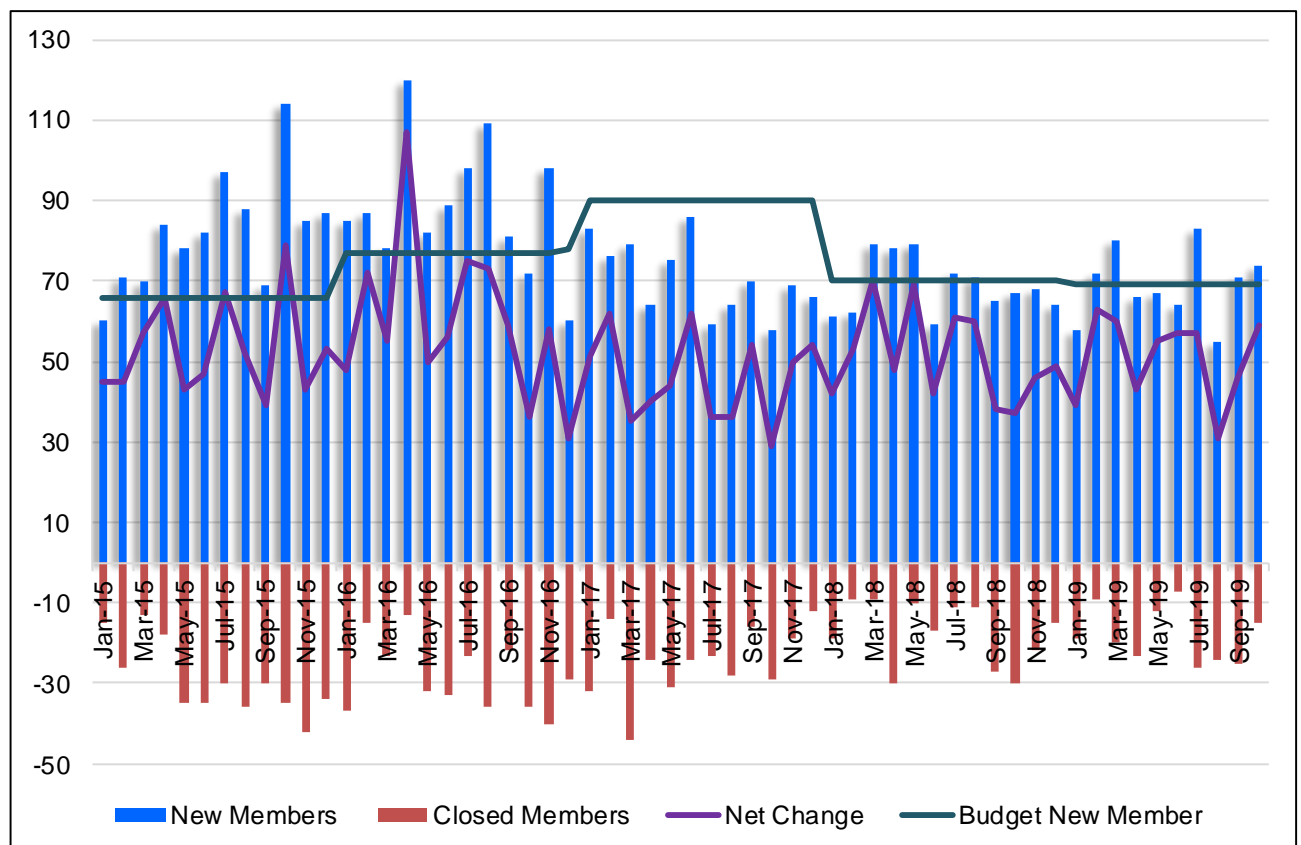
Figure 3. Membership Growth Analysis

7.3 Year-to-Date Membership Movement by Economy
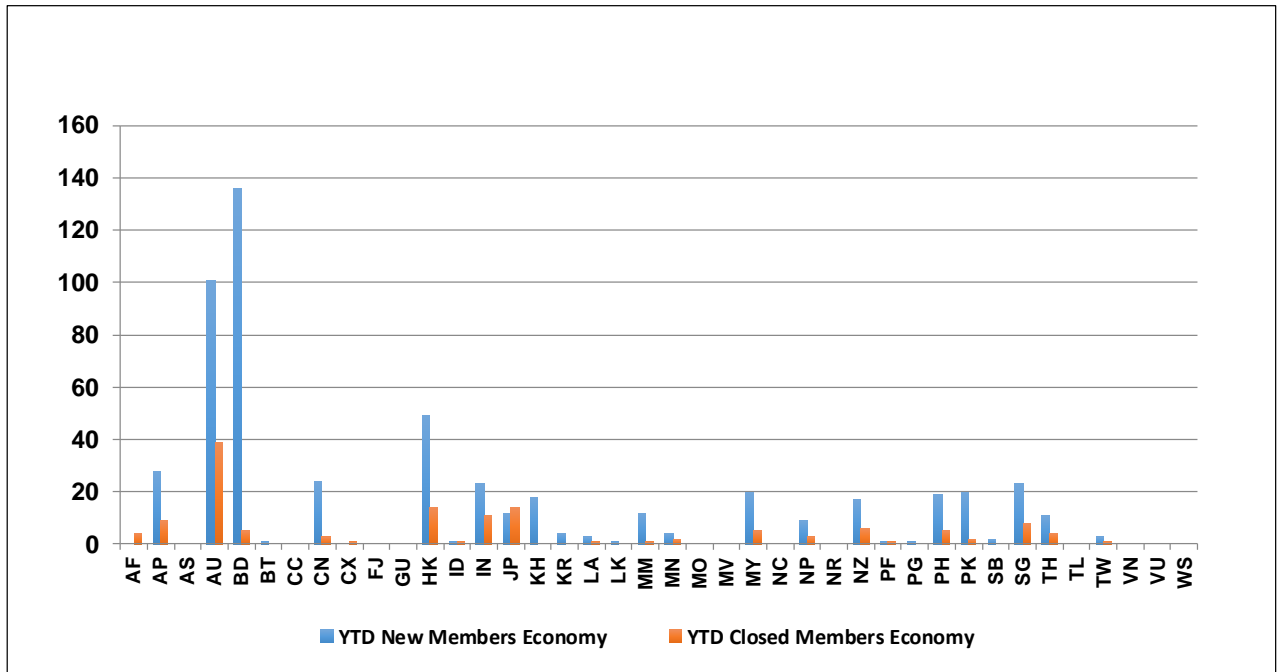
Figure 4. New and Closed Members Analysis

7.4 Membership Closures by Year Joined

Year Joined	Market transfer	Membership transfer to NIR	Merger & Acquisition	Non Payment [Uncontactable]	Non Payment [Contactable]	Voluntary member closure	Grand Total
1999						1	1
2000	1		2				3
2001			1				1
2002	2						2
2003		1		1			2
2004			2				2
2005				1		2	3
2006			4	1		1	6
2007			2	1			3
2008				1		1	2
2009		1		1	1	3	6
2010			2	1		4	7
2011		1	3	3		2	9
2012			4	1	1	3	9
2013	2		8	4	1	13	28
2014	4		5	5	2	10	26
2015				7	2	2	11
2016	1	1		4	4	7	17
2017		1	1	12	4	5	23
2018			1	6	2	10	19
Grand Total	**10**	**5**	**35**	**49**	**17**	**63**	**180**

Table 9. Membership Closure by Year Joined

7.5 Membership Closures by Economy

Economy	Market transfer	Membership transfer to NIR	Merger & Acquisition	Non Payment [Uncontactable]	Non Payment [Contactable]	Voluntary member closure	Grand Total	IPV4 Resources Reclaimed (/24's)	IPV6 Resources Reclaimed (/32's)	ASN Reclaimed
AF				2		1	3	8		3
AP	1		1	4	1	5	12	15	1	
AU	2		14	8	8	18	50	158	12	22
BD			1	3	4		8	24	3	7
CN	3			1		1	5	12	3	3
CX				1			1			
HK	4		2	3	1	18	28	19	5	7
ID		1					1			
IN		2	2	6		2	12	86	2	6
JP		1	7	8	1	1	18	24		
LA						1	1	1		1
MM						1	1	8		1
MN				1		1	2	2	0	2
MY			2	2		1	5	42	1	3
NC						1	1			
NP			1	1		1	3	8	2	2
NZ			2			5	7	3	1	4
PF			1				1			
PH				3		2	5	15	0	5
PK				2			2	5		2
SG				3	2	3	8	17	2	1
TH			2	1		2	5	14	0	3
TW		1					1			
Grand Total	10	5	35	49	17	64	180	461	32	72

Table 10. Membership Closure by Economy

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APNIC Monthly Reporting
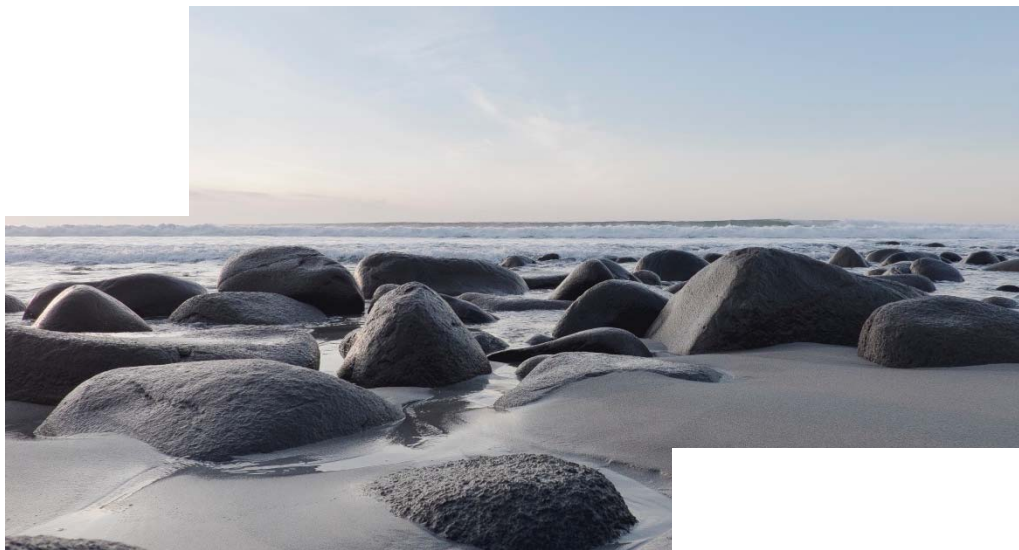
Summary

- The APNIC portfolio was slightly lower in October as AUD bonds fell -0.49% during the month as yields rose.

- Global equities rose 0.47% in AUD terms on the back of trade optimism and improving economic data.

- While Australian equities defied the global trend, falling -0.35% in October as a disappointing reporting season weighed on the share market.

Market Commentary

October was generally a positive month for financial markets with the US, European and Emerging Markets equities all rising in AUD terms by 0.06%, 1.00% and 2.09%, respectively. The positive sentiment was driven by trade optimism, further monetary policy easing by the US Federal Reserve and mildly positive developments on tariffs. Australian equities was an exception to the rule, falling by -0.35% over the month as a disappointing reporting season and weakness from the financial sector in particular weighed on the share market. Australian bonds fell -0.49% as improving sentiment and economic data pushed yields upwards.

The Australian economy continues to navigate a period of slow growth although there were tentatively positive signals that previous monetary and fiscal easing were starting to flow through. Retail sales underwhelmed in 3Q19, falling by -0.1% compared to expectations for 0.2% growth. On the other hand, the unemployment rate retraced from a year high of 5.3% to 5.2% in September on the back of a falling participation rate. Housing market conditions continued to improve with national house prices lifting by 1.7% over 3Q19, according to CoreLogic data. The incremental positives saw the RBA keep rates on hold at an historical low of 0.75%.

US economic data has rebounded from previously weak levels. Although US economic growth moderated in 3Q19 to an annualised rate of 1.9%, it was higher than expected. The troubled manufacturing sector has shown tentative signs of improvement with both the ISM Manufacturing and Markit PMIs improving over October. Despite a contraction in retail sales of -0.3% in September, consumer spending is likely to remain a supportive pillar for the US economy. Encouraging signals included a surprisingly positive labour market report and a resilient consumer sentiment reading in October. The Fed also executed what is widely expected to be the last of a series of "insurance"

rate cuts in October to support economic growth.

The European economy remains uninspiring, growing just 1.3% over the year ending 3Q19. The manufacturing sector continued to struggle with the EU Markit Manufacturing PMI for October recording another contractionary reading at 45.9. The services sector offered some reprieve with retail sales rising 3.1% in September compared to the same time in the previous year and the EU Market Services PMI increased from 51.6 to 52.2 in October. Consumer confidence remained muted in absolute terms but improved marginally from -7.1 to -6.5 in September.

Chinese economic growth slowed to 6.0% for the twelve months ending 3Q19 as the ongoing trade dispute with the US takes a toll on the domestic economy. Manufacturing indicators were mixed in October with the official reading issued by the government recording another contractionary signal of 49.3 whereas the private Caixin Manufacturing PMI unexpectedly rose to 51.7. On balance, the looming trade uncertainties skew risks to the downside and prompted the International Monetary Fund to revise down its forecast for Chinese economic growth for 2020 from 6.1% to 5.8%.

In the local market, the top performing sectors were Healthcare (+7.58%), Industrials (+2.97%) and Real Estate (+1.63%) while Information Technology (-3.95%), Financials (-2.82%) and Consumer Staples (-2.20%) were the worst performers.

Market Value as at 31 October 2019

	Market Value
APNIC Portfolio	A$27,692,613

Performance as of 31 October 2019

	APNIC Portfolio			
	Portfolio	Benchmark	Relative	CPI + 2.5%
Month	-0.24%	-0.15%	-0.09%	0.35%
3 Months	0.55%	0.68%	-0.13%	1.05%
Year To Date	11.32%	11.27%	0.05%	3.44%
1 Year	11.49%	11.36%	0.13%	4.20%
3 Years pa	6.52%	6.66%	-0.14%	4.37%
Since Inception pa	5.87%	6.03%	-0.16%	4.43%

* Performance is after fees but before franking

Positive Contributors to Performance

Australian stocks performing well included:

CSL (+9.56%)
Following a positive profit result in August the CSL share price continued to rally given further evidence of strong demand and tight supply of immunoglobulin. Management have positioned the company to take advantage of robust demand through proactive expansion of collection centres relative to competitors. Positive industry feedback on volume growth has led to further upgrades to analyst forecasts for CSL's earnings outlook.

Resmed (+7.21%)
The company reported a strong 1Q20 profit result in its underlying sleep therapy business driven by double-digit revenue growth in masks and improvement in profit margins. The result confirmed the company is gaining market share in a structurally growing market. Investors responded positively to the profit report and an increase in consensus earnings forecasts for FY20.

Reliance Worldwide (+4.47%)
Investor confidence continued to improve as the company confirmed it was on track to meet its earnings guidance for FY20 at its recent annual general meeting. Management indicated the group is successfully navigating headwinds in the UK given Brexit uncertainty and weaker construction activity with a lower Australian dollar providing some earnings offset for translated earnings in both the US and UK.

Negative Contributors to Performance

Australian stocks underperforming included:

Flight Centre Travel Group (-10.53%)
The Flight Centre share price weakened following an update by management that earnings are expected to decline in 1H20. Weaker near-term performance reflects subdued demand conditions for Australian leisure travel and continued flow through from higher wage costs implemented during the previous year. Management are expecting earnings to stabilise in the current quarter and improve in 2H20.

Newcrest Mining (-9.93%)
A lower Newcrest share price reflected a softer gold price and weaker than expected production for 1Q20. Slippage in production was primarily due to maintenance during the period. Management maintained its FY20 production forecast given most of the maintenance impact was planned. The company also approved Stage 1 of its Cadia mine expansion project at an estimated capital cost of $685m.

Magellan Financial (-6.36%)
Weakness in global equities earlier in the month continued to weigh on the share price of Australia's leading global equity fund manager. From a news flow perspective the company reported continued fund inflows leading to growth in funds under management. At the annual general meeting management also indicated good progress in developing a new retirement income product.

Asset Allocation

Asset Class	Tactical Position
Cash	Underweight
Bonds	Neutral
Australian Equities	Marginally Overweight
International Equities	Overweight
Alternative Investments	Marginally Overweight

Significant Portfolio Changes

Position	Comments
BlackRock Concentrated Industrial Fund / Vanguard MSCI Australian Small Companies Index ETF	Sold/Bought: Transition small cap exposure from active to passive on the back of lower cost of ETF and research that indicates it is becoming increasingly difficult for active fund managers to generate alpha in this segment as markets become more efficent.

Outlook

We approach 2020 a little more optimistic than even a month ago. Our view has been that rate cuts by central banks, renewed QE programs, and targeted stimulus measures in China would combine to arrest the deterioration in global economic data. The most recent data now shows some green shoots of stabilisation. Forward indicators such as the PMI were either improved or better than expected in Europe, the US and China. Markets were particularly pleased with a much stronger than expected payrolls number in the US without any noticeable uptick in average hourly earnings. Geopolitical uncertainty still pervades. However, there has been a noticeably conciliatory tone to comments exchanged between the leaders of the US and China. The "first phase" of resolution to the tariff dispute is planned to be signed before the end of the year. Our base case remains some sort of comprehensive agreement prior to the 2020 US election. We expect recession fears to gradually subside, with reasonable economic fundamentals and a calming of the tariff issue to provide support for equities. We continue with a neutral position in bonds which despite low yields, continue to provide the portfolio with stability, although with lower expected income.

Data Sources
Credit Suisse, unless otherwise specified.

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Private Banking

Investment Report 1.10.2019 – 31.10.2019

APNIC PTY LTD
Portfolio: 3000039-70

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Private Banking

Investment Report 1.10.2019 – 31.10.2019

Portfolio	**3000039-70**
In the Name of	APNIC PTY LTD

APNIC PTY LTD
PO BOX 3646
SOUTH BRISBANE, QLD 4101
AUSTRALIA

Produced on	5.11.2019
Reporting Currency	AUD
Relationship Manager	Patrick Armitage
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Table of Contents

Scope of Analysis
as of 31.10.2019

Components	Portfolio	Asset Value in AUD	Discretionary Mandate	Opened	Closed	Performance Activation	Performance Deactivation
Investment related Positions							
AUD Portfolio	3000039-70	27,696,020	Yes	16.08.2013		31.12.2013	
Total Wealth		**27,696,020**					

1. Overview

1.1. Asset Allocation

Asset Allocation by Asset Category
Period 1.10.2019 - 31.10.2019

	Beginning Market Value in AUD	Change	Ending Market Value in AUD	Ending Market Value Prop.
Liquidity & Similar Investments	1,794,751	-784,271	1,010,480	3.65%
Fixed Income & Similar Investments	14,493,920	706,866	15,200,786	54.88%
Equities & Similar Investments	6,442,384	-5,158	6,437,226	23.24%
Alternative Investments, Commodities & Real Estate	5,027,466	20,062	5,047,528	18.22%
Total Investments	**27,758,521**		**27,696,020**	**100.00%**
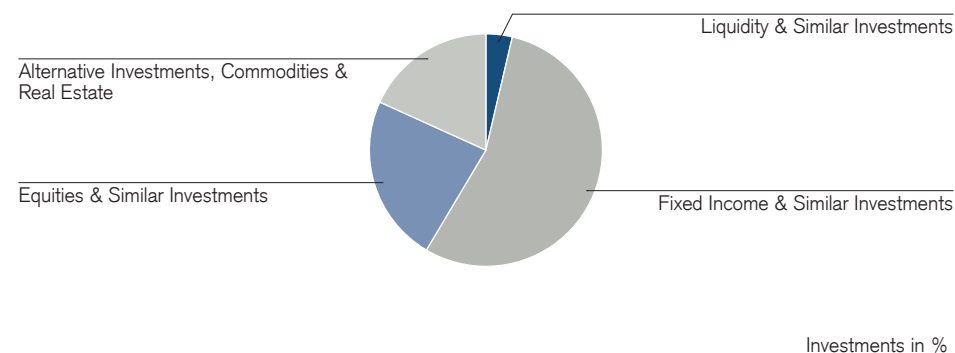
Asset Allocation by Currency
Period 1.10.2019 - 31.10.2019

	Beginning Market Value in AUD	Change	Ending Market Value in AUD	Ending Market Value Prop.
AUD - Australian Dollar	24,222,446	-64,249	24,158,197	87.23%
USD - US Dollar	2,692,094	-4,963	2,687,130	9.70%
EUR - Euro	568,087	4,031	572,117	2.07%
JPY - Japan Yen	199,716	4,185	203,901	0.74%
CHF - Swiss Franc	76,153	-1,505	74,648	0.27%
GBP - Pound Sterling	25	1	26	
Total Investments	**27,758,521**		**27,696,020**	**100.00%**

Liquidity & Similar Investments

Alternative Investments, Commodities & Real Estate

Equities & Similar Investments

Fixed Income & Similar Investments

Investments in %

CHF
JPY
EUR
USD

AUD

Investments in %

001970938 012 058
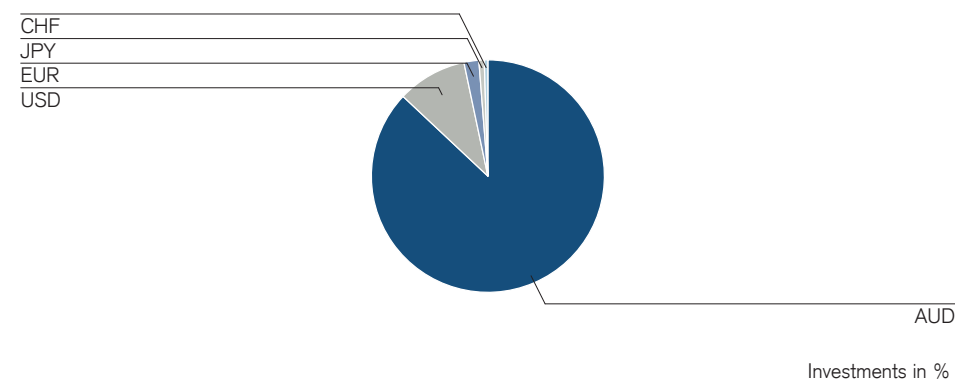
1.2.   Income and Activity

Income Summary
Period 1.10.2019 - 31.10.2019

	Current Period in AUD	Year to Date in AUD
Cash Dividend	63,807	759,034
Coupon Received/Paid	0	6,154
Interest Earned	919	11,362
Interest Paid	0	0
Net Income	**64,726**	**776,551**

Activity Summary
Period 1.10.2019 - 31.10.2019

	Current Period in AUD	Year to Date in AUD
Asset Inflows	0	0
Asset Outflows	0	0
Net Investment Asset Flows	**0**	**0**

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1.3. Performance

Performance Summary
Period 1.10.2019 - 31.10.2019

	Asset Value in AUD	Asset Value in AUD
Ending Market Value		27,696,020
Beginning Market Value		27,758,521
Asset Flows including		0
Inflows	0	
Outflows	0	
Net Non-Investment Flows	0	
Taxes	0	
Flow Adjusted Value Change		-62,501
Cumulative Portfolio Return – net		**-0.23%**
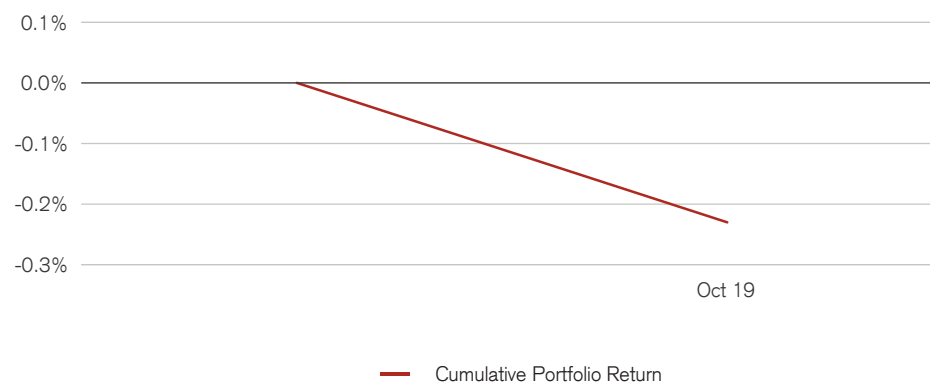
Performance Year-to-date
Period 1.1.2019 - 31.10.2019

	Asset Value in AUD	Asset Value in AUD
Ending Market Value		27,696,020
Beginning Market Value		24,886,409
Asset Flows including		-10,799
Inflows	0	
Outflows	0	
Net Non-Investment Flows	0	
Taxes	-10,799	
Flow Adjusted Value Change		2,820,410
Cumulative Portfolio Return – net		**11.33%**

Cumulative Portfolio Return

Cumulative Portfolio Return

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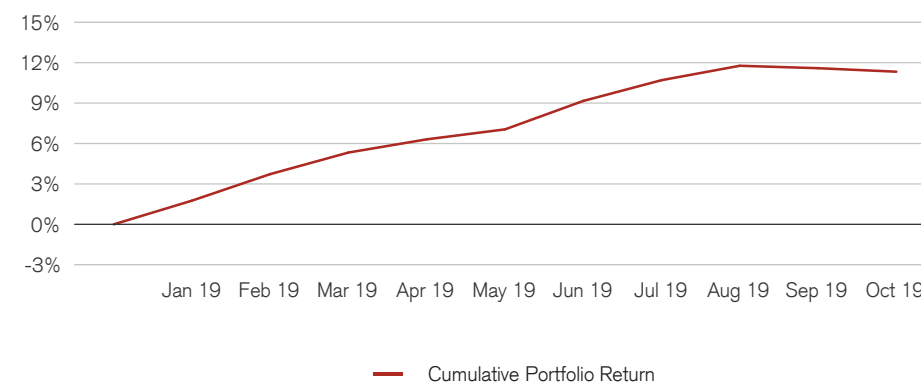
2.   Analyses

2.1.   Performance

Performance Details
Period 1.10.2018 - 31.10.2019

	Since Start of Period	Nov 18	Dec 18	Jan 19	Feb 19	Mar 19	Apr 19	May 19	Jun 19	Jul 19	Aug 19	Sep 19	Oct 19
Ending Market Value	24,849,594	24,674,468	24,886,409	25,323,834	25,815,306	26,209,883	26,453,089	26,637,075	27,159,199	27,542,976	27,808,588	27,758,521	27,696,020
Beginning Market Value	25,123,104	24,849,594	24,674,468	24,886,409	25,323,834	25,815,306	26,209,883	26,453,089	26,637,075	27,159,199	27,542,976	27,808,588	27,758,521
Asset Flows including	0	0	-3,393	0	0	-3,452	0	0	-3,601	0	0	-3,746	0
Inflows	0	0	0	0	0	0	0	0	0	0	0	0	0
Outflows	0	0	0	0	0	0	0	0	0	0	0	0	0
Net Non-Investment Flows	0	0	0	0	0	0	0	0	0	0	0	0	0
Taxes	0	0	-3,393	0	0	-3,452	0	0	-3,601	0	0	-3,746	0
Flow Adjusted Value Change	-273,510	-175,126	215,334	437,425	491,472	398,029	243,207	183,985	525,725	383,777	265,613	-46,321	-62,501
■ **Portfolio Return** – net	**-1.09%**	**-0.70%**	**0.87%**	**1.76%**	**1.94%**	**1.54%**	**0.93%**	**0.70%**	**1.97%**	**1.41%**	**0.96%**	**-0.17%**	**-0.23%**
— **Cumulative Portfolio Return**	**-1.09%**	**-1.79%**	**-0.93%**	**0.81%**	**2.77%**	**4.35%**	**5.32%**	**6.05%**	**8.15%**	**9.68%**	**10.73%**	**10.55%**	**10.30%**
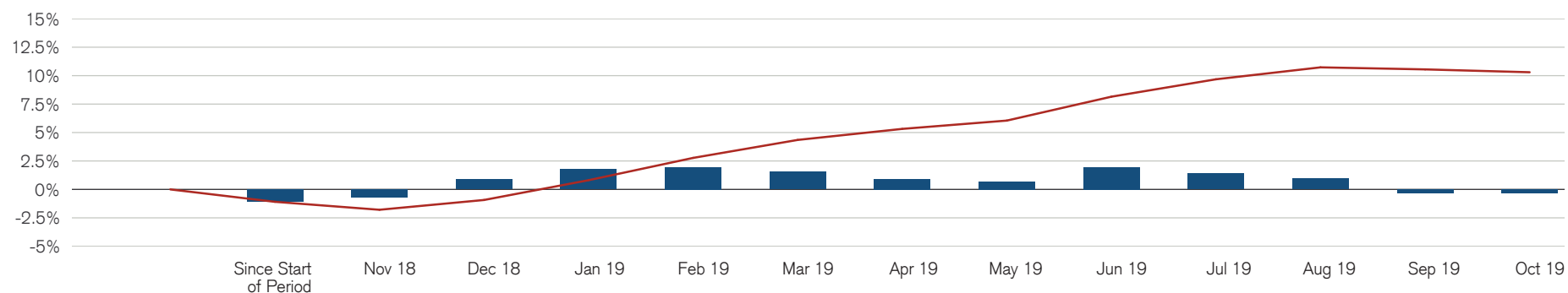
3. Positions

3.1. Investment Related Positions
as of 31.10.2019

Number/ Nominal	Description	Identification ISIN Valoren Number Ticker	Cost Valuation Price Exchange Rate	Current Valuation Price/ Type Date	Value in AUD of which Accrued Interest Proportion in %	Profit/ Loss Unrealized in AUD of which Instrument of which Forex	P/L Unreal. in % Instr. in % FX in %
Liquidity & Similar Investments							
Accounts							
AUD 251,238.24	Current Account -20300003970945		1.0000		251,238		
					0.91%		
CHF 51,004.80	Current Account -20300003970010		1.0000 0.6806 AUD/CHF		74,648	-295	-0.39%
					0.27%	-295	-0.39%
EUR 1,480.11	Current Account -20300003970056		1.0000 1.6444 EUR/AUD		2,388	-46	-1.90%
					0.01%	-46	-1.90%
GBP 13.97	Current Account -20300003970089		1.0000 1.8067 GBP/AUD		26	1	3.37%
						1	3.37%
JPY 235,584	Current Account -20300003970335		1.0000 72.0824 AUD/JPY		3,131	-137	-4.18%
					0.01%	-137	-4.18%
USD 104,492.55	Current Account -20300003970780		1.0000 0.6813 AUD/USD		150,974	-2,391	-1.56%
					0.55%	-2,391	-1.56%
Total Accounts					**482,405** **0** **1.74%**		

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Number/ Nominal	Description	Identification ISIN Valoren Number Ticker	Cost Valuation Price Exchange Rate	Current Valuation Price/ Type Date	Value in AUD of which Accrued Interest Proportion in %	Profit/ Loss Unrealized in AUD of which Instrument of which Forex	P/L Unreal. in % Instr. in % FX in %
Call & Time Deposits							
AUD 528,000	0.86% Deposit - Fixed Term (MM1929801094) 25.10.2019 - 15.11.2019 Total interest at maturity: AUD 261.25		1.0000		528,075 75 1.91%		
Total Call & Time Deposits					528,075 75 1.91%		
Total Liquidity & Similar Investments					**1,010,480** **75** **3.65%**		
Fixed Income & Similar Investments							
Fixed Income & Similar Investments AUD							
AUD 690,500	4 % NOTES NEW SOUTH WALES TREASURY CORP 2014-20.5.26 Duration: 5.7718 / Rating: S&P AAA Yield to Maturity: 1.27%	AU3SG0001373 25197437	116.5950%	117.1162% MID 31.10.2019	820,996 12,309 2.96%	3,599 3,599	0.45% 0.45%
AUD 723,000	3 % NOTES NEW SOUTH WALES TREASURY CORP 2016-20.02.30 Duration: 8.9217 / Rating: S&P AAA Yield to Maturity: 1.61%	AU3SG0001571 33439509	109.9290%	113.1480% MID 31.10.2019	822,304 4,244 2.97%	23,273 23,273	2.93% 2.93%
AUD 2,703,381.38	UNITS -D- ISHARES AUSTRALIAN BOND INDEX FUND	AU60BGL01056 2244170	1.0280	1.1050 NAV 31.10.2019	2,987,174 10.79%	208,039 208,039	7.49% 7.49%
AUD 1,726.88	UNITS PIMCO AUSTRALIAN BOND FUND CLASS -A-	AU60ETL01152 3432899	1,112.2894	1,126.9515 NAV 31.10.2019	1,946,110 7.03%	25,320 25,320	1.32% 1.32%
AUD 2,808,319.855	UNITS LEGG MASON WESTERN ASSET AUSTRALIAN BOND TRUST CLASS -A-	AU60SSB01221 2248336	1.2104	1.3072 BID 31.10.2019	3,671,148 13.26%	271,838 271,838	8.00% 8.00%

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Number/ Nominal		Description	Identification ISIN Valoren Number Ticker	Cost Valuation Price Exchange Rate	Current Valuation Price/ Type Date	Value in AUD of which Accrued Interest Proportion in %	Profit/ Loss Unrealized in AUD of which Instrument of which Forex	P/L Unreal. in % Instr. in % FX in %
AUD	4,117,251.96	UNITS VANGUARD AUSTRALIAN FIXED INTEREST INDEX FUND	AU60VAN00014 1653500	1.1438	1.2030 NAV 31.10.2019	4,953,054 17.88%	243,599 243,599	5.17% 5.17%
Total Fixed Income & Similar Investments						**15,200,786 16,553 54.88%**		

Equities & Similar Investments

Equities & Similar Investments AUD

Number/ Nominal		Description	Identification ISIN Valoren Number Ticker	Cost Valuation Price Exchange Rate	Current Valuation Price/ Type Date	Value in AUD of which Accrued Interest Proportion in %	Profit/ Loss Unrealized in AUD of which Instrument of which Forex	P/L Unreal. in % Instr. in % FX in %
AUD	4,978	REGISTERED SHS AUSTRALIA & NEW ZEALAND BANKING GROUP LTD	AU000000ANZ3 640139 ANZ.AX	29.6884	26.7400 CLO 31.10.2019	133,112 0.48%	-14,677 -14,677	-9.93% -9.93%
AUD	9,313	REGISTERED SHS AURIZON HOLDINGS LTD	AU000000AZJ1 20175896 AZJ.AX	5.1693	5.9000 CLO 31.10.2019	54,947 0.20%	6,805 6,805	14.14% 14.14%
AUD	6,550	REGISTERED SHS BHP GROUP LTD	AU000000BHP4 640390 BHP.AX	28.5717	35.9500 CLO 31.10.2019	235,473 0.85%	48,328 48,328	25.82% 25.82%
AUD	2,020	REGISTERED SHS CARSALES.COM LTD	AU000000CAR3 10476764 CAR.AX	15.7722	15.5400 CLO 31.10.2019	31,391 0.11%	-469 -469	-1.47% -1.47%
AUD	3,138	REGISTERED SHS COMMONWEALTH BANK OF AUSTRALIA	AU000000CBA7 646758 CBA.AX	77.1771	78.6600 CLO 31.10.2019	246,835 0.89%	4,653 4,653	1.92% 1.92%
AUD	2,692	REGISTERED SHS COMPUTERSHARE LTD	AU000000CPU5 241285 CPU.AX	16.4600	15.8400 CLO 31.10.2019	42,641 0.15%	-1,669 -1,669	-3.77% -3.77%

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Number/ Nominal		Description	Identification ISIN Valoren Number Ticker	Cost Valuation Price Exchange Rate	Current Valuation Price/ Type Date	Value in AUD of which Accrued Interest Proportion in %	Profit/ Loss Unrealized in AUD of which Instrument of which Forex	P/L Unreal. in % Instr. in % FX in %
AUD	1,135	REGISTERED SHS CSL LTD	AU000000CSL8 241548 CSL.AX	104.9787	256.0300 CLO 31.10.2019	290,594 1.05%	171,443 171,443	143.89% 143.89%
AUD	461	REGISTERED SHS FLIGHT CENTRE TRAVEL GROUP LTD	AU000000FLT9 90307 FLT.AX	47.1009	42.5900 CLO 31.10.2019	19,634 0.07%	-2,080 -2,080	-9.58% -9.58%
AUD	4,974	REGISTERED SHS FORTESCUE METALS GROUP LTD	AU000000FMG4 1655130 FMG.AX	7.5499	8.9100 CLO 31.10.2019	44,318 0.16%	6,765 6,765	18.01% 18.01%
AUD	1,589	CHESS UNITS OF FOREIGN SECURITIES JAMES HARDIE INDUSTRIES PLC	AU000000JHX1 1303670 JHX.AX	21.4806	24.8800 CLO 31.10.2019	39,534 0.14%	5,402 5,402	15.83% 15.83%
AUD	697	REGISTERED SHS MAGELLAN FINANCIAL GROUP LTD	AU000000MFG4 2807450 MFG.AX	24.2684	48.1700 CLO 31.10.2019	33,574 0.12%	16,659 16,659	98.49% 98.49%
AUD	1,136	REGISTERED SHS MACQUARIE GROUP LTD	AU000000MQG1 3422370 MQG.AX	67.5244	133.9200 CLO 31.10.2019	152,133 0.55%	75,425 75,425	98.33% 98.33%
AUD	4,889	REGISTERED SHS NATIONAL AUSTRALIA BANK LTD	AU000000NAB4 641643 NAB.AX	31.0600	28.6100 CLO 31.10.2019	139,874 0.51%	-11,978 -11,978	-7.89% -7.89%
AUD	2,117	REGISTERED SHS NEWCREST MINING LTD	AU000000NCM7 650853 NCM.AX	27.6787	31.3000 CLO 31.10.2019	66,262 0.24%	7,666 7,666	13.08% 13.08%

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Number/ Nominal		Description	Identification ISIN Valoren Number Ticker	Cost Valuation Price Exchange Rate	Current Valuation Price/ Type Date	Value in AUD of which Accrued Interest Proportion in %	Profit/ Loss Unrealized in AUD of which Instrument of which Forex	P/L Unreal. in % Instr. in % FX in %
AUD	4,289	REGISTERED SHS ORIGIN ENERGY LTD	AU000000ORG5 1051439 ORG.AX	8.7251	7.8600 CLO 31.10.2019	33,712 0.12%	-3,711 -3,711	-9.92% -9.92%
AUD	10,004 6,503 3,501	REGISTERED SHS QANTAS AIRWAYS LTD BLOCKED PEND REPO PROCEEDS~DIARSC1926802011 31.10.2019-31.10.2119 Freely available as of 31.10.2019	AU000000QAN2 390413 QAN.AX	6.3125	6.4100 CLO 31.10.2019	64,126 0.23%	976 976	1.54% 1.54%
AUD	1,479	REGISTERED SHS RIO TINTO LTD	AU000000RIO1 603520 RIO.AX	66.4031	90.8800 CLO 31.10.2019	134,412 0.49%	36,201 36,201	36.86% 36.86%
AUD	3,559	SHS RESMED INC CHESS DEPOSITORY INTERESTS REPR 1/10 SH	AU000000RMD6 1058638 RMD.AX	12.9217	21.2600 CLO 31.10.2019	75,664 0.27%	29,676 29,676	64.53% 64.53%
AUD	4,282	REGISTERED SHS RELIANCE WORLDWIDE CORPORATION LTD	AU000000RWC7 32257237 RWC.AX	4.6640	4.2100 CLO 31.10.2019	18,027 0.07%	-1,944 -1,944	-9.73% -9.73%
AUD	60,356	UNITS SPDR S&P/ASX 200 LISTED PROPERTY FUND EXCHANGE TRADED FUND	AU000000SLF1 1377855 SLF.AX	12.8749	14.2900 CLO 31.10.2019	862,487 3.11%	85,409 85,409	10.99% 10.99%
AUD	6,036	UNITS SPDR S&P/ASX 200 FUND ETF AUSTRALIAN EQUITY EXCHANGE TRADED FUNDS	AU000000STW9 1285707 STW.AX	59.6671	61.7300 CLO 31.10.2019	372,602 1.35%	12,452 12,452	3.46% 3.46%
AUD	2,024	REGISTERED SHS SUNCORP GROUP LTD	AU000000SUN6 588679 SUN.AX	14.2141	13.4500 CLO 31.10.2019	27,223 0.10%	-1,547 -1,547	-5.38% -5.38%

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Number/ Nominal		Description	Identification ISIN Valoren Number Ticker	Cost Valuation Price Exchange Rate	Current Valuation Price/ Type Date	Value in AUD of which Accrued Interest Proportion in %	Profit/ Loss Unrealized in AUD of which Instrument of which Forex	P/L Unreal. in % Instr. in % FX in %
AUD	6,573	STAPLED SECURITY TRANSURBAN GROUP	AU000000TCL6 444655 TCL.AX	11.4916	14.8400 CLO 31.10.2019	97,543 0.35%	22,009 22,009	29.14% 29.14%
AUD	10,873	REGISTERED SHS TELSTRA CORPORATION LTD	AU000000TLS2 720464 TLS.AX	4.9151	3.4900 CLO 31.10.2019	37,947 0.14%	-15,495 -15,495	-28.99% -28.99%
AUD	859	SHS VANGUARD MSCI AUSTRALIAN SMALL COMPANIES INDEX ETF EXCHANGE TRADED FUND	AU000000VSO2 13053435 VSO.AX	59.1560	59.0200 CLO 31.10.2019	50,698 0.18%	-117 -117	-0.23% -0.23%
AUD	7,504	REGISTERED SHS WESTPAC BANKING CORP	AU000000WBC1 642372 WBC.AX	31.2661	28.2100 CLO 31.10.2019	211,688 0.76%	-22,933 -22,933	-9.77% -9.77%
AUD	834	REGISTERED SHS WESFARMERS LTD	AU000000WES1 642397 WES.AX	31.3065	39.7600 CLO 31.10.2019	33,160 0.12%	7,050 7,050	27.00% 27.00%
AUD	2,738	REGISTERED SHS WOOLWORTHS GROUP LTD	AU000000WOW2 81350 WOW.AX	29.1782	37.3200 CLO 31.10.2019	102,182 0.37%	22,292 22,292	27.90% 27.90%
AUD	2,719	REGISTERED SHS WOODSIDE PETROLEUM LTD	AU000000WPL2 642429 WPL.AX	35.0354	32.2000 CLO 31.10.2019	87,552 0.32%	-7,709 -7,709	-8.09% -8.09%
AUD	4,050	STAPLED SECURITY ATLAS ARTERIA	AU0000013559 41318093 ALX.AX	7.9364	8.0300 CLO 31.10.2019	32,522 0.12%	379 379	1.18% 1.18%

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Number/ Nominal		Description	Identification ISIN Valoren Number Ticker	Cost Valuation Price Exchange Rate	Current Valuation Price/ Type Date	Value in AUD of which Accrued Interest Proportion in %	Profit/ Loss Unrealized in AUD of which Instrument of which Forex	P/L Unreal. in % Instr. in % FX in %
AUD	4,901	UNITS VANECK VECTORS MSCI AUSTRALIAN SUSTAINABLE EQUITY ETF EXCHANGE TRADED FUND	AU0000050353 48632714 GRNV.AX	26.6460	26.1600 CLO 31.10.2019	128,210 0.46%	-2,382 -2,382	-1.82% -1.82%
AUD	47,651.14	UNITS ELEY GRIFFITHS GROUP SMALL COMPANIES FUND	AU60EGG00011 3222428	2.1141	2.1896 NAV 30.10.2019	104,337 0.38%	3,598 3,598	3.57% 3.57%
AUD	0	UNITS ABERDEEN STANDARD EMERGING OPPORTUNITIES FUND	AU60ETL00329 2220820		2.3362 NAV 30.10.2019			
AUD	21,789.7995	UNITS IRONBARK KARARA AUSTRALIAN SMALL COMPANIES FUND CLASS -A-	AU60PAT00021 2879000	3.0259	3.5575 NAV 31.10.2019	77,517 0.28%	11,584 11,584	17.57% 17.57%
AUD	2,279	REGISTERED SHS THE A2 MILK COMPANY LTD	NZATME0002S8 1841567 A2M.AX	14.5751	12.0400 CLO 31.10.2019	27,439 0.10%	-5,778 -5,778	-17.39% -17.39%
Total Equities & Similar Investments AUD						**4,109,370 0 14.84%**		
Equities & Similar Investments EUR								
EUR	7,649	SHS EUR ISHARES II PLC - ISHARES CORE MSCI EUROPE UCITS ETF	IE00B1YZSC51 3246398 IQQY.DE	23.6121 1.5446 EUR/AUD	24.7800 CLO 31.10.2019	305,746 1.10%	26,769 14,410 12,359	9.60% 4.95% 4.65%
EUR	9,305	ACCUM.PTG.SHS WELLINGTON MANAGEMENT FUNDS (IRELAND) PLC - WELLINGTON STRATEGIC EUROPEAN EQUITY FUND CLASS -N- UNHEDGED EUR	IE00B9DPD161 20938626	13.8471 1.4731 EUR/AUD	17.5876 NAV 31.10.2019	263,984 0.95%	74,179 56,144 18,036	39.08% 27.01% 12.07%
Total Equities & Similar Investments EUR						**569,730 0 2.06%**		

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Number/ Nominal		Description	Identification ISIN Valoren Number Ticker	Cost Valuation Price Exchange Rate	Current Valuation Price/ Type Date	Value in AUD of which Accrued Interest Proportion in %	Profit/ Loss Unrealized in AUD of which Instrument of which Forex	P/L Unreal. in % Instr. in % FX in %
Equities & Similar Investments JPY								
JPY	640	UNITS NIKKEI 225 EXCHANGE TRADED FUND	JP3027650005 1264151 1321.T	18,961.5313 87.7787 AUD/JPY	23,600.0000 CLO 31.10.2019	200,770 0.72%	62,520 39,460 23,060	45.22% 24.46% 20.76%
Total Equities & Similar Investments JPY						200,770 0 0.72%		
Equities & Similar Investments USD								
USD	248	ACCUM.PTG.SHS ISHARES VII PLC - ISHARES NASDAQ 100 UCITS ETF USD	IE00B53SZB19 10737617 CSNDX.S	202.2470 0.8873 AUD/USD	452.0500 CLO 31.10.2019	161,977 0.58%	105,449 89,509 15,940	186.54% 123.51% 63.03%
USD	83.17	RED.PTG.SHS -C- CS RENAISSANCE EQUITY ACCESS FUND LTD	KYG258691271 39462785	1,135.2262 0.6894 AUD/USD	1,180.7395 EST 25.10.2019	141,885 0.51%	4,925 5,469 -544	3.60% 4.01% -0.41%
USD	4,584	SHS -R (ACC.)- GOLDMAN SACHS FUNDS SICAV - GOLDMAN SACHS EMERGING MARKETS EQUITY PORTFOLIO CAPITALISATION	LU0830622741 19578737	13.5800 0.7346 AUD/USD	14.2500 NAV 31.10.2019	94,379 0.34%	9,632 4,437 5,195	11.37% 4.93% 6.43%
USD	2,519	SHS -R (ACC.)- GOLDMAN SACHS FUNDS SICAV - GOLDMAN SACHS INDIA EQUITY PORTFOLIO CAPITALISATION	LU0830624010 19584199	18.7600 0.6751 AUD/USD	19.2900 NAV 31.10.2019	70,206 0.25%	212 1,929 -1,717	0.30% 2.83% -2.52%
USD	26,274	SHS -UCITS ETF USD C- AMUNDI INDEX SOLUTIONS SICAV - AMUNDI MSCI EMERGING MARKETS CAPITALISATION	LU1681045453 38785088 AUEM.PA	4.8361 0.7583 AUD/USD	4.6418 CLO 31.10.2019	176,209 0.64%	8,639 -7,375 16,014	5.16% -4.02% 9.17%

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Number/ Nominal		Description	Identification ISIN Valoren Number Ticker	Cost Valuation Price Exchange Rate	Current Valuation Price/ Type Date	Value in AUD of which Accrued Interest Proportion in %	Profit/ Loss Unrealized in AUD of which Instrument of which Forex	P/L Unreal. in % Instr. in % FX in %
USD	1,707	TRUST UNITS SPDR S&P 500 ETF TRUST	US78462F1030 45088 SPY.P	208.1052 0.8218 AUD/USD	303.3300 CLO 31.10.2019	748,108 2.70%	315,821 234,855 80,966	73.06% 45.76% 27.30%
USD	2,629	SHS FINANCIAL SELECT SECTOR SPDR FUND	US81369Y6059 986018 XLF.P	26.7866 0.6708 AUD/USD	28.7000 CLO 31.10.2019	109,015 0.39%	4,026 7,268 -3,242	3.83% 7.14% -3.31%
USD	172	SHS VANGUARD INFORMATION TECHNOLOGY ETF	US92204A7028 1781764 VGT.P	205.4900 0.7128 AUD/USD	223.6400 CLO 31.10.2019	55,577 0.20%	5,992 4,510 1,481	12.08% 8.83% 3.25%
Total Equities & Similar Investments USD						1,557,356 0 5.62%		
Total Equities & Similar Investments						**6,437,226** **0** **23.24%**		

Alternative Investments, Commodities & Real Estate
Hedge Funds

Number/ Nominal		Description	Identification	Cost Valuation	Current Valuation	Value in AUD	Profit/ Loss	P/L
AUD	510,393.378	UNITS GMO SYSTEMATIC GLOBAL MACRO TRUST CLASS -B-	AU60GMO00067 3375604	1.0073	0.9609 NAV 30.10.2019	490,437 1.77%	-23,695 -23,695	-4.61% -4.61%
AUD	396,717.07	UNITS BLACKROCK GLOBAL ALLOCATION FUND (AUST) CLASS -D- WHOLESALE	AU60MAL00181 3379478	1.2368	1.2330 NAV 31.10.2019	489,170 1.77%	-1,477 -1,477	-0.30% -0.30%
AUD	166,808	RED.PTG.SHS -A1- AHL (CAYMAN) SPC AUD CLASS A EVOLUTION SEGREGATED PORTFOLIO	KYG012291145 22393979	1.1382	1.9556 NAV 30.09.2019	326,210 1.18%	136,347 136,347	71.81% 71.81%

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Number/ Nominal	Description	Identification ISIN Valoren Number Ticker	Cost Valuation Price Exchange Rate	Current Valuation Price/ Type Date	Value in AUD of which Accrued Interest Proportion in %	Profit/ Loss Unrealized in AUD of which Instrument of which Forex	P/L Unreal. in % Instr. in % FX in %
USD 149	RED.PTG.SHS -A- CS RENAISSANCE ALTERNATIVE ACCESS FUND LTD USD	KYG258511099 34032546	1,160.0017 0.7191 AUD/USD	1,224.3087 EST 25.10.2019	263,568 0.95%	23,212 13,844 9,368	9.66% 5.54% 4.11%
AUD 336,341.333	RED.PTG.SHS -A- AHL DIMENSION (CAYMAN) LIMITED AUD	KYG0132G1652 30773689	0.9991	1.1466 NAV 30.09.2019	385,649 1.39%	49,601 49,601	14.76% 14.76%
Total Hedge Funds					**1,955,034** **0** **7.06%**		
Private Equity							
AUD 123,225.67	UNITS PARTNERS GROUP GLOBAL VALUE FUND (AUD) WHOLESALE	AU60ETL02762 26607292	1.8783	2.3576 NAV 30.09.2019	290,517 1.05%	59,060 59,060	25.52% 25.52%
Total Private Equity					**290,517** **0** **1.05%**		
Commodities & Precious Metals							
AUD 3,833	ETC SECURITY ETFS METAL SECURITIES AUSTRALIA LTD 2003-WITHOUT FIXED MATURITY ON GOLD COMMODITY	AU00000GOLD7 1583458 GOLD.AX	148.6351	203.2000 CLO 31.10.2019	778,866 2.81%	209,147 209,147	36.71% 36.71%
USD 580	UBS ETC UBS AG, LONDON BRANCH 2007-OPEN END ON UBS BLOOMBER CMCI COMPOSITE TOTAL RETURN	CH0031794263 3179426 TCMCI.S	1,008.3991 0.8355 AUD/USD	853.5000 CLO 30.10.2019	715,232 2.58%	15,168 -129,805 144,974	2.17% -15.36% 17.53%
Total Commodities & Precious Metals					**1,494,098** **0** **5.39%**		

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Number/ Nominal		Description	Identification ISIN Valoren Number Ticker	Cost Valuation Price Exchange Rate	Current Valuation Price/ Type Date	Value in AUD of which Accrued Interest Proportion in %	Profit/ Loss Unrealized in AUD of which Instrument of which Forex	P/L Unreal. in % Instr. in % FX in %
Real Estate								
AUD	20,725	STAPLED SECURITY DEXUS	AU000000DXS1 3819970 DXS.AX	11.0802	11.9700 CLO 31.10.2019	248,078 0.90%	18,442 18,442	8.03% 8.03%
AUD	23,058	STAPLED SECURITY GOODMAN GROUP	AU000000GMG2 18079202 GMG.AX	8.8381	14.3900 CLO 31.10.2019	331,805 1.20%	128,016 128,016	62.82% 62.82%
AUD	72,767	STAPLED SECURITY MIRVAC GROUP	AU000000MGR9 821911 MGR.AX	1.8439	3.2100 CLO 31.10.2019	233,582 0.84%	99,410 99,410	74.09% 74.09%
Total Real Estate						**813,465 0 2.94%**		
Other Alternative Investments								
AUD	4,309	PTG.SHS LEGG MASON GLOBAL FUNDS PLC - LEGG MASON WESTERN ASSET MACRO OPPORTUNITIES BOND FUND PREMIER CLASS DISTRIBUTING (S) HEDGED AUD	IE00BYYQZZ17 28828240	101.7099	114.7400 NAV 31.10.2019	494,415 1.79%	56,147 56,147	12.81% 12.81%
Total Other Alternative Investments						**494,415 0 1.79%**		
Total Alternative Investments, Commodities & Real Estate						**5,047,528 0 18.22%**		
Total Investments						**27,696,020 100.00%**		
of which Accrued Interest						**16,627**		

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4. Appendix

4.1. Explanations

Accrued Interest
Accrued interest is not displayed for financial instruments with variable interest rate or frequency within the same interest period, except for Floating Rate Notes. For FINER Revexus, the accrued interest displayed is based on the deposit currency for reference purpose only. Entitlement to the accrued interest depends on the product features. All accrued interests are displayed in the reporting currency of the portfolio and are calculated recognizing trades end of day. The FX conversion rates (reflected below) are used to convert the amount from original currency to reporting currency. The accrued interest payable/receivable is displayed as the net amount on Current Account balances. As a result of the foregoing and other factors, the accrued interest is only an estimate and may not reflect the actual interest accrued, if any.

Activity Summary
The asset inflows and outflows include client-instructed transactions, which are aggregated as Net Investment Asset Flows. Non-Investment Flows refer to transactions related to Non-Investment Related Positions such as loan transactions to finance such Non-Investment Related Positions. Non-investment Flows do not contribute to the performance of the account. Such asset inflows and outflows do not include fees and taxes.

Analyses
Values displayed for the respective month labels are as of month-end dates. If the report end period is not a month-end, the report period end month label will show the values as of the report period end date.

Asset Classification
If an instrument is classified as 'not classifiable', the instrument is pending its proper classification. As soon this is available in the system, the instrument will reflect the correct classification.

Cost Valuation Exchange Rates
For the Positions section, the cost valuation exchange rate displayed is always the instrument currency against the portfolio currency.
For the Transactions section, the cost valuation exchange rate displayed is always between the instrument currency and reporting currency. For execution of FX purchase/sale transactions, the transaction valuation is based on the end of day exchange rate on the value date and the cost valuation is based on the FX contract rate.

Duration
Modified duration is a change in the price of a bond arising from a change in market yields. Modified duration is expressed as an approximate percentage. The investment report displays the Modified Duration method for all Fixed Income instruments.

Fees/ Taxes
Fees include management or safekeeping fees.
Taxes include value-added taxes and service related taxes, depending on country specific rules.

Income Summary
Coupon received and coupon paid, as well as interest earned and interest paid, does not include accrued or unpaid coupon or interest.
Year to date figures include the addition of the monthly figures inclusive of any backdated income processing/ adjustments.
Figures shown can be gross or net depending on the specific country and market practice.
Non-Investment related Income is included in the Income Summary.

Market Value
The values stated as begin of period are asset values as of the last reported statement period.
The values stated as beginning/ ending market values are asset values that are inclusive of most updated market prices and backdated transactions.

Non-Investment Related Positions
Non-Investment Related Positions refer to positions held in the form of insurance policies, guarantees (standby letters of credit/bank guarantees/holdcovers) or mortgages,.
Non-Investment Related Positions are displayed in the Scope of Analysis and in the Non-Investment Related Positions section. However, they are not included in any other analyses.

Performance Calculation
The performance figures are calculated based on investment related positions using the TWR Daily method (Time Weighted Rate of Return), which is based on geometrically linking daily rates of return.
The start of period displayed for the performance calculation is referring to Beginning Market Value, which is the closing balance of the previous day. The end of period displayed is referring to Ending Market Value, which is the closing balance of the day.

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The net of fees and gross of taxes return is calculated after deduction of fees and before deduction of taxes.

The cumulative return calculation is reset, every time when geometrically linking the rates of return would render distorted values. Such scenarios can happen when the market values fluctuate around zero.

Return values prior 2015 displayed in this report might be different from previously reported return values.

Profit/ Loss Calculation

Realized and unrealized profit and loss are calculated by comparing the market or transaction value with the average cost value. For every trade date the system computes the average cost, first processing investments before disinvestments. Transaction costs are included in both realized and unrealized profit/loss calculation.

Unrealized profit/ loss displayed in the Positions section are calculated as of the reporting date. FX conversion rates used in the computation of the unrealized profit/loss is the derived rate based on the average price as of the individual transaction date.

Rating

Rating refers to the rating of an investment product and is either based on information available to the Bank or is obtained from sources believed to be reliable by the Bank as of the investment report date.

Yield

The investment report displays Yield for all Fixed Income instruments and is displayed per market price.

Abbreviations

BID = Bid Price
CLO = Closing Price
EST =
MID = Average Price
NAV = Net Asset Value

Rounding logic

Values in this investment report are calculated with exact numbers, however when presenting the data, values are rounded and therefore minor rounding differences might occur.

Large Numbers

The figures are consolidated and shown in denominations of thousands, millions and billions where applicable. If a value is too long to be displayed in the report itself, e.g. 1,526,555,333.26 the figure is consolidated and displayed as 1,526,555.33 in thousands in the report. If the value exceeds the column limit, a further division will take place and the phrase in millions/in billions will be displayed.

Conversion Rates as of 31.10.2019

AUD 1.0000 = CHF 0.6833
AUD 1.0000 = JPY 75.2305
AUD 1.0000 = USD 0.6921

EUR 1.0000 = AUD 1.6131
GBP 1.0000 = AUD 1.8678

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4.2. Legal Information

According to the Account Opening Terms and Conditions, this investment report shall be conclusive and binding if the Bank does not receive your objection in writing to any matters contained in this investment report within 14 days from the issue date.

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The Bank will, at the time of printing this investment report, use the last price indications available to it. Due to the time differences between the Asia Pacific region and markets in other regions, the price indications reflected in the Bank's investment report will not always reflect the price indications available on the last business day of the month in certain markets.

The Bank may use either an onshore or offshore CNY rate for FX conversion to reporting currency depending on the asset. Please note that there may be a differential between the onshore and offshore rate. Please refer to your RM if you need further information on the FX conversion rate applied in relation to your CNY positions.

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This investment report is an electronically generated report and does not require a signature.

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APNIC
Portfolio Review

November 2019

Credit Suisse AG
Private Banking Australia

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Key Highlights – Market Commentary
Period Ending 30/09/2019 and October

- Although a reinvigorated US-China trade war and brief inversion of a key US yield curve saw financial markets retreat for the month of August, the September quarter was generally positive as central banks once again loosened monetary policy. The US, European and Australian markets rose in Australian Dollar terms by 5.36%, 2.30% and 2.37%, respectively for the September quarter. Emerging Market equities were the exception to the rule, falling -0.51% over the period. Bonds advanced 1.98% as rate cuts pushed yields downwards.

- The Australian economy is navigating a period of slow growth. Employment growth has been firm but many of the jobs are part time. Participation has reached an historical high, and so unemployment increased to 5.3%. Wages growth is low, but the housing market in Sydney and Melbourne is recovering, as the Reserve Bank of Australia (RBA) has cut interest rates to an all time low of 0.75%.

- The US Federal Reserve (Fed) cut the official interest rate by 0.25% in October as the US Manufacturing Purchasing Manager Index (PMI) dropping to 47.8, pointing to a manufacturing recession, and payroll numbers also indicated slower jobs growth.

- In Europe, the European Central Bank (ECB) also eased monetary policy, lowering its key deposit rate from -0.4% to -0.5% and pledged to buy 20 billion Euros in bonds a month. The action followed a string of disappointing data which saw the central bank revise down inflation and growth targets for the region. The manufacturing sector contracted sharply in September with the corresponding PMI falling from 47.0 to 45.6. The previously resilient Services PMI offered little reprieve, and consumer confidence remained weak.

- The Chinese economy continues to falter. The Manufacturing PMI for September was 49.8 indicating a small contraction. Industrial production for August increased 4.4% Year on Year (YoY), down from July's 4.8%, and retail sales slowed further. In response, the People's Bank of China (PBOC) reduced the reserves required to be kept by banks and made conciliatory moves to exempt certain US goods from tariffs.

Asset Allocation
Period Ending 31/10/2019

- The portfolios finished October underweight cash, neutral bonds, overweight equities and overweight alternatives.

- Within equities, we are now looking to reallocate some of the overweight positioning from developed markets (DM) to emerging markets (EM), raising EM equities to an overweight allocation. Recent data, has provided initial signs of the recovery we expect in manufacturing. As a result, we think that the risk/return profile of EM equities has improved. Within DM, we retain a preference for the USA due to that market's better growth. We also retain our long-standing preference for technology shares, which have continued to outperform. Financial shares remain preferred as well, as they should further benefit from the ongoing rotation from defensive into cyclical sectors. Locally, we are looking to move Australian equities to an underweight position (currently neutral) based on valuation grounds.

- We have moved our overweight bond position closer to neutral to take profit after a strong bond market rally and the portfolio is now more closely aligned with the fixed income benchmark.

Current Asset Allocation

- Cash
- Fixed Income
- Australian Equities
- International Equities
- Alternative Investments

3.5%
18.2%
12.1%
11.5%
54.7%
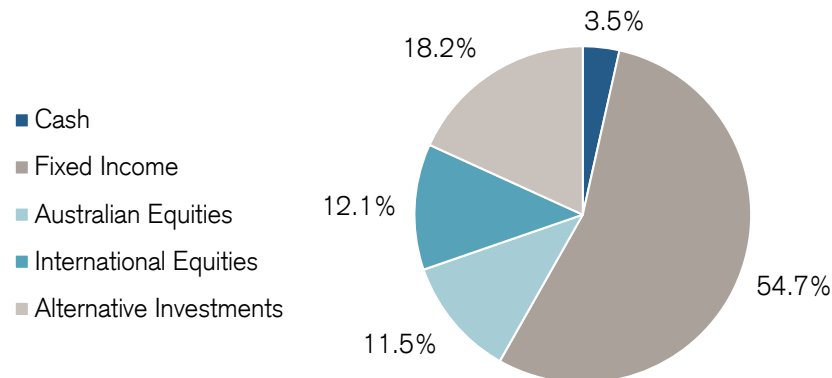
Benchmark Asset Allocation

- Cash
- Fixed Income
- Australian Equities
- International Equities
- Alternative Investments

5.0%
17.5%
11.25%
11.25%
55.0%
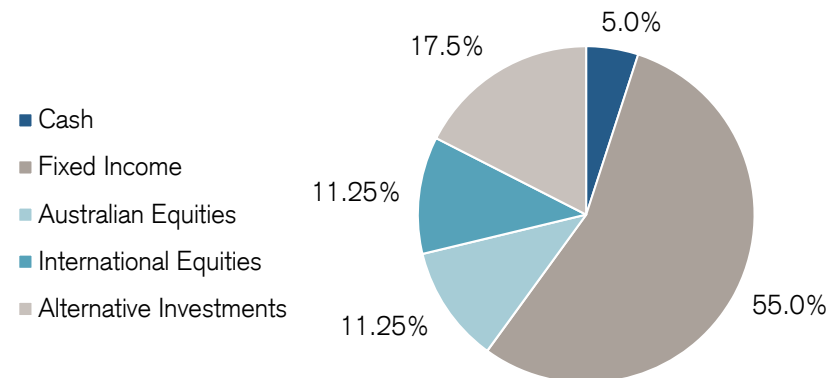
Performance Statistics
Period Ending 31/10/2019

Yield Strategy
Portfolio Value End October AUD $27,692,613

APNIC Portfolio	Portfolio[1]	Benchmark	Relative Performance	CPI + 2.5%
October	-0.24%	-0.15%	-0.09%	0.35%
3 Months to end October	0.55%	0.68%	-0.13%	1.05%
Calendar Year to end October	11.32%	11.27%	+0.05%	3.44%
One Year to end October	11.49%	11.36%	+0.13%	4.20%
3 Years p.a. to end October	6.52%	6.66%	-0.14%	4.37%
Since Inception[2] p.a. to end October	5.87%	6.03%	-0.16%	4.43%

[1] Performance is after fees but before franking
[2] Inception September 2013

Outlook
As at 31/10/2019

- A combination of factors – diminishing Brexit risks, a further rate cut by the US Federal Reserve (Fed), hopes for a first-phase US-China trade deal, indications of a manufacturing recovery in the making – has contributed to a strong performance in global equities over the past few months. The major equity indices, including the S&P 500 and the Euro Stoxx 50, broke out to the upside, marking new highs. At the same time, bond yields have backed up in the USA and in European core markets. With a trade deal yet to be signed though, UK elections coming up and green shoots not yet making a recovery, we have had to ask ourselves whether it is time to scale back our positive cyclical positioning within the portfolios.

- We continue to believe that equities offer a better return potential than bonds. In a portfolio context, we thus stay overweight equities and underweight government and investment grade bonds. Investors often exit favourable positions too early due to an urge to lock in profits. While our positions might be subject to some near-term reversal after their strong run, we expect them to continue to perform over our tactical 3–6-month horizon. We think that a recovery in manufacturing will indeed take hold, which should further reduce lingering worries among investors that the economic expansion may be derailed. This should further increase investors' appetite for cyclical risk. Should the USA and China seal a "phase one" trade deal, which is our base case, we would likely see further market gains.

- We therefore approach 2020 a little more optimistic than even a month ago. We expect recession fears to gradually subside, with reasonable economic fundamentals and a calming of the tariff issue to provide support for equities. We continue with a neutral position in bonds which despite low yields, continue to provide the portfolio with stability, although with lower expected income.

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2020 Activity Plan and Budget

APNIC

Contents

1   Introduction

This document explains APNIC's 2020 Activity Plan and Budget, for the information of APNIC Members and the wider community. It is structured according to the new Four Year Strategic Direction (2020-2023), adopted by the APNIC EC on 3 December 2019.

Under the previous Four Year Strategic Direction (2016-2019), APNIC's activities were structured under four main areas:
- Serving Members
- Regional Development
- Global Cooperaton
- Corporate

Under the new Four Year Strategic Direction (2020-2023), the structure moves from this largely geographic/audience-based classification to a new activity structure based on the type of work being executed.

These new areas, or "pillars" are:
- Membership
- Registry
- Development
- Information
- Capability

Activities in the new Strategic Direction are defined for the purposes of planning, budgeting and reporting – and categorized into 18 workstreams under the five strategic pillars, aligned with APNIC's vision and mission (see page 4).

The 2020 Activity Plan and Budget describes activities according to the same structure; and provides under each workstream, the activities which are planned for 2020, along with budget allocations.

Feedback on the 2020 Activity Plan and Budget is welcome. If you would like to comment, please contact the APNIC Executive Council (EC).

1.1   APNIC Planning Process

The APNIC EC and Secretariat receive input from the community through the biennial survey (apnic.net/survey), APNIC Conferences, and other interactions. These inputs guide APNIC's strategy and annual planning, and the Secretariat reports progress on its activities back to the community during the year.

1.2   APNIC Activities

The Four Year Strategic Direction (2020-2023) defines 18 workstreams, across five pillars, as follows. Each workstream includes a number of activities which are described in this plan.

i) Membership
- Member Services
  - Deliver excellence in service and value to Members through active listening and proactive engagements.
- Membership Products
  - Develop and maintain products that deliver value and improve the experience for Members.
- Membership Reporting
  - Ensure that APNIC remains fully accountable to its Members, by providing timely and accurate information about APNIC operations and ensuring Members can freely and easily exercise their membership rights.

ii) Registry
- Registration Services
  - Provide delegation and registration services for Internet numbers (ASN, IPv4, IPv6) according to the community developed policies.
- Registry Products
  - Maintain accurate and reliable number registry products and develop new registry product functionality.
- Policy Development
  - Facilitate the open Policy Development Process to ensure resource policies in the APNIC region are developed and implemented in a neutral manner consistent with agreed rules and community expectations.

iii) Development
- APNIC Conferences
  - Arranging the provide engaging and relevant forums – physical and virtual – for the entire APNIC community to learn, share ideas and experience, make new contacts, and participate in developing the Internet.
- Foundation Support
  - Provide financial and operational support to ensure the success of the APNIC Foundation.
- Community Engagement
  - Ensure APNIC is a meaningful and enabling technical resource to the Internet community.
- Community Participation
  - Encourage awareness and diverse participation in community-led APNIC processes (including Special Interest Groups), and APNIC's events, initiatives and online properties.
- APNIC Academy
  - Scale up training and technical assistance infrastructure with high-quality training content and curriculum.
- Infrastructure Support

        ○ Promote and support the deployment of critical Internet infrastructure and operations.

iv) Information
- Information Products
  - Develop and maintain meaningful information services to the communities APNIC serves.
- Research and Analysis
  - Analyse the pressures shaping the evolution of Internet infrastructure and share insights with the community.

v) Capability
- Employee Experience
  - Attract, develop and retain talented, service-oriented people to deliver APNIC's mission and exceed community expectations.
- Finance and Business Services
  - Provide efficient and robust finance and business services and facilities to effectively support and manage APNIC's operations.
- Technical Infrastructure
  - Provide stable and secure technical infrastructure to support APNIC operations and services.
- Governance
  - Provide the legal, economic and governance framework and professional services to support APNIC's operations to minimise risk, ensure compliance and continuity.

2   2020 Activity Summary

2.1   Activity Summary

The introduction of the new workstreams and pillars, of the new Four Year Strategic Direction (2020-2023), means that some activities previously categorised and reported in one area (or pillar) have now moved to another. As a result, the annual budget has been restructured to reflect the new activity distribution.

The following table and chart provide a breakdown of APNIC's 2020 budget under this new structure.

2020 Activity Budget

Pillar	FTE	%	Expenses (AUD $)	%	CAPEX (AUD $)	%
Membership	17.55	21%	4,222,795	17%	-	-
Registry	9.85	12%	2,111,516	9%	-	-
Development	23.55	29%	8,622,717	35%	396,000	54%
Information	5.75	7%	1,643,653	7%	80,000	11%
Capability	25.30	31%	7,692,341	32%	262,600	36%
Grand Total	**82.00**	**100%**	**24,293,022**	**100%**	**738,600**	**100%**

2020 Budget Expense Distribution
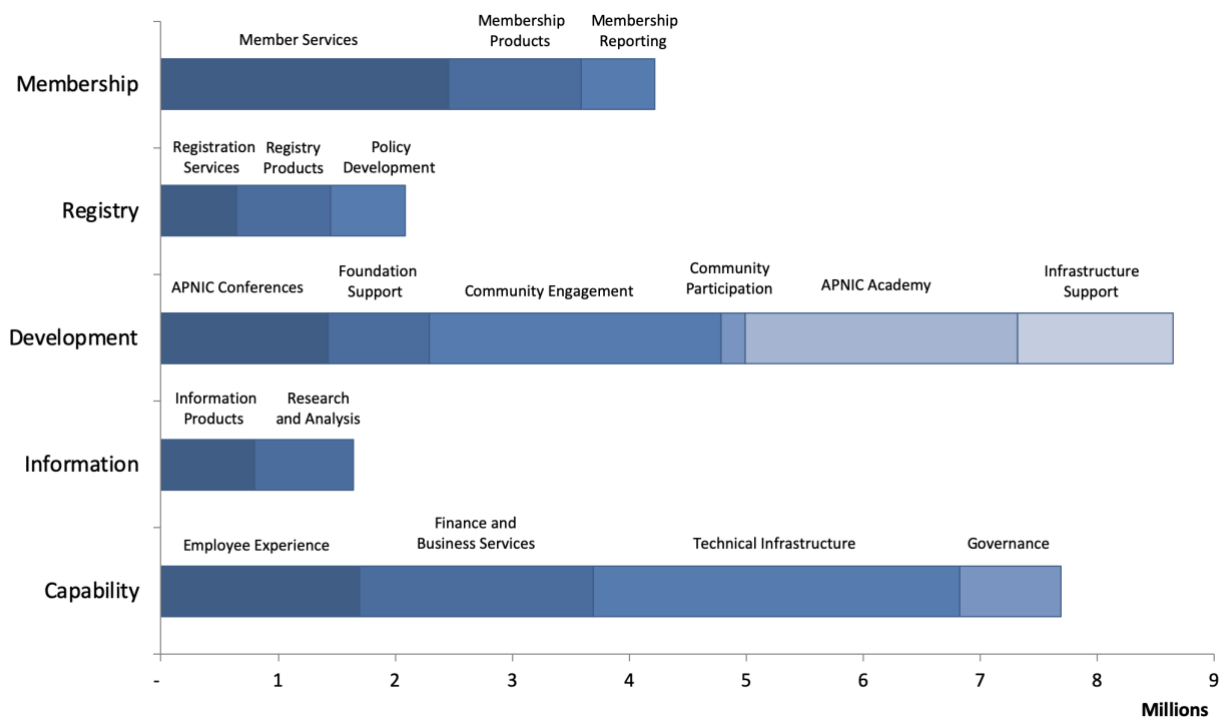
2.2   Notes on the Activities

APNIC's activities are reported in this document under the 18 workstreams and five pillars described in the previous section:
- Membership
- Registry
- Development
- Information
- Capability

The activities are described as either 'Operations' or 'Investments'.
- 'Operations' includes all ongoing activities required for continued provision of APNIC services.
- 'Investments' are discrete project activities which result in new products, services, or improvements to APNIC services.

A table summarizes the resources (financial and human) needed to successfully complete the operations and investments in each workstream. All monetary figures quoted are in Australian Dollars (AUD).
- **FTE:** The number of Full-Time Equivalent employees required for the activity. In all cases, contributions from more than one employee are involved, and the FTE number will comprise a percentage of time from each employee. For example – an FTE of 1.6 may be made up of four employees who each dedicate 40% (0.4) of their time to the activity, for a period of one year. The detailed matrix used to calculate estimated FTE allocations is provided on page 22.
- **Expenses:** Refers to all operational costs directly incurred by the activity (in AUD).
- **CAPEX:** Provides the provision for capital expenditure required by the activity (in AUD).

3 APNIC 2020 Activity Plan

3.1 Membership

3.1.1 Member Services

	FTE	Expenses	CAPEX
Workstream total	9.8	2,461,629	-
Operations	9.8	2,461,629	-
Investments	-	-	-

Operations

3.1.1.1 Member Services
Ongoing service to Members in relation to APNIC products and services. In 2019, APNIC handled a quarterly average of more than 7,000 Member requests, 200 phone calls, 870 online chat sessions, and processed more than 16,000 Member invoices and receipts. An increased workload is expected in 2020.

3.1.1.2 Member Experience
Capture and analysis of Member feedback on APNIC products and services, for quality control and continuous improvement.

3.1.1.3 Membership Development
Ensuring that those organisations that may need APNIC products and services can discover and access them.

3.1.1.4 APNIC Survey
Conducting the biennial APNIC Member and stakeholder survey, due to be held again in 2020.

3.1.2 Membership Products

	FTE	Expenses	CAPEX
Workstream total	7.15	1,127,922	-
Operations	4.80	763,450	-
Investments	2.35	364,472	-

Operations

3.1.2.1 Membership Product Management
Ongoing operation, development and maintenance of APNIC Membership products, including MyAPNIC, online forms, and collaborative online platforms.

Investments

3.1.2.2 Online Community Platform
Develop a collaborative online platform for network operators to share knowledge and experience.
- o Objectives
  - ▪ Identify a common platform to serve as APNIC's community FAQ and knowledge base

- Configure and populate the platform with related FAQ and knowledge base information
  - o Benefits to Members
    - Allows network operators to find answers to common questions and issues quickly
    - Network operators can learn from each other's experience and save time researching multiple sources

3.1.2.3 Election System

Upgrade the current election system to make use of an external, auditable voting platform (BigPulse).
- o Objectives
  - Introduce independent 3rd-party voting platform
  - Eliminate paper ballots
- o Benefits to Members
  - Improved user experience for voting and elections
  - Improved trust and auditability of APNIC elections

3.1.3   Membership Reporting

	FTE	Expenses	CAPEX
Workstream total	0.60	633,244	-
Operations	0.60	633,244	-
Investments	-	-	-

Operations

3.1.3.1 Planning and Reporting

Development and publishing of APNIC's Activity Plan and Budget, Four Year Strategy document, Annual Report, and reports to the community at events, as part of APNIC's commitment to transparency and accountability.

3.2   Registry

3.2.1   Registration Services

	FTE	Expenses	CAPEX
Workstream total	3.70	645,389	-
Operations	3.70	645,389	-
Investments	-	-	-

Operations

3.2.1.1 IPv4, IPv6 and ASN delegation and registration services

Providing delegation and registration services for Internet numbers according to current policies. In 2019, APNIC processed 5,400 resource and transfer requests. It is assumed that this activity will continue at a similar level in 2020.

3.2.1.2 Resource Quality Check (RQC)

Providing a service and tools to check the "quality" of resources delegated by APNIC, with respect to routing status, whois and IRR registration, geolocation status, blacklisting and other measures.

3.2.1.3 Maintain correct and current registry data

Encouraging Members to improve and maintain accuracy and currency of number resource registration records.

3.2.1.4 Reclaiming unused IPv4 address space

Identifying and contacting holders of unused IPv4 address space to encourage the return or transfer of unused resources; providing a listing service for Members holding resources available for transfer.

3.2.2   Registry Products

	FTE	Expenses	CAPEX
Workstream total	5.30	825,807	-
Operations	4.30	672,710	-
Investments	1.00	153,097	-

Operations

3.2.2.1 Internet Number Registry Management

Operation and management of the Internet number registry, including identifying areas for improvement and development.

3.2.2.2 Registry Product Management

Ongoing operation, development and maintenance of APNIC Registry products including Whois, RDAP, RPKI, RDNS and IRR.

Investments

3.2.2.3 RPKI AS0 ROA

Implement publication of AS0 ROA in accordance with Prop-132.
- o Objectives
    - ▪ Complete proposed implementation plan, and report at APNIC 49.
    - ▪ Redesign of internal (ARMS) tools and deploy service during 2020, with updates provided at APNIC 50
- o Benefits to Members
    - ▪ Implementation of agreed mechanism to help avoid address hijacking and other "bogons"

3.2.3   Policy Development

	FTE	Expenses	CAPEX
Workstream total	0.85	640,320	-
Operations	0.85	620,320	-
Investments	-	20,000	-

Operations

3.2.3.1 Policy Development

Facilitate the open Policy Development Process to ensure that resource policies in the APNIC region are developed in manner consistent with agreed rules and community expectations. This activity includes support for:

- Policy SIG meetings (twice per year) and mailing lists
- Secretariat review of policy proposals
- Exchange of policy-related information with other RIRs
- Support of ASO Address Council Members from the APNIC region.

3.2.3.2 Policy Implementation
Implement community-approved policies in a timely and effective manner.

3.2.3.3 Policy Analysis
Analyse the impact of policy proposals on APNIC operations and advise the community as part of the PDP to ensure they are fully informed; identify areas of policy or registry operations where policies may be required, or existing policies clarified by the community.

Investments

3.2.3.4 Policy Documentation Review
Editorial review and potential restructure of policy documentation.

- o Objectives
  - ▪ Review APNIC policy documentation to improve clarity and readability, and identify any areas needing additional community input.
- o Benefits to Members
  - ▪ Improved policy documentation which is easier to use and understand.

3.3   Development

3.3.1   APNIC Conferences

	FTE	Expenses	CAPEX
Workstream total	4.60	1,405,301	1,000
Operations	4.50	1,319,912	1,000
Investments	0.10	85,389	-

Operations

3.3.1.1 APNIC Conferences
Deliver well-organized, high-quality events for the APNIC community with consistently interesting and relevant program content.

- APRICOT 2020 will be held in Melbourne, Australia (12 – 21 February 2020).
- APNIC 50 will be held in Dhaka, Bangladesh (3 – 10 September 2020).

Investments

3.3.1.2 Fellowships
Support for participation in APNIC conferences and workshops, including "returning" and "youth" fellowships, with a continued focus on diversity.

- o Objectives
  - ▪ Provide support for selected community members from the region's developing economies to attend and participate in APNIC meetings
  - ▪ Bolster investment by attracting community sponsorship to expand number of fellowships offered
- o Benefits to Members
  - ▪ Opportunities for more Members to attend APNIC conferences
  - ▪ Diversity of participation in APNIC conferences

3.3.2 Foundation Support

	FTE	Expenses	CAPEX
Workstream total	1.15	865,463	-
Operations	-	-	-
Investments	1.15	865,463	-

Investments

3.3.2.1 Operational and Administrative Support

Provide two full time staff seconded to the Foundation under APNIC funding, plus a total of 1 FTE equivalent in operational support.
- o Objectives
  - ▪ Provide APNIC staff support to allow the Foundation to operate successfully
- o Benefits to Members
  - ▪ A well-run Foundation to deliver increased funding for development projects in the APNIC region

3.3.2.2 ISIF Asia Contribution

Annual contribution of $100,000 to ISIF Grants and Awards, including network operations research grants.
- o Objectives
  - ▪ Encourage Internet innovation and network operations research in the Asia Pacific
- o Benefits to Members
  - ▪ Recognition and funding of innovative Internet projects that benefit the community
  - ▪ Research projects which help inform Members' decisions around Internet operations

3.3.3 Community Engagement

	FTE	Expenses	CAPEX
Workstream total	7.15	2,493,689	-
Operations	7.15	2,493,689	-
Investments	-	-	-

3.3.3.1 Technical Community Support
Sponsorship and participation in NOGs, IXPs, Peering Forums; and Research & Education activities; around 30 events during 2020.

3.3.3.2 Security Community Support
Work with security organizations such as APCERT, FIRST, and local CERTs/CSIRTs; support the development of CERT/CSIRTs, and best cybersecurity practices.

3.3.3.3 Internet Organisation Cooperation
Play a responsible role in the global Internet ecosystem through active collaboration with other Internet organizations.

3.3.3.4 Internet Governance Participation
Strengthen global Internet Governance by continued support for the IGF and related events at a regional and national level.

3.3.3.5 Government Engagement
Participation in inter-governmental forums such as ITU, APT and APECTEL, and engaging with relevant government agencies in the region, advocating for APNIC's vision and mission, technical capacity building and adoption of best practices.

3.3.4   Community Participation

	FTE	Expenses	CAPEX
Workstream total	1.10	203,283	-
Operations	0.90	165,304	-
Investments	0.20	37,979	-

Operations

3.3.4.1 Community-led Processes
Increase awareness of, and participaton in, community-led APNIC processes including the PDP, Special Interest Groups (Policy, Cooperation, NIR, Routing Security), and BOFs. Both online and face-to-face participation is encouraged.

3.3.4.2 Participation in APNIC Services and Initiatives
Increase awareness of APNIC services and initiatives available to benefit APNIC Members and the wider community.

3.3.4.3 Encouraging Newcomers
Encourage new participants in the APNIC community – both online and face-to-face – particularly the next generation of network engineers.

Investments

3.3.4.4 Community Diversity
Monitor and improve diversity (including gender, age and language) of community participation in APNIC events and activities.
  o Objectives
    ▪ Gather demographics of conferences and other APNIC activities
    ▪ Support increased diversity through APNIC fellowship, conference and community activities
    ▪ Review the APNIC website to identify translation opportunities

- o Benefits to Members
  - Understanding of the diversity of participants in the APNIC community
  - Greater diversity of community participation in APNIC activities

3.3.5 APNIC Academy

	FTE	Expenses	CAPEX
Workstream total	8.45	2,330,523	-
Operations	5.75	1,729,064	-
Investments	2.70	601,459	-

Operations

3.3.5.1 Curriculum Development
Continued development of online and face-to-face courses to increase quality, scope, acceptance and recognition of APNIC Academy training. IPv6 deployment courses will be expanded in 2019.

3.3.5.2 Face-to-Face Training
Delivery of face-to-face training around the APNIC region to increase knowledge and skills in the community.

3.3.5.3 Online Training
Delivery of online technical training to increase knowledge and skills in the APNIC community via the APNIC Academy platform.

3.3.5.4 Community Trainers
Continued recruitment and development of Community Trainers to expand the scope and quality of APNIC Academy training.

3.3.5.5 Technical Assistance
Respond wherever possible to requests from Members for technical assistance, both online via the APNIC Academy platform and face to face, on a cost-recovery basis.

3.3.5.6 RPKI Awareness and Deployment Support
Increase adoption of RPKI and routing security through training, technical assistance, presentations at relevant events, online information, and encouraging deployment of RPKI ROV in IXPs.

3.3.5.7 IPv6 Awareness and Deployment Support
Encourage deployment of IPv6 through training and technical assistance, and sharing of IPv6 best practices, information resources and case studies.

Investments

3.3.5.8 APNIC Academy Development
Develop APNIC Academy as a cohesive learning environment by integrating better blended face-to-face and online training services.
- o Objectives
  - Integrate various training systems (e.g. registration, calendar and training wiki) into APNIC Academy
  - Establish an online technical assistance platform that connects Members with experts in the Internet community
  - Increase multilingual support by adding more languages to more courses, and engaging community reviewers

- Develop a new digital badging and recognition system
  - o Benefits to Members
    - Improved access to APNIC's training offerings and technical assistance
    - Improved experience and satisfaction with training services across all skill levels
    - Greater access to training in more economies with language barriers.

3.3.6 Infrastructure Support

	FTE	Expenses	CAPEX
Workstream total	1.10	1,324,458	395,000
Operations	0.20	1,147,451	275,000
Investments	0.90	177,008	120,000

Operations

3.3.6.1 Infrastructure Deployment

Support for deployment and management of IXPs and DNS anycast rootservers and ROV support (as a package), and deployment of anchors for the RIPE Atlas program.

3.3.6.2 Honeynet Deployment

Maintain and grow the APNIC Community Honeynet to help network operators understand online adversaries.

Investments

3.3.6.3 M-Root Anycast Instance Deployment Support

Partnership with the WIDE Project to improve the anycast deployment of M-Root.
  - o Objectives
    - Help streamline M-Root deployment and operations by improving process and automation
  - o Benefits to Members
    - Faster and more reliable DNS service
    - Faster and easier deployment of Root DNS anycast instances at desirable or underserved locations

3.3.6.4 Security Threat Sharing Platform

Extend the APNIC Community Honeynet into a platform for APNIC Members to share cybersecurity threat information so they can take necessary action.
  - o Objectives
    - Create platform for APNIC Members to share threat information and develop a trusted community culture
    - Encourage development of analysis and incident response capabilities among Members
  - o Benefits to Members
    - Access to actionable threat information to help protect infrastructure and customers
    - Increased situational awareness on cybersecurity threats

3.4   Information

3.4.1   Information Products

	FTE	Expenses	CAPEX
Workstream total	4.90	794,498	-
Operations	4.90	794,498	-
Investments	-	-	-

Operations

3.4.1.1 APNIC Blog

Maintain the APNIC Blog's position as the Internet operations community's leading daily news and opinion portal in the Asia Pacific and beyond.

3.4.1.2 Information Product Management

Ongoing operation, development and maintenance of APNIC information products including the Internet Directory, NetOX and DASH to improve value, ease of use, availability and performance for the APNIC community.

3.4.2   Research and Analysis

	FTE	Expenses	CAPEX
Workstream total	0.85	849,155	80,000
Operations	0.85	849,155	80,000
Investments	-	-	-

Operations

3.4.2.1 Conducting research and measurements

Conduct research experiments on topics including IP addressing, routing, DNS and other critical Internet infrastructure matters.

3.4.2.2 Cooperative Research Opportunities

Engage in research partnerships with other reputable organizations.

3.4.2.3 Sharing Research Outcomes

Share research insights online and at selected events to raise awareness of issues and trends which may impact Internet operations and assist policy discussions.

3.5   Capability

3.5.1   Employee Experience

	FTE	Expenses	CAPEX
Workstream total	2.45	1,692,464	-
Operations	2.30	1,547,217	-
Investments	0.15	145,247	-

Operations

3.5.1.1 Organisational Development

Optimise organisational structure for the achievement of Member-focused objectives, with clear lines of accountability. In 2020, the focus will be on communicating the new Strategic Direction, and a revamp of APNIC's performance management approach.

3.5.1.2 Physical Work Environment Management

Ensure that all places of work for APNIC staff, both the office and remote locations, are fit for purpose, and safe.

3.5.1.3 Talent Attraction and Retention

Recruiting and onboarding staff to fill vacancies, and providing all staff with opportunities to develop skills to meet business requirements and aid retention. In 2020, leadership development and enhanced learning will be focus areas.

3.5.1.4 Policies and Benefits Management

Provide policies and benefits which meet current best practice for market competitiveness and employee retention. A new HR system for staff to manage employment, development, performance and benefits interactions will be rolled out in 2020. The Parental Leave policy will be updated to align with current best practice.

Investments

3.5.1.5 Product Management

Establish two new product teams (using existing staff), and continue to spread APNIC's product management framework to other areas of the organisation.
- o Objectives
  - ▪ Set up product teams for the APNIC Academy online platform and enterprise applications
  - ▪ Provide training and coaching for product managers and teams
- o Benefits to Members
  - ▪ Development and management of products and services that are validated with the needs of Members and the community

3.5.2   Finance and Business Services

	FTE	Expenses	CAPEX
Workstream total	8.20	1,999,137	55,000
Operations	6.70	1,749,985	55,000
Investments	1.50	249,152	-

3.5.2.1 Knowledge Management

Maintaining effective methods, structures and tools to retain and retrieve corporate information within APNIC.

3.5.2.2 Financial Services

Transparent and efficient management and reporting of APNIC's financial affairs. In 2020, APNIC's finance team is expected to issue and pay in excess of 14,000 invoices, process 1,000 journals, settle over 1,700 expense claims, and reconcile more than 4,000 credit card transactions. The existing financial reporting tool will also be replaced to improve efficiency of forecasting and monthly financial reporting.

3.5.2.3 Business Services

Effective management of office facilities, administration and travel, and maintaining APNIC's adherence to the ISO 9001 quality management system. APNIC will continue to undertake regular scenario testing of its Business Continuity Plan as a critical part of its overall risk management framework.

Investments

3.5.2.4 Business Intelligence

Establish a comprehensive business intelligence facility that integrates data from a range of systems to produce better analysis and consistent reporting.

- o Objectives
    - ▪ Deliver a data warehouse incorporating customer and registration data, providing analysable structures suitable for use with tools such as Tableau
    - ▪ Migrate recurring reporting to the new system
- o Benefits to Members
    - ▪ Improved Secretariat decision-making and easier access to structured information for service requests.
    - ▪ Improved reporting to APNIC EC and Members

3.5.3 Technical Infrastructure

	FTE	Expenses	CAPEX
Workstream total	13.10	3,140,201	207,600
Operations	12.60	2,965,752	207,600
Investments	0.50	174,449	-

Operations

3.5.3.1 Information Architecture and Management

Management and ongoing improvement of APNIC's information architecture and governance for better integration and coordination of systems and business processes.

3.5.3.2 Network and Infrastructure Operations

Management of APNIC data centre presence in the region, interconnections between the APNIC network and peer/upstream networks, appropriate peering relationships, and maintaining a 24x7 Incident Response Team.

3.5.3.3 System and Platform Operations

Migration of services to virtualized and 'cloud' infrastructure to improve online service performance; IT asset management including maintenance, depreciation, and licensing associated with APNIC systems. In 2020, Wordpress services will be migrated and multi-region RDAP will be enabled.

3.5.3.4 CSIRT Operations
Maintaining a CSIRT to strengthen security incident response and management within APNIC (relating to APNIC systems and services).

3.5.3.5 Enterprise Application Management
Management and ongoing improvement of enterprise applications underpinning APNIC operations.

Investments

3.5.3.6 Network Presence at Asia Pacific Internet Hubs
Establish network presence at key Internet hubs in the region including Tokyo and Singapore.
- o Objectives
    - ▪ Improve performance and latency of accessing APNIC services by direct peering at co-located Internet hub locations
    - ▪ Make deployment of APNIC's online services services more effective
- o Benefits to Members
    - ▪ Fast and reliable access to APNIC's online services

3.5.4 Governance

	FTE	Expenses	CAPEX
Workstream total	1.55	860,539	-
Operations	1.55	860,539	-
Investments	-	-	-

Operations

3.5.4.1 Executive Council (EC) Support
Facilitate impartial EC election processes of the highest integrity, in line with the APNIC By-laws and Member expectations, and support EC members to perform their roles diligently.

3.5.4.2 Corporate Governance and Legal
Mitigate legal risk in all APNIC activities through timely legal advice, contract management, corporate governance guidance, organizational risk management and legal cooperation with other organizations.

4   2020 Budget Summary

4.1   Budget Summary

Activity	FTE	%	Expenses (AU$)	%	CAPEX (AU$)	%
Membership	**17.55**	**21%**	**4,222,795**	**17%**	**-**	**-**
Member Services	9.80	12%	2,461,629	10%	-	-
Membership Products	7.15	9%	1,127,922	5%	-	-
Membership Reporting	0.60	1%	633,244	3%	-	-
Registry	**9.85**	**12%**	**2,111,516**	**9%**	**-**	**-**
Registration Services	3.70	5%	645,389	3%	-	-
Registry Products	5.30	6%	825,807	3%	-	-
Policy Development	0.85	1%	640,320	3%	-	-
Development	**23.55**	**29%**	**8,622,717**	**35%**	**396,000**	**54%**
APNIC Conferences	4.60	6%	1,405,301	6%	1,000	0%
Foundation Support	1.15	1%	865,463	4%	-	-
Community Engagement	7.15	9%	2,493,689	10%	-	-
Community Participation	1.10	1%	203,283	1%	-	-
APNIC Academy	8.45	10%	2,330,523	10%	-	-
Infrastructure Support	1.10	1%	1,324,458	5%	395,000	53%
Information	**5.75**	**7%**	**1,643,653**	**7%**	**80,000**	**11%**
Information Products	4.90	6%	794,498	3%	-	-
Research and Analysis	0.85	1%	849,155	3%	80,000	11%
Capability	**25.30**	**31%**	**7,692,341**	**32%**	**262,600**	**36%**
Employee Experience	2.45	3%	1,692,464	7%	-	-
Finance and Business Services	8.20	10%	1,999,137	8%	55,000	7%
Technical Infrastructure	13.10	16%	3,140,201	13%	207,600	28%
Governance	1.55	2%	860,539	4%	-	-
Total	**82.00**	**100%**	**24,293,022**	**100%**	**738,600**	**100%**

Note: Some numbers presented in this table may not add up precisely to the totals provided due to rounding.

4.2 FTE Distribution

Activity	Total FTE	Bus	Comms	DG	HR	I&D	Prod Dev	Srvcs	SE
Membership	**17.55**	**2.80**	**0.70**	**0.90**	**0.10**	**0.20**	**5.85**	**6.60**	**0.40**
Member Services	9.80	2.50	0.10	0.60	0.10	-	0.20	6.00	0.30
Membership Products	7.15	0.30	0.20	0.10	-	0.20	5.65	0.60	0.10
Membership Reporting	0.60	-	0.40	0.20	-	-	-	-	-
Registry	**9.85**	**-**	**0.60**	**0.35**	**0.10**	**0.10**	**4.50**	**4.20**	**-**
Registration Services	3.70	-	-	0.30	0.10	-	-	3.30	-
Registry Products	5.30	-	0.10	-	-	0.10	4.50	0.60	-
Policy Development	0.85	-	0.50	0.05	-	-	-	0.30	-
Development	**23.55**	**1.50**	**4.60**	**1.55**	**0.35**	**10.10**	**2.05**	**1.00**	**2.40**
APNIC Conferences	4.60	1.00	3.00	-	-	0.10	0.50	-	-
Foundation Support	1.15	0.50	-	0.05	0.20	-	-	0.40	-
Community Engagement	7.15	-	0.60	1.50	-	1.10	1.05	0.50	2.40
Community Participation	1.10	-	1.00	-	-	0.10	-	-	-
APNIC Academy	8.45	-	-	-	0.15	7.70	0.50	0.10	-
Infrastructure Support	1.10	-	-	-	-	1.10	-	-	-
Information	**5.75**	**-**	**2.10**	**0.85**	**-**	**-**	**2.60**	**0.20**	**-**
Information Products	4.90	-	2.10	-	-	-	2.60	0.20	-
Research and Analysis	0.85	-	-	0.85	-	-	-	-	-
Capability	**25.30**	**10.70**	**-**	**1.35**	**1.45**	**6.60**	**5.00**	**-**	**0.20**
Employee Experience	2.45	0.40	-	0.05	1.30	0.50	-	-	0.20
Finance and Business Services	8.20	8.20	-	-	-	-	-	-	-
Technical Infrastructure	13.10	1.80	-	0.05	0.15	6.10	5.00	-	-
Governance	1.55	0.30	-	1.25	-	-	-	-	-
Total	**82.00**	**15.00**	**8.00**	**5.00**	**2.00**	**17.00**	**20.00**	**12.00**	**3.00**

Note: Some numbers presented in this table may not add up precisely to the totals provided due to rounding.

4.3 Investments by Workstream

Activity	FTE	%	Expenses (AUD)	%	Capex (AUD)	%	Investment
Membership	**2.35**	**22%**	**364,472**	**13%**	**-**	**0%**	
Member Services	-						
Membership Products	1.85		283,865				Online Community Platform Election System
Membership Products	0.50		80,607				
Membership Reporting	-		-				
Registry	**1.00**	**9%**	**173,097**	**6%**	**-**	**0%**	
Registration Services	-		-				
Registry Products	1.00		153,097				RPKI AS0 ROA
Policy Development	-		20,000				Policy Document review
Development	**5.05**	**48%**	**1,767,297**	**61%**	**120,000**	**100%**	
APNIC Conferences	0.10		85,389				Fellowships
Foundation Support	1.15		765,463				Operational and Administrative Support
Foundation Support	-		100,000				ISIF Asia Contribution
Community Engagement	-		-				
Community Participation	0.20		37,979				Community Diversity
APNIC Academy	2.70		601,459				APNIC Academy Development
Infrastructure Support	0.70		127,228		120,000		M-Root Anycast Instance Deployment Support Security Threat Sharing Platform
Infrastructure Support	0.20		49,780				
Information	**-**	**0%**	**-**	**0%**	**-**	**0%**	
Information Products	-		-				
Research and Analysis	-		-				
Capability	**2.15**	**20%**	**568,848**	**20%**	**-**	**0%**	
Employee Experience	0.15		145,247				Product Management
Finance and Business Services	1.50		249,152				Business Intelligence

Technical Infrastructure	0.50		174,449				Network Presence at Asia Pacific Internet Hubs
Governance	-		-				
Total	**10.55**	**100%**	**2,873,714**	**100%**	**120,000**	**100%**	

Note: Some numbers presented in this table may not add up precisely to the totals provided due to rounding.

APNIC's 2020 Budget Submission provides more details on the 2020 APNIC Budget and is available with the Minutes of the December 2019 EC meeting.

APNIC Budget 2020 - Draft

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Table of Tables

1 Executive Summary

This document contains the APNIC budget submission for the financial year from January to December 2020. The budget submission includes revenue, expense, and capital expenditure projections based on the planned activities for the APNIC Secretariat for 2020.

The purpose of this paper is to allow the APNIC Executive Council to approve an expenditure level for 2020, in the manner as described in the APNIC By-laws:

"to establish the basis for the budget of APNIC and determine, in the light of the decisions taken by the Members on the reports referred to in by-law 5(b) above, a ceiling for the expenditure of APNIC until the next AGM after considering all relevant aspects of the work of APNIC in that period" [APNIC By-laws 30 (g)]

The proposed budget includes operational expenditure of AUD $24,293,024 and projected revenue of AUD $23,918,533 providing an operating deficit of AUD $374,491 for 2020. The capital expenditure requirements for 2020 are AUD $738,600. All values in this document are expressed in Australian Dollars (AUD) unless otherwise indicated.

2   Budget Summary

The 2020 budget for revenue, expenses, and capital expenditure are included in the table below:

Revenue	Forecast 2019	Budget 2020	Change
Membership Fees	21,052,094	21,699,005	3%
Non-Member Fees	257,271	260,000	1%
Reactivation Fees	16,788	25,000	49%
Sign-Up Fee	338,000	331,750	-2%
Transfer Fee	172,726	250,000	45%
Sundry Income	420,781	387,778	-8%
Total Operating Revenue	**22,257,660**	**22,953,533**	**3%**
Investment Income	1,018,040	965,000	-5%
Total Income	**23,275,700**	**23,918,533**	**3%**
Expenses			
Bank Service Fees	209,979	207,200	-1%
Communication Expenses	565,702	753,550	33%
Computer Expenses	1,071,356	1,154,458	8%
Contribution to APNIC Foundation	738,166	750,463	2%
Doubtful Debt Expenses	21,363	25,000	17%
Depreciation Expenses	861,532	862,000	0%
ICANN Contract Fees	263,382	238,000	-10%
Insurance Expenses	206,520	231,833	12%
Meeting and Training Expenses	452,242	561,100	24%
Membership Fees	63,496	54,029	-15%
Office Operating Expenses	339,606	381,300	12%
Postage & Delivery	36,943	39,700	7%
Printing & Photocopy	34,986	40,500	16%
Professional Fees	1,863,376	2,051,021	10%
Recruitment Expense	106,868	145,000	36%
Rent and Outgoings	-	10,000	
Salaries and Personnel Expenses	12,973,111	13,561,230	5%
Sponsorship and Publicity Expense	720,728	679,640	-6%
Staff Training Expense	344,124	175,000	-49%
Translation Expense	6,392	20,000	213%
Travel Expenses	2,350,000	2,352,000	0%
Total Expenses	**23,229,871**	**24,293,024**	**5%**
Total Surplus/(Deficit)	**45,829**	**(374,491)**	**-917%**

Capital Expenditure	Forecast 2019	Budget 2020	Change
Computer Plant & Equipment	552,713	683,600	24%
Office Furniture & Fittings	87,098	55,000	-37%
Total CAPEX	**639,811**	**738,600**	**15%**

Table 2.1 2020 Budget summary

3   Budget Preparation Notes

The budget is developed on a zero-based methodology and involves extensive consultation across the organization.

There are a range of key inputs which are included in the budget process, including but not limited to the following:

- The 2018 APNIC Survey

- The 2020 APNIC Activity Plan

- 2020 priorities as established through the operational planning process

- The APNIC organization structure, HR cost analysis and recruitment plans

- Membership projections, derived from analysis of historical membership growth and recent trends

- Investment return forecasts provided by APNIC's investment advisors

- The asset register and quantity survey reports, forming the basis of depreciation and capital allowance forecast

3.1   Projection techniques

Projections for membership fees are calculated by analysing recent trends in membership activity. 2020 membership revenues budgets are calculated based on the current (2015) fee schedule. A linear projection of membership growth and account closure is used to estimate the incremental growth in revenue for membership fees in 2020.

Interest income is based on analysis of APNIC's existing cash deposits and the contracted rates and maturity dates for fixed deposits. Estimates of interest from the current account are based on current returns. Investment income predictions are based on forecasts provided by APNIC's investment advisors across the range of investment categories set out in APNIC's Investment Policy.

The ERP system allows for the verification of all current approved spending commitments. This data is combined with new planned expenditure in 2020.

An overall inflation rate of 1.7% was recorded for the 12 months ending September 2019 and this has been used in projecting costs in this submission.

3.2   APNIC's Taxation Status

APNIC's taxation status as a "Mutual Organisation" by way of a Private Ruling from the Australian Taxation Office was re-confirmed in November 2017 for a further five years ending June 2022.

4   Revenue

The table below tracks APNIC's revenue from 2013 through to the forecast for 2019 and the budget submission for 2020.

REVENUE (AUD)	Actual 2013	Actual 2014	Actual 2015	Actual 2016	Actual 2017	Actual 2018	Forecast 2019	Budget 2020	Change
Membership fees	15,074,781	15,903,111	16,933,413	18,354,898	19,310,962	20,213,860	21,052,094	21,699,005	3.1%
Non-members fees	240,225	254,706	243,049	243,923	260,010	251,054	257,271	260,000	1.1%
Reactivation fees	37,050	67,800	37,600	37,700	27,200	22,000	16,788	25,000	48.9%
Sign-Up fees	0	0	456,000	465,000	373,250	330,000	338,000	331,750	-1.8%
Transfer fees	61,339	81,304	77,943	130,139	127,440	164,145	172,726	250,000	44.7%
Sundry income	112,320	207,304	221,968	186,694	218,185	389,984	420,782	387,778	-7.8%
Operating Revenue	15,525,715	16,514,224	17,969,973	19,418,354	20,317,048	21,371,042	22,257,661	22,953,533	3.1%
Investment income	585,522	754,563	792,041	890,951	841,080	872,034	1,018,040	965,000	-5.2%
TOTAL REVENUE	16,111,236	17,268,788	18,762,014	20,309,305	21,158,128	22,243,077	23,275,701	23,918,533	2.8%
Change		7.2%	8.6%	8.2%	4.2%	5.1%	4.6%	2.8%	

Table 4.1 Revenue over time

4.1   Investment Income

The value APNIC's investments continue to increase as excess funds are transferred from the operating account to the Investment Fund. Investment returns are reinvested in line with the Investment Policy and the investment income projections are based on advice from APNIC's investment advisors. Interest on cash deposits not held in the fund are forecast to achieve 1.25% in 2020, significantly down from 2.5% included in the 2019 budget submission.

4.2   Membership Fees

4.2.1   Membership growth

APNIC's membership growth continues and the 2020 Budget assumes similar membership growth trends to 2019. The table below shows membership growth since 2010.

Member Tier	2010	2011	2012	2013	2014	2015	2016	2017	2018	F'Cast 2019	Budget 2020
Extra Large	16	21	20	20	21	22	22	23	24	24	24
Very Large	33	41	45	42	40	44	43	41	44	46	46
Large	141	145	144	147	142	137	138	138	143	144	144
Medium	324	378	402	392	402	431	449	473	483	492	500
Small	867	970	1114	1198	1388	2165	2643	2971	3376	3583	3853
Very Small	637	817	1021	1294	1701	2336	2590	2769	2967	3324	3557
Associate	503	575	788	957	924	133	109	132	125	136	138
Total	2521	2947	3534	4050	4618	5268	5994	6547	7162	7749	8262
New	478	615	832	813	805	968	1048	849	825	790	790
Closed	163	189	245	297	237	318	322	296	210	240	240
Net Growth	315	426	587	516	568	650	726	553	615	550	550
Average Net Monthly Growth	26	36	49	43	47	54	61	46	51	46	46

Table 4.2 Membership growth over time

4.2.2   *Membership and Sign-Up fee revenue – sensitivity analysis*

The table below illustrates the potential impact on membership revenue if the actual growth of membership in 2020 varies from the assumptions included in the budget. The average annual fee a new Member will pay is estimated at $1,280 which accounts for allocations from the last /8 and the IANA reclaimed pool, and for discounts applied to new Members from LDC's, analysis of the 2019 trends show 31% of new members are in LDC economies.

New Members 2020	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	2020
LDC	22	22	19	19	22	20	19	20	20	20	20	22	245
Non LDC	45	45	45	45	45	45	45	45	45	45	45	50	545
Total New	67	67	64	64	67	65	64	65	65	65	65	72	790

Membership Fees from new Members 2020

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	2020
Impact of 10% More new Members	$ 3,573	$ 7,147	$ 10,240	$ 13,653	$ 17,867	$ 20,800	$ 23,893	$ 27,733	$ 31,200	$ 34,667	$ 38,133	$ 46,080	$ 274,987
Impact of 20% More new Members	$ 1,787	$ 3,573	$ 5,120	$ 6,827	$ 8,933	$ 10,400	$ 11,947	$ 13,867	$ 15,600	$ 17,333	$ 19,067	$ 23,040	$ 137,493
Impact of 30% More new Members	$ 715	$ 1,429	$ 2,048	$ 2,731	$ 3,573	$ 4,160	$ 4,779	$ 5,547	$ 6,240	$ 6,933	$ 7,627	$ 9,216	$ 54,997
Membership Fees from new Members 2020	$ 7,147	$ 14,293	$ 20,480	$ 27,307	$ 35,733	$ 41,600	$ 47,787	$ 55,467	$ 62,400	$ 69,333	$ 76,267	$ 92,160	$ 549,973
Impact of 10% Less new Members	$ (715)	$ (1,429)	$ (2,048)	$ (2,731)	$ (3,573)	$ (4,160)	$ (4,779)	$ (5,547)	$ (6,240)	$ (6,933)	$ (7,627)	$ (9,216)	$ (54,997)
Impact of 25% Less new Members	$ (1,787)	$ (3,573)	$ (5,120)	$ (6,827)	$ (8,933)	$ (10,400)	$ (11,947)	$ (13,867)	$ (15,600)	$ (17,333)	$ (19,067)	$ (23,040)	$ (137,493)
Impact of 50% Less new Members	$ (3,573)	$ (7,147)	$ (10,240)	$ (13,653)	$ (17,867)	$ (20,800)	$ (23,893)	$ (27,733)	$ (31,200)	$ (34,667)	$ (38,133)	$ (46,080)	$ (274,987)

Sign-Up Fees from new Members 2020

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	2020
Impact of 10% More new Members	$ 14,000	$ 14,000	$ 13,625	$ 13,625	$ 14,000	$ 13,750	$ 13,625	$ 13,750	$ 13,750	$ 13,750	$ 13,750	$ 15,250	$ 166,875
Impact of 20% More new Members	$ 7,000	$ 7,000	$ 6,813	$ 6,813	$ 7,000	$ 6,875	$ 6,813	$ 6,875	$ 6,875	$ 6,875	$ 6,875	$ 7,625	$ 83,438
Impact of 30% More new Members	$ 2,800	$ 2,800	$ 2,725	$ 2,725	$ 2,800	$ 2,750	$ 2,725	$ 2,750	$ 2,750	$ 2,750	$ 2,750	$ 3,050	$ 33,375
Sign-Up Fees from new Members 2020	$ 28,000	$ 28,000	$ 27,250	$ 27,250	$ 28,000	$ 27,500	$ 27,250	$ 27,500	$ 27,500	$ 27,500	$ 27,500	$ 30,500	$ 333,750
Impact of 10% Less new Members	$ (2,800)	$ (2,800)	$ (2,725)	$ (2,725)	$ (2,800)	$ (2,750)	$ (2,725)	$ (2,750)	$ (2,750)	$ (2,750)	$ (2,750)	$ (3,050)	$ (33,375)
Impact of 25% Less new Members	$ (7,000)	$ (7,000)	$ (6,813)	$ (6,813)	$ (7,000)	$ (6,875)	$ (6,813)	$ (6,875)	$ (6,875)	$ (6,875)	$ (6,875)	$ (7,625)	$ (83,438)
Impact of 50% Less new Members	$ (14,000)	$ (14,000)	$ (13,625)	$ (13,625)	$ (14,000)	$ (13,750)	$ (13,625)	$ (13,750)	$ (13,750)	$ (13,750)	$ (13,750)	$ (15,250)	$ (166,875)

Total Fees from new Members 2020

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	2020
Impact of 10% More new Members	$ 17,573	$ 21,147	$ 23,865	$ 27,278	$ 31,867	$ 34,550	$ 37,518	$ 41,483	$ 44,950	$ 48,417	$ 51,883	$ 61,330	$ 441,862
Impact of 20% More new Members	$ 8,787	$ 10,573	$ 11,933	$ 13,639	$ 15,933	$ 17,275	$ 18,759	$ 20,742	$ 22,475	$ 24,208	$ 25,942	$ 30,665	$ 220,931
Impact of 30% More new Members	$ 3,515	$ 4,229	$ 4,773	$ 5,456	$ 6,373	$ 6,910	$ 7,504	$ 8,297	$ 8,990	$ 9,683	$ 10,377	$ 12,266	$ 88,372
Fees from new Members 2020	$ 35,147	$ 42,293	$ 47,730	$ 54,557	$ 63,733	$ 69,100	$ 75,037	$ 82,967	$ 89,900	$ 96,833	$ 103,767	$ 122,660	$ 883,723
Impact of 10% Less new Members	$ (3,515)	$ (4,229)	$ (4,773)	$ (5,456)	$ (6,373)	$ (6,910)	$ (7,504)	$ (8,297)	$ (8,990)	$ (9,683)	$ (10,377)	$ (12,266)	$ (88,372)
Impact of 25% Less new Members	$ (8,787)	$ (10,573)	$ (11,933)	$ (13,639)	$ (15,933)	$ (17,275)	$ (18,759)	$ (20,742)	$ (22,475)	$ (24,208)	$ (25,942)	$ (30,665)	$ (220,931)
Impact of 50% Less new Members	$ (17,573)	$ (21,147)	$ (23,865)	$ (27,278)	$ (31,867)	$ (34,550)	$ (37,518)	$ (41,483)	$ (44,950)	$ (48,417)	$ (51,883)	$ (61,330)	$ (441,862)

Table 4.3 Sensitivity analysis – membership growth

Based on analysis of recent trends, it is forecast that 790 new Members will join APNIC in 2020, the average value of closed accounts is estimated at $1,544 and on average, 20 account closures are expected each month, in 75% of cases, resources are returned to APNIC. The table below illustrates the impact on Membership revenue if the actual number of membership closures in 2020 varies from the assumptions included in the budget.

Account Closures 2020	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	2020
Membership Accounts	-20	-20	-20	-20	-20	-20	-20	-20	-20	-20	-20	-20	-240

Reduction in Membership Fees from account closures 2020

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	2020
Impact of 10% Less closures	$ 1,287	$ 2,573	$ 3,860	$ 5,147	$ 6,433	$ 7,720	$ 9,007	$ 10,293	$ 11,580	$ 12,867	$ 14,153	$ 15,440	$ 100,360
Impact of 20% Less closures	$ 643	$ 1,287	$ 1,930	$ 2,573	$ 3,217	$ 3,860	$ 4,503	$ 5,147	$ 5,790	$ 6,433	$ 7,077	$ 7,720	$ 50,180
Impact of 30% Less closures	$ 257	$ 515	$ 772	$ 1,029	$ 1,287	$ 1,544	$ 1,801	$ 2,059	$ 2,316	$ 2,573	$ 2,831	$ 3,088	$ 20,072
Reduction in fees from account closures	$ (2,573)	$ (5,147)	$ (7,720)	$ (10,293)	$ (12,867)	$ (15,440)	$ (18,013)	$ (20,587)	$ (23,160)	$ (25,733)	$ (28,307)	$ (30,880)	$ (200,720)
Impact of 10% More closures	$ (257)	$ (515)	$ (772)	$ (1,029)	$ (1,287)	$ (1,544)	$ (1,801)	$ (2,059)	$ (2,316)	$ (2,573)	$ (2,831)	$ (3,088)	$ (20,072)
Impact of 25% More closures	$ (643)	$ (1,287)	$ (1,930)	$ (2,573)	$ (3,217)	$ (3,860)	$ (4,503)	$ (5,147)	$ (5,790)	$ (6,433)	$ (7,077)	$ (7,720)	$ (50,180)
Impact of 50% More closures	$ (1,287)	$ (2,573)	$ (3,860)	$ (5,147)	$ (6,433)	$ (7,720)	$ (9,007)	$ (10,293)	$ (11,580)	$ (12,867)	$ (14,153)	$ (15,440)	$ (100,360)

Table 4.4 Sensitivity analysis – membership closures

4.3   Non-Members Fees

Fees from Non-Member account holders continue to be very stable and it is anticipated that in 2020 that there will be minimal change to this revenue for this item.

4.4   Reactivation Fees

Reactivation Fees are charged to Members to reactivate their accounts after closure. The revenue for this item is expected to increase slightly compared to 2019.

4.5   Sign-Up Fees

Sign-Up fees are directly related to membership growth as outlined in table 4.2 above. The fee is $500 and is discounted by 50% for LDC economies currently making up 31% of new members. The effect of a variance to the budget assumptions for membership growth for this revenue item is outlined above in 4.2.2.

4.6   Transfer Fees

Transfer activity is expected to increase in 2020 with IPv4 reclamation, projections take this into account.

4.7   Sundry Income

Sundry income includes revenue for sources such as:

- Meeting receipt registration – Members/Non-Members

- Meeting receipt – Sponsorship

- External training receipts - Members/Non-Members

- Recovery of APNIC staff costs and travel for work undertaken for foundation activities

- External funding from research activities

Meeting Sponsorship will be lower, 2019 included significant sponsorship for the Chiang Mai meeting which will not be replicated in 2020.

4.8   Foreign Exchange Gains/Losses

The budget for exchange rate variances has been set as zero; it is not possible to forecast the total gain or loss on APNIC transactions. APNIC has a low exposure to currency variations as all fees from members and the majority of expenses in running APNIC's operations are paid in Australian dollars. The decline in the Australian dollar will potentially affect expense items including travel.

5   Expenses

The tables below set out APNIC's expenses since 2013, with commentary on the major expenses is included below:

EXPENSES (AUD)	Actual 2013	Actual 2014	Actual 2015	Actual 2016	Actual 2017	Actual 2018	Forecast 2019	Budget 2020	Change
Bank service fees	138,337	145,823	156,496	167,917	177,670	193,762	209,979	207,200	-1.3%
Communication expenses	490,600	483,803	591,885	532,212	561,271	542,895	565,702	753,550	33.2%
Computer expenses	548,748	572,528	520,784	533,628	647,453	817,599	1,071,356	1,154,458	7.8%
Contribution to APNIC Foundation	0	0	0	18,003	665,058	732,710	738,166	750,463	1.7%
Depreciation expense	753,032	765,548	764,145	785,218	807,596	856,029	861,532	862,000	0.1%
Doubtful debt expenses	30,990	34,259	-54,293	-6,225	14,653	-1,445	21,363	25,000	17.0%
ICANN contract fee	136,732	260,333	284,161	243,026	244,657	278,866	263,382	238,000	-9.6%
Insurance expense	126,751	129,971	131,550	128,793	173,610	189,738	206,520	231,833	12.3%
Meeting and training expenses	332,819	374,850	350,313	363,343	389,922	396,545	452,242	561,100	24.1%
Membership fees	48,294	55,611	49,532	48,971	52,296	48,309	63,496	54,029	-14.9%
Office operating expenses	300,757	312,744	315,608	324,948	337,207	342,458	339,605	391,300	15.2%
Postage & delivery	45,269	22,071	51,029	41,893	40,610	42,808	36,943	39,700	7.5%
Printing & photocopy	36,586	48,508	33,807	38,165	29,311	35,605	34,986	40,500	15.8%
Professional fees	1,246,373	1,052,757	1,195,494	1,409,430	1,304,343	1,458,389	1,863,375	2,051,021	10.1%
Recruitment expense	89,472	144,423	119,077	94,307	134,793	185,554	106,868	145,000	35.7%
Salaries and personnel expenses	8,298,111	8,731,164	9,586,575	10,459,153	11,096,470	11,962,294	12,973,111	13,561,230	4.5%
Sponsorship and Publicity expenses	319,623	340,946	575,775	624,179	681,342	759,741	720,728	679,640	-5.7%
Staff training/ Conference expenses	163,053	135,996	169,122	164,441	148,603	199,349	344,124	175,000	-49.1%
Translation expenses	15,255	1,623	2,883	11,147	9,027	7,855	6,392	20,000	212.9%
Travel expenses	1,937,230	1,955,471	1,961,551	2,085,745	2,161,034	2,165,459	2,350,000	2,352,000	0.1%
TOTAL EXPENSES	**15,058,033**	**15,568,431**	**16,805,493**	**18,068,294**	**19,676,928**	**21,214,519**	**23,229,870**	**24,293,024**	**4.6%**
Change		3.4%	7.9%	7.5%	8.9%	7.8%	9.5%	4.6%	

Table 5.1 Expenses over time – by value

5.2   Salary and Personnel Expenses

Salary and personnel expenses will increase by 4.5% in 2020 when compared to the forecast expenditure for the 2019 year. The assumptions included in this budget are:

- Employee superannuation contributions will remain at 9.5%

- All permanent staff will take 3.5 weeks of annual leave

- The overall allowance for salary increases resulting from role changes and annual performance reviews will be set at 3.5%

- Existing headcount commitments continue from 2019.

- As in 2019, two APNIC staff will be seconded to the APNIC foundation, their costs are included in the expense; Contribution to APNIC foundation.

5.3   Travel Expenses

APNIC's travel expenses will be similar in 2020, noting pressure on pricing resulting from the continued decline of the Australian dollar against the US dollar, at this stage this impact is being offset by strong competition.

This category includes travel for; APNIC Staff, APNIC EC, NRO NC, Support for SIG Chairs.

Travel expenses include all corporate travel management fees and International SOS membership, which provides advice and emergency assistance for those travelling on APNIC business. In 2020, there is a provision to implement a carbon offset program.

5.4   Professional fees

Professional Fees will increase by 10%, the major contributor is the APNIC Academy. Details of major expenses for 2020 expenses are:

Labs Consultancy	209,600
HR Consulting Fees	175,000
Information Services - Full Stack Dev	165,000
Investment Consultant Service	156,000
Legal Advice & Expenses	139,560
Non-staff trainers	130,000
Design Consultancy	120,811
Super Portal - CMS & Web Consultation & Module Development	118,000
CRM Consultant Implementation	80,800
Non-staff trainers - Travel	80,000
Industry interviews and internal policy review	80,000
Consultant - 2020 APNIC Survey	75,000
Outsourced Content Development (F2F & Online)	50,000
Academy Translation Services	50,000
Audit Fees	39,750
Financial and Tax advice	34,000
ERP Consulting Support	30,000
Strategic Planning Services Consultancy	30,000
PKI Compliance Audit	30,000
APNIC APRICOT Event Stenography	28,000
APNIC Conference Stenography	26,000
Business Internal Systems - Doc Mgt - SharePoint	25,000
Travel for guest speakers and media to APNIC conferences	25,000

5.5   Computer Expenses

Computer expenses include all non-capital purchases of equipment, consumables, license and support fees for hardware and software. There are several costs related to work already commenced which contribute to the increase in 2020. Major expenses in 2020 are:

ERP Licenses	131,688
Salesforce Licence Expenses	120,000
Research Cloud Computing Expenses	120,000
APNIC Academy - Virtual Labs (LODS & VM Licences)	85,000
Cloudflare	57,000
Pardot Licence Expenses	44,000
Firewall & Intrusion detection/prevention	41,000
Salesforce Premium Support	36,000
HR IS Licences	35,452
SSO LifeCycle	30,000
Cloud deployment - Initial node	30,000
AU - Hardware maintenance	27,000
APNIC Academy - Website Licences & Dev Tools	25,000
Local Network Storage support and maintenance	25,000
Vmware licenses - Hosts, Vcenter and ROB	22,500

5.6   Depreciation Expenses

Depreciation expenses are budgeted based on analysis of the existing depreciation and capital allowance schedules; including anticipated depreciation based on Capital Expenditure planned for 2020. The amounts budgeted for 2020 are:

Equipment depreciation	703,653
Capital works allowances - 6 Cordelia St	158,347

5.7 Sponsorship and Publicity Expenses

Sponsorship and Publicity expenses include APNIC contributions to the NRO expenses, the ISIF program, and sponsorship of NOG's and other community events. Major expenses in 2020 include:

Sponsorships for NOGs / IXPs / Peering / R&E / Security Related Events & Activities	170,000
NRO Expenses APNIC Contribution	155,000
Contribution to ISIF Grants fund	100,000
Google PPC Advertising - member dev/ASN Project	60,000
APNIC conference fellowships	60,000
Regional/national IGFs sponsorship	40,000
General promotional items	24,000
Regional community dev conference sponsorship	10,000

5.8 Communication Expenses

Communication expenses include data network expenses, Internet connectivity expenses, telephony and mobile phone expenses. The major contributors to costs here are the ongoing cost of the dark fibre network and the cost of rack-space in the co-locations that are critical to APNIC's network resilience. The major costs included in the 2020 budget include the following:

AU - Data centre rack hire & cross connects	177,600
Network equipment support and Maintenance	120,000
AU - Transit, Peering, virtual interconnections	114,000
APNIC Network presence & Peering in Singapore, Tokyo & HK	80,000
DNS Anycast and Regional whois cloud hosting	68,100
AU - Dark fibre interconnections	68,000
VoIP service and call charges	59,250
Network, service monitoring and alerting	19,500
Hosting Expenses for Community Honeynet	15,000
Backup: Cloud storage	15,000

5.9   Contribution to APNIC Foundation

APNIC will underwrite Foundation costs up to a maximum of $750,463 in 2020. Included in this amount is the costs for the two APNIC staff seconded to the Foundation and recovery of other internal resource costs. Details can be found at 7.1 below.

5.10   Meeting and Training Expenses

Meeting and Training expenses include all the costs incurred in running the meetings including APNIC conferences and other meeting/training events. This includes; venue and equipment hire, catering and social events. The major contributors to this expense are the APNIC conferences in 2020 in Australia, and Bangladesh. While not all meeting expenses are included in this expense, the major venue and logistic costs are included. A portion of these costs in some instances is offset by sponsorship and Registration/workshop income. Major provisions included in the 2020 budget are:

APNIC Conference week - main plenary	94,000
Training support (venue and catering costs)	50,000
APNIC Conference AV rental	40,000
Xmas and Mid Year Staff Events	36,000
APNIC Conference Opening reception	35,000
APNIC APRICOT Closing Reception	30,000
APNIC Conference Workshop week - catering	25,000
APNIC Conference closing dinner	25,000
NRO CFO Retreat	15,000
APNIC Conference week - venue hire	15,000
APNIC Conference Workshop week - venue hire	14,500
APNIC APRICOT Conference Package	14,000
APNIC APRICOT AV-Webcast Equipment Rental	11,000
Workshop transportation - 5 days	10,000
Services outreach exhibition	10,000
Member gathering	10,000

5.11   Office Operating Expenses

The major costs in this item include electricity, land tax, council and water rates, cleaning and rubbish removal, air-conditioning and security. Major planned expenditure for 2020 includes:

Cordelia Street - Electricity	60,000
Kitchen Supply and Catering Expenses	54,000
Land Tax	53,250
Office Cleaning	42,000
BCC Rates	37,500
General Workplace Health & Safety	24,080
General Maintenance and repairs	12,000
WHS Support	12,000
Staff health initiatives	11,000
Office building A/C service monthly	7,920
Stationery Supplies	7,200
Electrical repair & testing	7,200
Plant Hire	6,600
Office painting	6,500
Water Rates	6,000
Building Security Services	4,700

6   Capital Expenditure

Capital expenditure comprises equipment & software and office equipment. For the 2020 budget submission capital expenditure provision is $738,600. Of this amount, $683,600 relates to Equipment & Software, and $55,000 relates to Office Furniture & Fittings as set out in the table below:

CAPITAL (AUD)	Actual 2013	Actual 2014	Actual 2015	Actual 2016	Actual 2017	Actual 2018	Forecast 2019	Budget 2020	Change
Equipment & Software	659,449	653,998	671,551	809,626	572,206	510,658	552,713	683,600	23.7%
Office Furniture & Fittings	89,911	31,728	36,731	12,136	110,211	91,273	87,098	55,000	-36.9%
Total - Capital Expenditure	**749,360**	**685,725**	**708,282**	**821,762**	**682,417**	**601,930**	**639,811**	**738,600**	**15.4%**
Change		-8.5%	3.3%	16.0%	-17.0%	-11.8%	6.3%	15.4%	

Table 6.1 Capital Expenditure over time

Major provisions in Equipment & Software include:

IXP and Root Server Development	200,000
Renewals - APNIC Laptops and Monitors	130,000
Virtualisation Network storage	90,000
Labs Servers	80,000
Virtualisation servers	60,000
Conference Laptops & Equipment Spares	30,000
Conference Network equipment and shipment boxes	23,000
PBCS Implementation	22,000
Office wired and wireless network upgrade	22,000
IT Office Equipment, Projectors etc.	20,000

Office Furniture & Fittings include allowances for replacement of office furniture and kitchen equipment, office modifications and alterations. There will be an upgrade of the Lighting and Security camera systems in 2020, with a provision of $40K.

7 APNIC Foundation

The APNIC foundation will require up to a maximum of $750,463 of funding in 2020, details of expected revenue and expenses for the foundation are included below:

	Budget 2018	FY 2018 in USD	FY 2018	Budget 2019	Forecast 2019	Budget 2020	Budget vs Forecast	Variance %
Operating Contribution Received - APNIC	700,683	USD 543,074.80	732,710	746,208	742,029	750,463	8,434	1%
Contribution Received - Grants	145,000	USD 479,221.96	646,560	619,000	567,213	690,000	122,787	22%
Interest Income	0	USD 321.76	434		778	0	(778)	-100%
TOTAL REVENUE	845,683	USD 1,022,618.52	1,379,704	1,365,208	1,310,020	1,440,463	130,443	10%
EXPENSES								
Grant Expenses	145,000	USD 479,221.96	646,560	619,000	567,213	690,000	122,787	22%
Operating Expenses								
Bank Service Fees	500	USD 423.16	571	1,000	1,067	1,000	(67)	-6%
Communication Expenses	3,000	USD 1,455.76	1,964	3,000	1,984	2,000	16	1%
Computer Expenses	1,000	USD 2,761.92	3,726	5,000	9,729	6,000	(3,729)	-38%
Depreciation Expense	0		0	0	0	0	0	0%
Meeting and Training Expenses	1,500	USD 1,518.17	2,048	0	2,794	3,000	206	7%
Personnel Support Expenses	532,873	USD 397,233.54	535,943	572,808	535,872	572,163	36,291	7%
Postage & Delivery	250	USD 187.28	253	500	343	500	157	46%
Printing & Photocopy	1,000	USD 1,772.57	2,392	1,000	4,479	4,000	(479)	-11%
Professional Fees	40,000	USD 33,580.61	45,307	40,000	36,496	40,000	3,504	10%
Recruitment Expense	2,000		0	1,500	0	0	0	0%
Staff Training Expense	2,000		0	2,000	0	0	0	0%
Translation Expense	1,000	USD 633.17	854	1,000	1,359	1,000	(359)	-26%
Travel Expenses	115,560	USD 103,830.39	140,087	118,400	148,684	120,800	(27,884)	-19%
TOTAL EXPENSES	845,683	USD 1,022,618.53	1,379,704	1,365,208	1,310,020	1,440,463	130,443	10%
OPERATING SURPLUS/(DEFICIT)	0	(USD 0.01)	(0)	0	0	0	0	0%

REVENUE and EXPENSES (AUD)	Budget 2018	FY 2018 in USD	FY 2018	Budget 2019	Forecast 2019	Budget 2020	Budget vs Forecast	Variance %
Total Revenue	845,683	USD 1,022,618.52	1,379,704	1,365,208	1,310,020	1,440,463	130,443	10%
Total Expenses	845,683	USD 1,022,618.53	1,379,704	1,365,208	1,310,020	1,440,463	130,443	10%
OPERATING SURPLUS/(DEFICIT)	0	(USD 0.01)	-0	0	0	0	0	0%

Table 7.1 APNIC Foundation – Financial Estimates 2020

Budget 2020
EC Meeting December 2019

APNIC

Contents

- Budget outlook and observations

- Summary Budget 2020

- Operational activities vs. Investment activities

- Revenue 2020

- Expenses 2020

- Key statistics

All values in this presentation are in Australian Dollars

APNIC

Budget outlook for 2020

Revenue:

- Membership growth remains steady, expecting similar growth in 2020
  - Around 790 new and 240 closed = net growth of 550
  - Expecting 31% of new members coming from LDCs

- Transfer activity will increase with IPv4 reclamation, projections take this into account

- While the investment portfolio has performed well, returns on cash investments will decline
  - Deposits maturing from 2.5% are being reinvested at 1.2-1.4%
  - This will affect Investment income

Budget outlook for 2020

Expenses:

- 2020 Activity Plan identifies areas where investment is required

- Staff levels remaining steady and the secretariat continues to make efficiency gains
  - Operating expenses per member continues to decline
  - CAPEX growth declining with more reliance on cloud solutions

- Expenses continue to increase in real terms at a greater rate than revenues, to support growing activities and membership

- AUD has continued to decline to around USD 0.68

- CPI (inflation) has been absorbed
  - Since the last fee change in 2015, CPI increase to Sep 2019 is 9.1%
  - Since the new fee structure in 2010, CPI increase is 24.5%

Budget outlook into 2021 and 2022

Observations:

- Membership growth likely continue along similar trends through to the next planning cycle.

- Need for investment in new services, primarily registry functionality and integrity

- Expenses will continue to increase at a greater rate than income, if there are no changes to the Membership Fees

- APNIC's reserve target of 18 months of operating expenses will not be achievable without greater budget surpluses.

APNIC

Budget 2020

Budget preparation

There are a range of key inputs that are included in the budget process, including but not limited to:

- The 2018 APNIC Survey

- The 2020 APNIC Activity Plan

- 2020 priorities as established through the operational planning process

- The APNIC organization structure, HR cost analysis and recruitment plans

- Membership projections, derived from analysis of historical membership growth and recent trends

- Investment return forecasts provided by APNIC's investment advisors

- The asset register and quantity survey reports, which form the basis of depreciation and capital allowance forecast

Budget preparation cont'd

- Interest income is based on analysis of APNIC's existing cash deposits and the contracted rates and maturity dates for fixed deposits. Estimates of interest from the current account are based on current returns

- Investment income predictions are based on forecasts provided by APNIC's investment advisors across the range of investment categories set out in APNIC's Investment Policy

- The ERP system allows for the verification of all current approved spending commitments. This data is combined with new planned expenditure in 2020

- An overall inflation rate of 1.7% was recorded for the 12 months ending September 2019 and this has been used where required in projecting costs in this submission

- APNIC's taxation status as a "Mutual Organisation" by way of a Private Ruling from the Australian Taxation Office was re-confirmed in November 2017 for a further five years ending June 2022

APNIC

High level numbers

Financial Performance	Forecast 2019	Budget 2020
Revenue	23,275,700	23,918,533
Less: Expenses	23,229,871	24,293,024
Total Surplus/(Deficit)	**45,829**	**(374,491)**

APNIC

Compared to the last EC update

Financial Performance	Forecast 2019	Budget 2020
Operating Revenue	22,257,660	22,953,533
Less: Operating Expenses	23,229,871	21,419,309
Operating Surplus/(Deficit)	**(972,211)**	**1,534,224**
Investment Income	1,018,040	965,000
Less: Investment Expenses	-	2,873,714
Investing Surplus/(Deficit)	**1,018,040**	**(1,908,714)**
Total Surplus/(Deficit)	**45,829**	**(374,491)**

Reported to EC Sept 2019

Financial Performance	Forecast 2019	Forecast 2020
Revenue	23,283,972	24,249,594
Less: Expeneses	23,181,447	24,523,750
Total Surplus/(Deficit)	**102,525**	**(274,156)**

APNIC

2020 Budget - Revenue

Revenue	Forecast 2019	Operations 2020	Investments 2020	Budget 2020
Membership Fees	21,052,094	21,699,005		21,699,005
Non-Member Fees	257,271	260,000		260,000
Reactivation Fees	16,788	25,000		25,000
Sign-Up Fee	338,000	331,750		331,750
Transfer Fee	172,726	250,000		250,000
Sundry Income	420,781	387,778		387,778
Total Operating Revenue	**22,257,660**	**22,953,533**		**22,953,533**
Investment Income	1,018,040	-	965,000	965,000
Total Income	**23,275,700**	**22,953,533**	**965,000**	**23,918,533**

APNIC

2020 Budget - Expenses

Expenses	Forecast 2019	Operations 2020	Investments 2020	Budget 2020
Bank Service Fees	209,979	207,200		207,200
Communication Expenses	565,702	673,550	80,000	753,550
Computer Expenses	1,071,356	1,145,458	9,000	1,154,458
Contribution to APNIC Foundation	738,166	-	750,463	750,463
Doubtful Debt Expenses	21,363	25,000		25,000
Depreciation Expenses	861,532	862,000		862,000
ICANN Contract Fees	263,382	238,000		238,000
Insurance Expenses	206,520	231,833		231,833
Meeting and Training Expenses	452,242	561,100		561,100
Membership Fees	63,496	54,029		54,029
Office Operating Expenses	339,606	381,300		381,300
Postage & Delivery	36,943	39,700		39,700
Printing & Photocopy	34,986	40,500		40,500
Professional Fees	1,863,376	1,710,521	340,500	2,051,021
Recruitment Expense	106,868	145,000		145,000
Rent and Outgoings	-	10,000		10,000
Salaries and Personnel Expenses	12,973,111	12,112,379	1,448,851	13,561,230
Sponsorship and Publicity Expense	720,728	519,640	160,000	679,640
Staff Training Expense	344,124	175,000		175,000
Translation Expense	6,392	20,000		20,000
Travel Expenses	2,350,000	2,267,100	84,900	2,352,000
Total Expenses	23,229,871	21,419,309	2,873,714	24,293,024

APNIC

2020 Budget – Capital Expenditure

Expenses	Forecast 2019	Operations 2020	Investments 2020	Budget 2020
Computer Plant & Equipment	552,713	563,600	120,000	683,600
Office Furniture & Fittings	87,098	55,000	-	55,000
Total CAPEX	**639,811**	**618,600**	**120,000**	**738,600**

2020 Budget

Financial Performance	Forecast 2019	Operations 2020	Investments 2020	Budget 2020
Operating Revenue	22,257,660	22,953,533	-	22,953,533
Less: Operating Expenses	23,229,871	21,419,309		21,419,309
Operating Surplus/(Deficit)	**(972,211)**	**1,534,224**	**-**	**1,534,224**
Investment Income	1,018,040	-	965,000	965,000
Less: Investment Expenses	-	-	2,873,714	2,873,714
Investing Surplus/(Deficit)	**1,018,040**	**-**	**(1,908,714)**	**(1,908,714)**
Total Surplus/(Deficit)	**45,829**	**1,534,224**	**(1,908,714)**	**(374,491)**

Budget 2020
Operations vs Investments

Operations vs Investments

- Operational activities
  - All routine APNIC activities
  - Member and registry services
  - Additional services as established and expected
  - Regular "continuous improvement" activities

- Investment activities
  - New products and services
  - Substantial service improvements and upgrades
  - Internal systems and process upgrades
  - Time-limited project expenses
  - Usually, not "mandatory"

Investments 2020

Pillar	Workstream	Description	Investments	Total FTE	OPEX	TRAVEL	Total OPEX	CAPEX
Membership	Member Services	Deliver excellence in service and value to Members through active listening and proactive engagements.		-			$ -	
	Membership Products	Develop and maintain products that deliver value and improve the experience for Members.	Customer Self Service Platform	1.85	$ -	$ 15,000	$ 283,865	
			Voting and elections	0.50	$ 6,000		$ 80,607	
	Membership Reporting	Ensure that APNIC remains fully accountable to its Members, by providing timely and accurate information about APNIC operations and ensuring Members can freely and easily exercise their membership rights.		-			$ -	
Registry	Registration Services	Provide delegation and registration services for Internet numbers (ASN, IPv4, IPv6) according to the community developed policies.		-			$ -	
	Registry Products	Maintain accurate and reliable number registry products and develop new registry product functionality.	RPKI ASO ROA	1.00	$ -	$ -	$ 153,097	$ -
	Policy Development	Facilitate the open Policy Development Process to ensure resource policies in the APNIC region are developed and implemented in a neutral manner consistent with agreed rules and community expectations.	Policy Documentation review	-	$ 20,000		$ 20,000	
Development	APNIC Conferences	Arranging the provide engaging and relevant forums – physical and virtual – for the entire APNIC community to learn, share ideas and experience, make new contacts, and participate in developing the Internet.	Fellowships	0.10	$ 60,000	$ 8,900	$ 85,389	
	Foundation Support	Provide financial and operational support to ensure the success of the APNIC Foundation.	Operational and Administrative Support	1.15			$ 765,463	
		Annual contribution to the ISIF Grants and Awards program	ISIF Asia Contribution	-			$ 100,000	
	Community Engagement	Ensure APNIC is a meaningful and enabling technical resource to the Internet community.		-			$ -	
	Community Participation	Encourage awareness and diverse participation in community-led APNIC processes (including Special Interest Groups), and APNIC's events, initiatives and online properties.	Community Diversity	0.20	$ 5,000		$ 37,979	
	APNIC Academy	Scale up training and technical assistance infrastructure with high-quality training content and curriculum.	APNIC Academy Training and Platform Enhancement	2.70	$ 175,500	$ -	$ 601,459	$ -
	Infrastructure Support	Promote and support the deployment of critical Internet infrastructure and operations.	M-Root Anycast Instance Deployment Support	0.70	$ -	$ 16,000	$ 127,228	$ 120,000
			Security Threat Sharing Platform	0.20	$ 3,000	$ 15,000	$ 49,780	$ -
Information	Information Products	Develop and maintain meaningful information services to the communities APNIC serves.		-			$ -	
	Research and Analysis	Analyse the pressures shaping the evolution of Internet infrastructure and share insights with the community.		-			$ -	
Capability	Employee Experience	Attract, develop and retain talented, service-oriented people to deliver APNIC's mission and exceed community expectations.	Product Management	0.15	$ 120,000		$ 145,247	
	Finance and Business Services	Provide efficient and robust finance and business services and facilities to effectively support and manage APNIC's operations.	Business Intelligence	1.50	$ 20,000	$ -	$ 249,152	$ -
	Technical Infrastructure	Provide stable and secure technical infrastructure to support APNIC operations and services.	Network Presence at Asia Pacific Internet Hubs	0.50	$ 80,000	$ 15,000	$ 174,449	$ -
	Governance	Provide the legal, economic and governance framework and professional services to support APNIC's operations to minimise risk, ensure compliance and continuity.		-			$ -	
				10.55	$ 489,500	$ 69,900	$2,873,714	$ 120,000

APNIC

2020 Budget

Revenue	Forecast 2019	Operations 2020	Investments 2020	Budget 2020
Membership Fees	21,052,094	21,699,005		21,699,005
Non-Member Fees	257,271	260,000		260,000
Reactivation Fees	16,788	25,000		25,000
Sign-Up Fee	338,000	331,750		331,750
Transfer Fee	172,726	250,000		250,000
Sundry Income	420,781	387,778		387,778
Total Operating Revenue	22,257,660	22,953,533		22,953,533
Investment Income	1,018,040	–	965,000	965,000
Total Income	23,275,700	22,953,533	965,000	23,918,533

Expenses	Forecast 2019	Operations 2020	Investments 2020	Budget 2020
Bank Service Fees	209,979	207,200		207,200
Communication Expenses	565,702	673,550	80,000	753,550
Computer Expenses	1,071,356	1,145,458	9,000	1,154,458
Contribution to APNIC Foundation	738,166	–	750,463	750,463
Doubtful Debt Expenses	21,363	25,000		25,000
Depreciation Expenses	861,532	862,000		862,000
ICANN Contract Fees	263,382	238,000		238,000
Insurance Expenses	206,520	231,833		231,833
Meeting and Training Expenses	452,242	561,100		561,100
Membership Fees	63,496	54,029		54,029
Office Operating Expenses	339,606	381,300		381,300
Postage & Delivery	36,943	39,700		39,700
Printing & Photocopy	34,986	40,500		40,500
Professional Fees	1,863,376	1,710,521	340,500	2,051,021
Recruitment Expense	106,868	145,000		145,000
Rent and Outgoings	–	10,000		10,000
Salaries and Personnel Expenses	12,973,111	12,112,379	1,448,851	13,561,230
Sponsorship and Publicity Expense	720,728	519,640	160,000	679,640
Staff Training Expense	344,124	175,000		175,000
Translation Expense	6,392	20,000		20,000
Travel Expenses	2,350,000	2,267,100	84,900	2,352,000
Total Expenses	23,229,871	21,419,309	2,873,714	24,293,024
Total Surplus/(Deficit)	45,829	1,534,224	(1,908,714)	(374,491)

Expenses	Forecast 2019	Operations 2020	Investments 2020	Budget 2020
Computer Plant & Equipment	552,713	563,600	120,000	683,600
Office Furniture & Fittings	87,098	55,000	–	55,000
Total CAPEX	639,811	618,600	120,000	738,600

APNIC

Activity Plan 2020

Pillar	Workstream	Operations			Investment			Total		
		FTE	Expenses	CAPEX	FTE	Expenses	CAPEX	FTE	Expenses	CAPEX
Membership	Member Services	9.8	2,461,629	-		-	-	9.8	2,461,629	
	Membership Products	4.8	763,450	-	2.4	364,472	-	7.2	1,127,922	
	Membership Reporting	0.6	633,244	-		-	-	0.6	633,244	
	Total Membership	**15.2**	**3,858,323**	**-**	**2.4**	**364,472**	**-**	**17.6**	**4,222,795**	**-**
Registry	**Registration Services**	3.7	645,389	-				3.7	645,389	
	Registry Products	4.3	672,710	-	1.0	153,097		5.3	825,807	
	Policy Development	0.9	620,320	-		20,000		0.9	640,320	
	Total Registry	**8.9**	**1,938,419**	**-**	**1.0**	**173,097**	**-**	**9.9**	**2,111,516**	**-**
Development	APNIC Conferences	4.5	1,319,912	1,000	0.1	85,389	-	4.6	1,405,301	1,000
	Foundation Support		-	-	1.2	865,463		1.2	865,463	
	Community Engagement	7.2	2,493,689	-				7.2	2,493,689	
	Community Participation	0.9	165,304	-	0.2	37,979		1.1	203,283	
	APNIC Academy	5.8	1,729,065	-	2.7	601,458		8.5	2,330,523	
	Infrastructure Support	0.2	1,147,450	275,000	0.9	177,008	120,000	1.1	1,324,458	395,000
	Total Development	**18.5**	**6,855,420**	**276,000**	**5.1**	**1,767,297**	**120,000**	**23.6**	**8,622,717**	**396,000**
Information	**Information Products**	4.9	794,498	-		-		4.9	794,498	
	Research and Analysis	0.9	849,155	80,000			-	0.9	849,155	80,000
	Total Information	**5.8**	**1,643,653**	**80,000**		**-**	**-**	**5.8**	**1,643,653**	**80,000**
Capability	Employee Experience	2.3	1,547,217	-	0.2	145,247		2.5	1,692,464	
	Finance and Business Services	6.7	1,749,985	55,000	1.5	249,152	-	8.2	1,999,137	55,000
	Technical Infrastructure	12.6	2,965,752	207,600	0.5	174,449	-	13.1	3,140,201	207,600
	Governance	1.6	860,539	-				1.6	860,539	
	Total Capability	**23.2**	**7,123,493**	**262,600**	**2.2**	**568,848**	**-**	**25.3**	**7,692,341**	**262,600**
	Total	**71.5**	**21,419,308**	**618,600**	**10.6**	**2,873,714**	**120,000**	**82.0**	**24,293,022**	**738,600**
	% of Total	**87.1%**	**88.2%**	**83.8%**	**12.9%**	**11.8%**	**16.2%**			

Activity Plan 2020

FTE by Pillar 2020

- Membership 21%
- Registry 12%
- Development 29%
- information 7%
- Capability 31%

Expenses by Pillar 2020

- Membership 17%
- Registry 9%
- Development 35%
- information 7%
- Capability 32%

Operations vs Investment

Budget Expenditure 2020

2020 Budget

Revenue	Forecast 2019	Operations 2020	Investments 2020	Budget 2020
Membership Fees	21,052,094	21,699,005		21,699,005
Non-Member Fees	257,271	260,000		260,000
Reactivation Fees	16,788	25,000		25,000
Sign-Up Fee	338,000	331,750		331,750
Transfer Fee	172,726	250,000		250,000
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Staff Training Expense	344,124	175,000		175,000
Translation Expense	6,392	20,000		20,000
Travel Expenses	2,350,000	2,267,100	84,900	2,352,000
Total Expenses	23,229,871	21,419,309	2,873,714	24,293,024
Total Surplus/(Deficit)	45,829	1,534,224	(1,908,714)	(374,491)

Expenses	Forecast 2019	Operations 2020	Investments 2020	Budget 2020
Computer Plant & Equipment	552,713	563,600	120,000	683,600
Office Furniture & Fittings	87,098	55,000	–	55,000
Total CAPEX	639,811	618,600	120,000	738,600

Revenue 2020

Revenue

REVENUE (AUD)	Actual 2013	Actual 2014	Actual 2015	Actual 2016	Actual 2017	Actual 2018	Forecast 2019	Budget 2020	Change
Membership fees	15,074,781	15,903,111	16,933,413	18,354,898	19,310,962	20,213,860	21,052,094	21,699,005	3.1%
Non-members fees	240,225	254,706	243,049	243,923	260,010	251,054	257,271	260,000	1.1%
Reactivation fees	37,050	67,800	37,600	37,700	27,200	22,000	16,788	25,000	48.9%
Sign-Up fees	0	0	456,000	465,000	373,250	330,000	338,000	331,750	-1.8%
Transfer fees	61,339	81,304	77,943	130,139	127,440	164,145	172,726	250,000	44.7%
Sundry income	112,320	207,304	221,968	186,694	218,185	389,984	420,782	387,778	-7.8%
Operating Revenue	15,525,715	16,514,224	17,969,973	19,418,354	20,317,048	21,371,042	22,257,661	22,953,533	3.1%
Investment income	585,522	754,563	792,041	890,951	841,080	872,034	1,018,040	965,000	-5.2%
TOTAL REVENUE	16,111,236	17,268,788	18,762,014	20,309,305	21,158,128	22,243,077	23,275,701	23,918,533	2.8%
Change		7.2%	8.6%	8.2%	4.2%	5.1%	4.6%	2.8%	

APNIC

Revenue Cont'd

Investment Income

- The value APNIC's investments continue to increase as excess funds are transferred from the operating account to the Investment Fund and investment returns are reinvested in line with the Investment Policy

- Investment income projections are based on advice from APNIC's investment advisors

- Interest on cash deposits not held in the fund are forecast to achieve 1.25% in 2020, significantly down from 2.5% included in the 2019 budget submission

APNIC

Revenue Cont'd
Membership Fees

- For the 2020 budget is that the average annual fee a new Member will pay is estimated at $1,280 which accounts for allocations from the last /8 and the IANA reclaimed pool, and for discounts applied to new Members from LDC's, analysis of the 2019 trends show 31% of new members are in LDC economies

- Based on analysis of recent trends, it is forecast that 790 new Members will join APNIC in 2020, the average value of closed accounts is estimated at $1,544 and on average, 20 account closures are expected each month, in 75% of cases, resources are returned to APNIC

Member Tier	2010	2011	2012	2013	2014	2015	2016	2017	2018	F'Cast 2019	Budget 2020
Extra Large	16	21	20	20	21	22	22	23	24	24	24
Very Large	33	41	45	42	40	44	43	41	44	46	46
Large	141	145	144	147	142	137	138	138	143	144	144
Medium	324	378	402	392	402	431	449	473	483	492	500
Small	867	970	1114	1198	1388	2165	2643	2971	3376	3583	3853
Very Small	637	817	1021	1294	1701	2336	2590	2769	2967	3324	3557
Associate	503	575	788	957	924	133	109	132	125	136	138
Total	2521	2947	3534	4050	4618	5268	5994	6547	7162	7749	8262
New	478	615	832	813	805	968	1048	849	825	790	790
Closed	163	189	245	297	237	318	322	296	210	240	240
Net Growth	315	426	587	516	568	650	726	553	615	550	550
Average Net Monthly Growth	26	36	49	43	47	54	61	46	51	46	46

Revenue Cont'd

Non-Members Fees

Fees from Non-Member account holders continue to be very stable and it is anticipated that in 2020 that there will be minimal change to this revenue for this item.

Reactivation Fees

Reactivation Fees are charged to Members to reactivate their accounts after closure. The revenue for this item is expected to increase slightly compared to 2019.

Sign-Up Fees

Sign-Up fees are directly related to membership growth, The fee is currently $500 and is discounted by 50% for LDC economies currently making up 31% of new members.

APNIC

Revenue Cont'd

Transfer Fees

Transfer activity is expected to increase in 2020 with IPv4 reclamation, projections take this into account.

Sundry Income

Sundry income includes revenue for sources such as:
- Meeting receipt registration – Members/Non-Members
- Meeting receipt – Sponsorship
- External training receipts - Members/Non-Members
- Recovery of APNIC staff costs and travel for work undertaken for Foundation activities
- External funding from research activities
- Foreign exchange rate gains/losses

Meeting Sponsorship will be lower, 2019 included significant sponsorship for the Chiang Mai meeting which will not be achieved in 2020.

APNIC

Expenses 2020

APNIC

Expenses

EXPENSES (AUD)	Actual 2013	Actual 2014	Actual 2015	Actual 2016	Actual 2017	Actual 2018	Forecast 2019	Budget 2020	Change
Bank service fees	138,337	145,823	156,496	167,917	177,670	193,762	209,979	207,200	-1.3%
Communication expenses	490,600	483,803	591,885	532,212	561,271	542,895	565,702	753,550	33.2%
Computer expenses	548,748	572,528	520,784	533,628	647,453	817,599	1,071,356	1,154,458	7.8%
Contribution to APNIC Foundation	0	0	0	18,003	665,058	732,710	738,166	750,463	1.7%
Depreciation expense	753,032	765,548	764,145	785,218	807,596	856,029	861,532	862,000	0.1%
Doubtful debt expenses	30,990	34,259	-54,293	-6,225	14,653	-1,445	21,363	25,000	17.0%
ICANN contract fee	136,732	260,333	284,161	243,026	244,657	278,866	263,382	238,000	-9.6%
Insurance expense	126,751	129,971	131,550	128,793	173,610	189,738	206,520	231,833	12.3%
Meeting and training expenses	332,819	374,850	350,313	363,343	389,922	396,545	452,242	561,100	24.1%
Membership fees	48,294	55,611	49,532	48,971	52,296	48,309	63,496	54,029	-14.9%
Office operating expenses	300,757	312,744	315,608	324,948	337,207	342,458	339,605	391,300	15.2%
Postage & delivery	45,269	22,071	51,029	41,893	40,610	42,808	36,943	39,700	7.5%
Printing & photocopy	36,586	48,508	33,807	38,165	29,311	35,605	34,986	40,500	15.8%
Professional fees	1,246,373	1,052,757	1,195,494	1,409,430	1,304,343	1,458,389	1,863,375	2,051,021	10.1%
Recruitment expense	89,472	144,423	119,077	94,307	134,793	185,554	106,868	145,000	35.7%
Salaries and personnel expenses	8,298,111	8,731,164	9,586,575	10,459,153	11,096,470	11,962,294	12,973,111	13,561,230	4.5%
Sponsorship and Publicity expenses	319,623	340,946	575,775	624,179	681,342	759,741	720,728	679,640	-5.7%
Staff training/ Conference expenses	163,053	135,996	169,122	164,441	148,603	199,349	344,124	175,000	-49.1%
Translation expenses	15,255	1,623	2,883	11,147	9,027	7,855	6,392	20,000	212.9%
Travel expenses	1,937,230	1,955,471	1,961,551	2,085,745	2,161,034	2,165,459	2,350,000	2,352,000	0.1%
TOTAL EXPENSES	15,058,033	15,568,431	16,805,493	18,068,294	19,676,928	21,214,519	23,229,870	24,293,024	4.6%
Change		3.4%	7.9%	7.5%	8.9%	7.8%	9.5%	4.6%	

Expenses cont'd

Salary and Personnel Expenses

Salary and personnel expenses will increase by 4.5% in 2020 when compared to the forecast expenditure for the 2019 year. The assumptions included in this budget are:

- Employee superannuation contributions will remain at 9.5%

- All permanent staff will take 3.5 weeks of annual leave

- The overall allowance for salary increases resulting from role changes and annual performance reviews will be set at 3.5%

- Existing headcount commitments continue from 2019

- As in 2019, two APNIC staff will be seconded to the APNIC Foundation, their costs are included in the expense; Contribution to APNIC Foundation

APNIC

Expenses cont'd

Travel Expenses

- APNIC's travel expenses will be similar in 2020, noting pressure on pricing resulting from the continued decline of the Australian dollar against the US dollar, at this stage this impact is being offset by strong competition

- This category includes travel for; APNIC Staff, APNIC EC, NRO AC, Support for SIG Chairs

- Travel expenses include all corporate travel management fees and International SOS membership, which provides advice and emergency assistance for those travelling on APNIC business

- In 2020, there is a provision to implement a carbon offset program.

Expenses cont'd

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- In 2020 there is a provision to implement a carbon offset program.

Expenses cont'd

Professional Fees

Professional Fees will increase by 10%, with the major changes coming form work on the Academy and the 2020 APNIC Survey.

Labs Consultancy	209,600
HR Consulting Fees	175,000
Information Services – Full Stack Dev	165,000
Investment Consultant Service	156,000
Legal Advice & Expenses	139,560
Non-staff trainers	130,000
Design Consultancy	120,811
Super Portal – CMS & Web Consultation & Module Development	118,000
CRM Consultant Implementation	80,800
Non-staff trainers – Travel	80,000
Industry interviews and internal policy review	80,000
Consultant – 2020 APNIC Survey	75,000
Outsourced Content Development (F2F & Online)	50,000
Academy Translation Services	50,000
Audit Fees	39,750
Financial and Tax advice	34,000
ERP Consulting Support	30,000
Strategic Planning Services Consultancy	30,000
PKI Compliance Audit	30,000
APNIC APRICOT Event Stenography	28,000
APNIC Conference Stenography	26,000
Business Internal Systems – Doc Mgt – SharePoint	25,000
Travel for guest speakers and media to APNIC conferences	25,000

Expenses cont'd

Computer expenses:
Computer expenses include all non-capital purchases of equipment, consumables, license and support fees for hardware and software. Computer expenses will increase by 8% in 2020.

Major expenses in are:

ERP Licenses	131,688
Salesforce Licence Expenses	120,000
Research Cloud Computing Expenses	120,000
APNIC Academy – Virtual Labs (LODS & VM Licences)	85,000
Cloudflare	57,000
Pardot Licence Expenses	44,000
Firewall & Intrusion detection/prevention	41,000
Salesforce Premium Support	36,000
HR IS Licences	35,452
SSO LifeCycle	30,000
Cloud deployment – Initial node	30,000
AU – Hardware maintenance	27,000
APNIC Academy – Website Licences & Dev Tools	25,000
Local Network Storage support and maintenance	25,000
Vmware licenses – Hosts, Vcenter and ROB	22,500

Expenses cont'd

Depreciation Expenses

Depreciation expenses are budgeted based on analysis of the existing depreciation and capital allowance schedules; including anticipated depreciation based on Capital Expenditure planned for 2020.

The amounts budgeted for 2020 are:

Equipment depreciation	703,653
Capital works allowances - 6 Cordelia St	158,347

Expenses cont'd

Sponsorship and Publicity Expenses

Sponsorship and Publicity expenses include APNIC contributions to the NRO expenses, the ISIF program, and sponsorship of NOG's and other community events.

Major expenses for 2020 include:

Sponsorships for NOGs / IXPs / Peering / R&E / Security Related Events & Activities	170,000
NRO Expenses APNIC Contribution	155,000
Contribution to ISIF Grants fund	100,000
Google PPC Advertising - member dev/ASN Project	60,000
APNIC conference fellowships	60,000
Regional/national IGFs sponsorship	40,000
General promotional items	24,000
Regional community dev conference sponsorship	10,000

Expenses cont'd

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Expenses cont'd

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APNIC conference fellowships	60,000
Regional/national IGFs sponsorship	40,000
General promotional items	24,000
Regional community dev conference sponsorship	10,000

Expenses cont'd

Communication Expenses

Communication expenses include data network expenses, Internet connectivity expenses, telephony and mobile phone expenses. The major contributors to costs here are the ongoing cost of the dark fibre network and the cost of rack-space in the co-locations that are critical to APNIC's network resilience.

Major expenses for 2020 include: *i*

AU – Data centre rack hire & cross connects	177,600
Network equipment support and Maintenance	120,000
AU – Transit, Peering, virtual interconnections	114,000
APNIC Network presence & Peering in Singapore, Tokyo & HK	80,000
DNS Anycast and Regional whois cloud hosting	68,100
AU – Dark fibre interconnections	68,000
VoIP service and call charges	59,250
Network, service monitoring and alerting	19,500
Hosting Expenses for Community Honeynet	15,000
Backup: Cloud storage	15,000

APNIC

Expenses cont'd

Contribution to APNIC Foundation

APNIC will underwrite Foundation costs up to a maximum of $750,463 in 2020. Included in this amount is the costs for the two APNIC staff seconded to the Foundation and recovery of other internal resource costs.

	Budget 2018	FY 2018 in USD	FY 2018	Budget 2019	Forecast 2019	Budget 2020	Budget vs Forecast	Variance %
Operating Contribution Received - APNIC	700,683	USD 543,074.80	732,710	746,208	742,029	750,463	8,434	1%
Contribution Received - Grants	145,000	USD 479,221.96	646,560	619,000	567,213	690,000	122,787	22%
Interest Income	0	USD 321.76	434		778	0	(778)	-100%
TOTAL REVENUE	845,683	USD 1,022,618.52	1,379,704	1,365,208	1,310,020	1,440,463	130,443	10%
EXPENSES								
Grant Expenses	145,000	USD 479,221.96	646,560	619,000	567,213	690,000	122,787	22%
Operating Expenses								
Bank Service Fees	500	USD 423.16	571	1,000	1,067	1,000	(67)	-6%
Communication Expenses	3,000	USD 1,455.76	1,964	3,000	1,984	2,000	16	1%
Computer Expenses	1,000	USD 2,761.92	3,726	5,000	9,729	6,000	(3,729)	-38%
Depreciation Expense	0		0	0	0	0	0	0%
Meeting and Training Expenses	1,500	USD 1,518.17	2,048	0	2,794	3,000	206	7%
Personnel Support Expenses	532,873	USD 397,233.54	535,943	572,808	535,872	572,163	36,291	7%
Postage & Delivery	250	USD 187.28	253	500	343	500	157	46%
Printing & Photocopy	1,000	USD 1,772.57	2,392	1,000	4,479	4,000	(479)	-11%
Professional Fees	40,000	USD 33,580.61	45,307	40,000	36,496	40,000	3,504	10%
Recruitment Expense	2,000		0	1,500	0	0	0	0%
Staff Training Expense	2,000		0	2,000	0	0	0	0%
Translation Expense	1,000	USD 633.17	854	1,000	1,359	1,000	(359)	-26%
Travel Expenses	115,560	USD 103,830.39	140,087	118,400	148,684	120,800	(27,884)	-19%
TOTAL EXPENSES	845,683	USD 1,022,618.53	1,379,704	1,365,208	1,310,020	1,440,463	130,443	10%
OPERATING SURPLUS/(DEFICIT)	0	(USD 0.01)	(0)	0	0	0	0	0%

REVENUE and EXPENSES (AUD)	Budget 2018	FY 2018 in USD	FY 2018	Budget 2019	Forecast 2019	Budget 2020	Budget vs Forecast	Variance %
Total Revenue	845,683	USD 1,022,618.52	1,379,704	1,365,208	1,310,020	1,440,463	130,443	10%
Total Expenses	845,683	USD 1,022,618.53	1,379,704	1,365,208	1,310,020	1,440,463	130,443	10%
OPERATING SURPLUS/(DEFICIT)	0	(USD 0.01)	-0	0	0	0	0	0%

Expenses cont'd

Meeting and Training Expenses

Meeting and Training expenses include all the costs incurred in running the meetings including APNIC conferences and other meeting/training events.

Major expenses in 2020 are:

APNIC Conference week – main plenary	94,000
Training support (venue and catering costs)	50,000
APNIC Conference AV rental	40,000
Xmas and Mid Year Staff Events	36,000
APNIC Conference Opening reception	35,000
APNIC APRICOT Closing Reception	30,000
APNIC Conference Workshop week – catering	25,000
APNIC Conference closing dinner	25,000
NRO CFO Retreat	15,000
APNIC Conference week – venue hire	15,000
APNIC Conference Workshop week – venue hire	14,500
APNIC APRICOT Conference Package	14,000
APNIC APRICOT AV-Webcast Equipment Rental	11,000
Workshop transportation – 5 days	10,000
Services outreach exhibition	10,000
Member gathering	10,000

APNIC

Expenses cont'd

Office Operating Expenses

The major costs in this item include electricity, land tax, council and water rates, cleaning and rubbish removal, air-conditioning and security. Major expenses in 2020 are:

Cordelia Street - Electricity	60,000
Kitchen Supply and Catering Expense (Inc	54,000
Land Tax	53,250
Office Cleaning	42,000
BCC Rates	37,500
General Workplace Health & Safety	24,080
General Maintenance and repairs	12,000
WHS Support	12,000
Staff health initiatives	11,000
Office building A/C service monthly	7,920
Stationery Supplies	7,200
Electrical repair & testing	7,200
Plant Hire	6,600
Office painting	6,500
Water Rates	6,000
Building Security Services	4,700

APNIC

Capital Expenditure

The capital expenditure provisions for 2020 comprises equipment & software and office equipment of $738,600.

There is $55k provided for the upgrade of the surveillance systems and other general office upgrades. Major expenses contributing to a total expenditure of $884k for equipment & Software in 2020 are:

i		
	IXP and Root Server Development	200,000
	Renewals – APNIC Laptops and Monitors	130,000
	Virtualisation Network storage	90,000
	Labs Servers	80,000
	Virtualisation servers	60,000
	Conference Laptops & Equipment Spares	30,000
	Conference Network equipment and shipment boxes	23,000
	PBCS Implementation	22,000
	Office wired and wireless network upgrade	22,000
	IT Office Equipment, Projectors etc.	20,000

APNIC

Key statistics

APNIC

Revenue analysis – per Member

Operating Revenue per Member
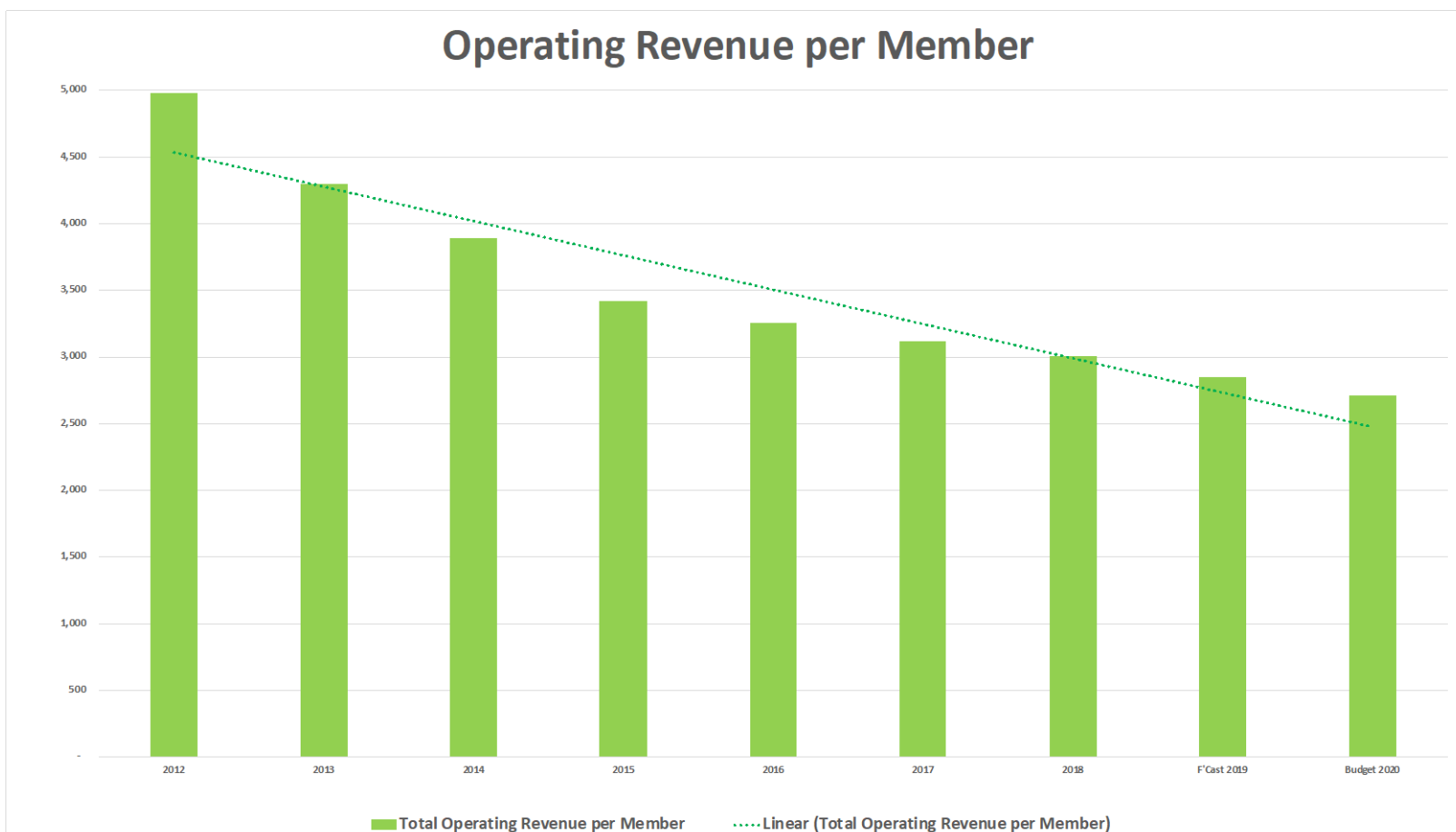
	2012	2013	2014	2015	2016	2017	2018	F'Cast 2019	Budget 2020	F'Cast 2021
Operating Revenue	17,602,161	17,425,855	17,968,303	18,038,246	19,531,112	20,454,383	21,537,347	22,258,975	22,953,533	24,038,274
APNIC Members	3,534	4,051	4,618	5,268	5,994	6,547	7,162	7,712	8,262	9,112
Revenue Per Member	4,981	4,302	3,891	3,424	3,258	3,124	3,007	2,886	2,778	2,638

APNIC

Efficiency Measures – Members/FTE

Ratio of Members per FTE
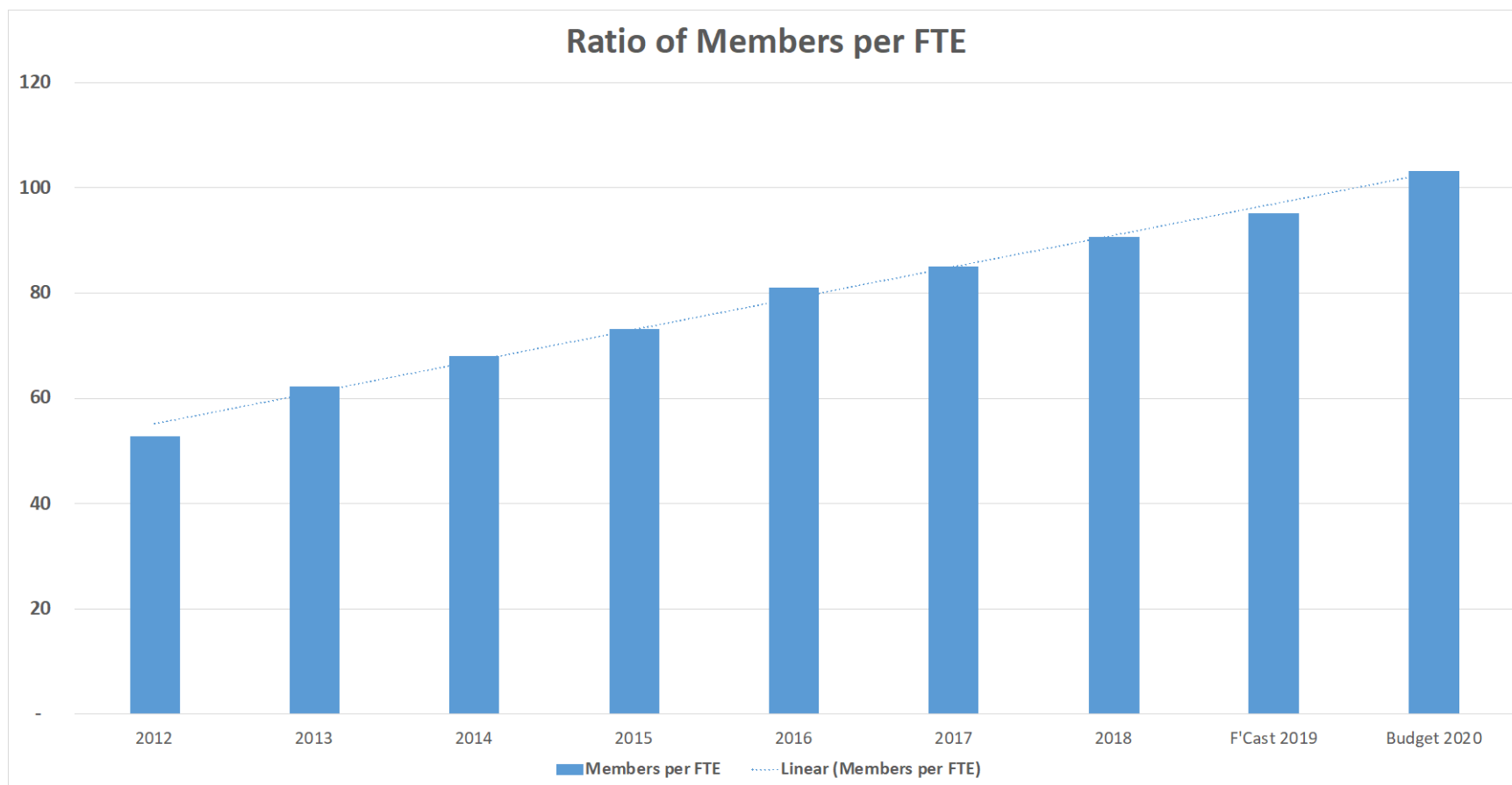
	2012	2013	2014	2015	2016	2017	2018	F'Cast 2019	Budget 2020	F'Cast 2021
FTE	67	65	68	72	74	77	79	82	82	82
APNIC Members	3,534	4,051	4,618	5,268	5,994	6,547	7,162	7,749	8,262	9,112
Members/FTE	**53**	**62**	**68**	**73**	**81**	**85**	**91**	**95**	**101**	**111**

Expense analysis – Opex/Member

Operating Expenses per Member
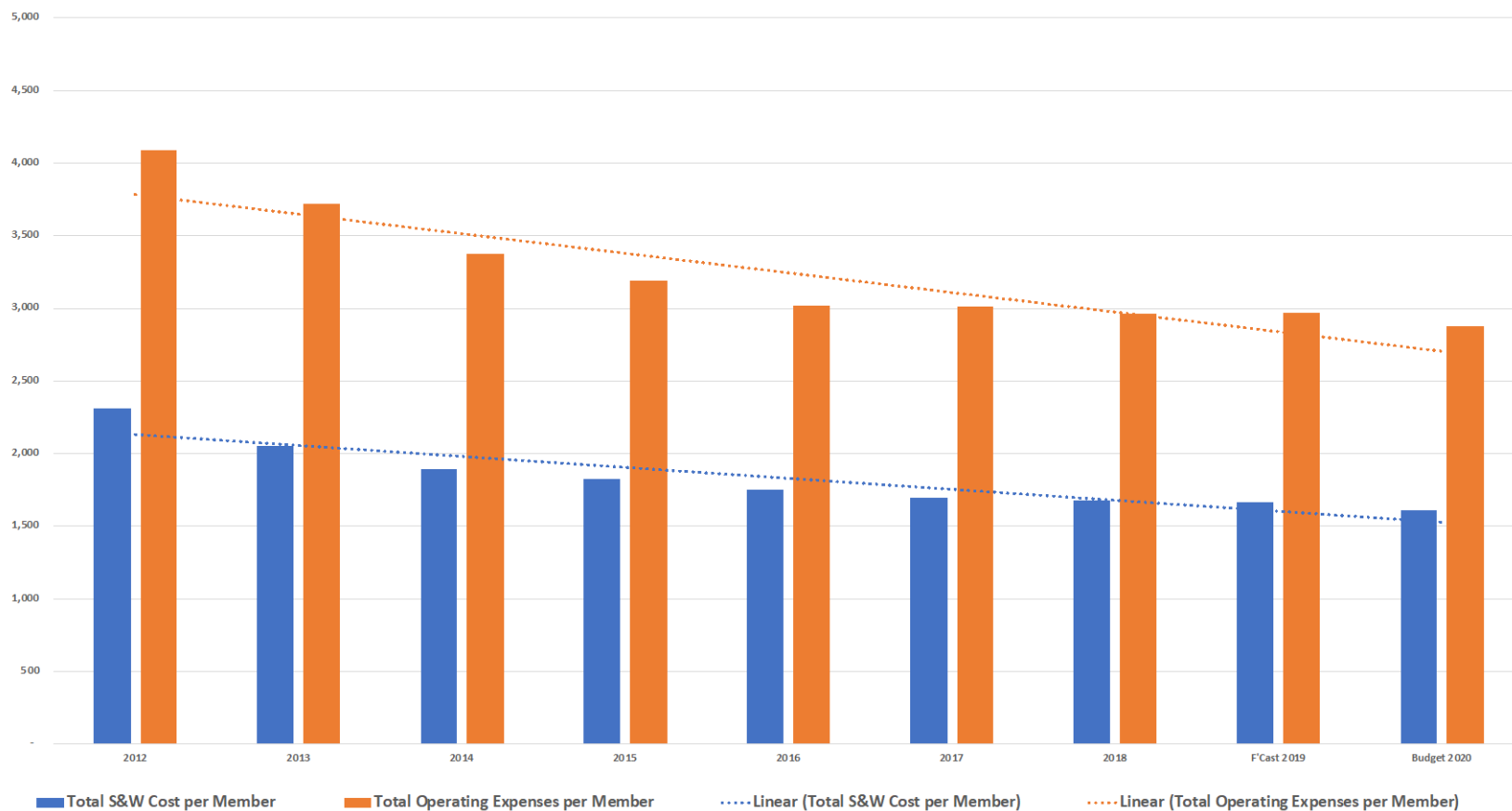
Revenue and Expenses over time

Revenue and Expense over time
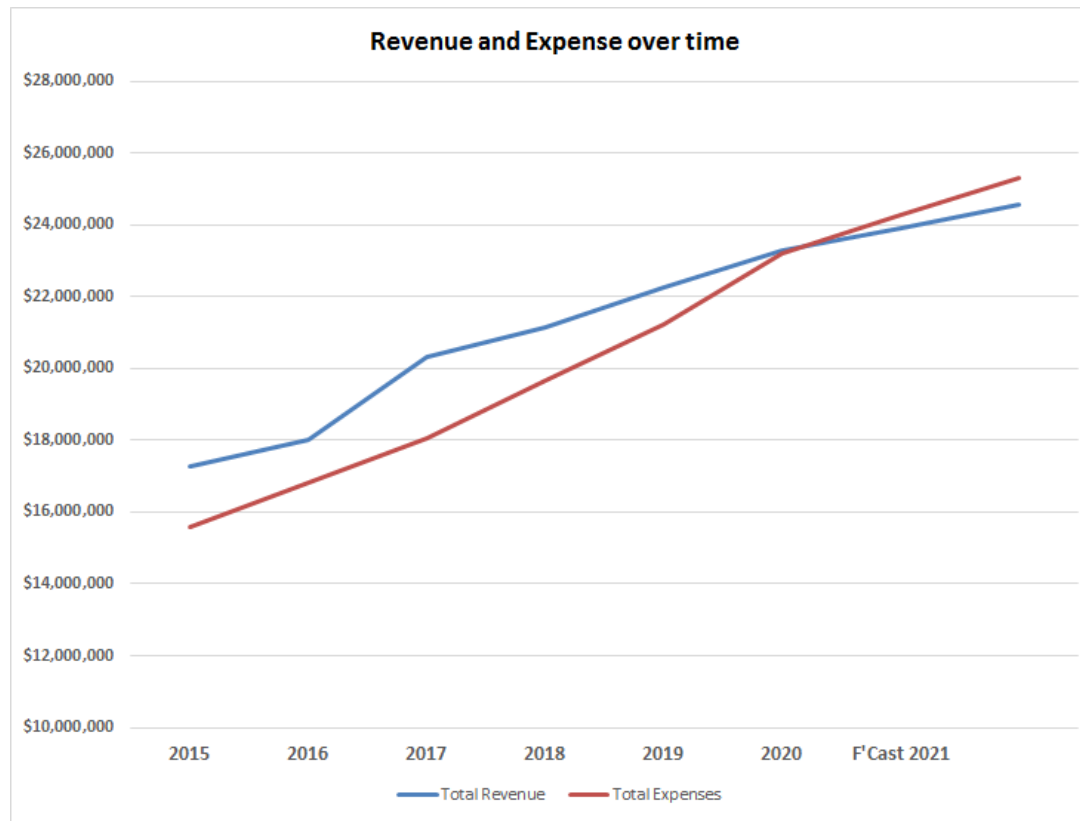
REVENUE and EXPENSES (AUD)	Actual 2014	Actual 2015	Actual 2016	Actual 2017	Actual 2018	Forecast 2019	Budget 2020	Forecast F'Cast 2021
Total Revenue	17,268,788	18,016,858	20,309,305	21,158,128	22,243,077	23,275,700	23,918,533	24,576,188
Total Expenses	15,568,431	16,805,493	18,068,294	19,676,928	21,214,519	23,229,871	24,293,024	25,329,910
Operating Surplus	1,700,357	1,211,364	2,241,011	1,481,199	1,028,557	45,829	-374,491	-753,722

Justification for a review of fees

- APNIC continues to increase efficiency, but revenue growth is slower than expense growth.
  - Due to IPv4 address exhaustion (more small members)
  - Due to LDC discount (growing number of LDC members)

- Maintaining current reserves will be difficult while continuing necessary investment activities.

- There has been no increase in the base fee increase since 2010

- For most Members, small fee changes are not significant compared to exchange rate fluctuations.

Discussion/Questions?

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