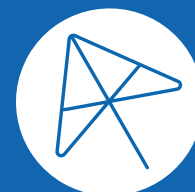# 2020
ANNUAL REPORT

Internet
Association
of Australia

DAVID HOOTON | APRICOT 2020

MESSAGE FROM THE CHAIR
DAVID HOOTON

It is now three years since I joined the IAA Board, serving as Chair for the last two years. Over this last year the current Board and I have focussed on putting the right people and systems in place to enable the Association to reliably and sustainably keep growing the services we offer our members.

This year has seen many changes for the Association. The team have navigated the loss of our very dear friend and team member Kellie Ireland, moved to a more streamlined organisational structure, welcomed Narelle Clark into the team as our CEO, and grown our technical team with the talented Washif Ahmed and Aaron Chidiac.

APRICOT was held in Melbourne in February, the first time the renowned industry event has been held in Australia since 2006. We were proud to be the host of this year's event to which, despite the difficulties caused by what became a pandemic, we still managed to attract over 500 delegates from over 60 economies. We have also helped our members weather the COVID-19 traffic explosion and have approved and begun operating from our first formal full year budget.

Nick Pratley has significantly improved the levels of automation on the IX, and we have run a series of events which have helped members provide feedback to, and work more closely with, government policy teams on matters that directly affect their businesses.

At this year's AGM we will be saying goodbye from the Board to Nathan Brookfield who has decided to stand down to focus on other areas of his professional career. Nathan has been a key figure in many of the decisions made by the Board over the last five years and his knowledge and experience will be missed. I would like to personally thank Nathan and wish him the best for the future.

The focus for the year ahead is to continue the momentum in the day to day operation of the association that we have started to build over the last 12 months.

David Hooton
Chair, IAA Board

David Hooton (Chair)
Elected by Corporate Members, nominated by Field Solutions Group
Elected 6 September 2017, re-elected 4 September 2019
Member, Membership Committee
Member, Finance and Audit Committee

Nathan Brookfield (Secretary)
Elected by Corporate Members, nominated by Simtronic
Elected 29 September 2015, re-elected 6 September 2017,
re-elected 4 September 2019, retiring at 2020 AGM
Member, Membership Committee

Jay Binks
Elected by Corporate Members, nominated by Over The Wire
Elected 4 September 2019

Daryl Collins
Elected by Corporate Members, nominated by Akamai
Elected 6 September 2017, re-elected 4 September 2019
Member, Intercap Project Committee

Jason Dale
Elected by Professional Members
Elected 30 August 2018 Resigned 18 Nov 2019

Matthew Enger
Appointed to casual vacancy 10 January 2020
Member, Intercap Project Committee
Member, Finance and Audit Committee

Matthew McDonough
Elected by Professional Members
Elected 4 September 2019

Matthew Moyle-Croft
Elected by Professional Members
Elected 4 September 2019
Member, Finance and Audit Committee

Brett O'Hara
Appointed to casual fill vacancy 11 September 2019, nominated by Vocus
Member, Finance and Audit Committee

Chris Kawchuk
Elected 4 September 2019, nominated by Virtutel, declined the position.

DIRECTOR ATTTENDANCES

Director	Eligible	Present	Apologies	Absent
David Hooton	14	13	1	0
Nathan Brookfield	14	14	0	0
Daryl Collins	14	12	2	0
Matthew Moyle-Croft	14	14	0	0
Matthew McDonough	14	12	1	1
Matthew Enger	11	11	0	0
Brett O'Hara	13	13	0	0
Jay Binks	14	4	5	5
Jason Dale	2	2	0	0

Table covers the period from AGM 2019 - AGM 2020

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NARELLE CLARK | ICANN52

MESSAGE FROM THE CEO
NARELLE CLARK

The team have good reason to be proud of their performance in what has been a tremendously challenging year for the Association. The beginning of the financial year opened with some great plans, only for the cruellest of tragedies to force change. I was privileged to work with Kellie Ireland for a short time to develop the Association's voice in the advocacy space, and I am confident I can still hear her voice in these projects and as I continue to grow our organisation on her solid foundations.

It was with some excitement and indeed trepidation that I took on this role. However, with its perfect combination of business, technology and industry policy I am confident we can continue to see our place as the lynchpin in the Australian Internet ecosystem.

In this, I have endeavoured to bring my big telco experience in strategic architecture and business planning, and balance it with the can-do attitude of the smaller, challenger technology company. As a member-driven, not-for-profit entity we are in a unique place to both set standards and respond to the need for high quality services. The pandemic has certainly focused attention on the importance of the Internet to society, and it is something I, and the team, take tremendously seriously.

On that note, it's great to be part of the implementation of things like RPKI, flow-through automation and projects more specific to IX Australia, such as building out greater redundancy and capacity. Over the coming year, we expect to further extend the capacity, quality and reliability of our services. Our relationship with NZIX is solid, and we are deepening that partnership with new services and locations.

Over the coming year we hope to continue with our events program, having made the transition well to the online format. We promise to get together for a catch up in person as soon as it is safe! This coming year marks the 25th anniversary of WAIA, a milestone to make us immensely proud. Those humble beginnings have indeed proved to be a great foundation.

I also want to thank everyone for the welcome I've had coming into the organisation, and thank the staff and Board for their tremendous support. We have a great team and a great future.

Narelle Clark
Chief Executive Officer

THE YEAR AHEAD

This year we have some great projects planned, with much expected to be completed by the time the AGM takes place.

ON THE TECHNOLOGY FRONT

- RPKI – will be implemented and validating all BGP routes across the exchanges

- Increased redundancy and diversity through our intercapital bandwidth expansion project.

- Replacement of the Extreme BDX8 switches and expansion of the switching fabric in Sydney and Melbourne, to enable easy growth and better stability.

- More automation of our provisioning and configuration management, with the replacement of our compute clusters and upgrades to the route servers.

- The beginnings of a portal replacement project.

ON THE ORGANISATIONAL FRONT

- Increasing our presence in the advocacy space, building our relationships with the regulators, politicians, and other stakeholders.

- Refreshing our social and mainstream media interactions to increase our presence.

- Conducting a thorough review of our rules, and putting a proposal to members to consider a transition to incorporation as a not-for-profit entity under federal corporations law.

PANDEMIC?
WHAT PANDEMIC?

Along with everyone else, we made a lot of changes to ensure we gave our highest priority to staff health and wellbeing whilst ensuring business continuity. We also recognised the importance of our role as a specialist provider of critical infrastructure.

To prepare for and manage this situation, we established a business continuity framework aligned with the recommendations of the Australian Government health fact sheet for COVID-19 and monitored global activity, taking advice from relevant government agencies, the WHO, and actively followed relevant notices and alerts. Luckily, our team has remained safe, but certainly busy!

WHAT DID WE DO?

We worked with our team and members to ensure infrastructure and business continuity during this time. This included:

- Upgrading networks to handle the increase in network traffic
- Deferring any unnecessary work
- Restricting major changes to essential ones only
- Reassessing our spares, extra port availability and remote hands services to ensure any failures were and are dealt with rapidly
- Providing or coordinating the use of remote hands services to reduce travel and maximise skilled staff availability
- Adhering strictly to pandemic protocols in place in data centre facilities

PANDEMIC?
WHAT PANDEMIC?

PERSONAL HEALTH & SAFETY

A key focus area in caring for staff and members continues to be working to prevent the transmission of COVID-19 in our workplaces. To achieve this, we put the following measures in place:

- Anyone feeling unwell remains in isolation

- Anyone wishing to attend our colo or data centres must advise if there have been any team members within their organisation with symptoms or known cases of COVID-19 before they attend

- Domestic business travel was restricted to business-critical purposes

- Widespread use of hand sanitiser

WORKING FROM HOME

Our team is well accustomed to working remotely or from home and our systems are designed for this. More than once, however, staff had to have children around them on calls as alternative care arrangements were disrupted. This meant the occasional piano lesson alongside contract reviews, and jam sandwiches far closer to keyboards than usual!

COLLABORATION IS KEY

Without wanting to overuse the terms "extraordinary" and "unprecedented", it really has been a time of challenge for everyone, and our team, customers, suppliers, stakeholders and the relevant authorities, have just been amazing as we've all had to listen, take advice and importantly, take decisive action to help everyone through this period.

Unfortunately, though – it's not over yet! Should you have any questions or need further information about how we are managing the delivery of your services, please get in touch.

Our thanks certainly go out to everyone for their patience and empathy, and we extend our sympathy to those who have lost loved ones, colleagues and livelihoods.

TECHNICAL
REPORT

We started the year with 37 POPs in service (including those operated on behalf of the New Zealand Internet Exchange, NZIX) keeping all in service apart from one (DC3) which was decommissioned in Queensland when TPG ceased operations on the site. NZIX has similarly grown and we assisted them in commissioning the new Christchurch exchange CHC-IX.

Better tools in place to operate and support the IX and members:

- Flow-through provisioning via Ansible AWX and ARouteServer

- Daily AS-SET updates are now fully automated!

Significant intercapital capacity upgrades to improve capacity and redundancy with path diversity for more VLLs and more reliable cache updates

- NSW-QLD – Completed 4 × 10G

- NSW-VIC – Pending 4 × 10G

- VIC-ADL – Pending 2 × 10G

- ADL-PER – Pending 2 × 10G

- ADL-SYD – Pending 2 × 10G

End of life Extreme BDX8 switches in train for replacement, and an expansion strategy in place for easy growth when required.

AND WILL CONTINUE TO STRENGTHEN INTO THE FUTURE

More Automation

- New portal to be scoped next year, requirements to be properly compiled
- Member initiated MAC address updates
- Automated LOA creation

Replace BDX8 switches

- Sydney completed August 2020
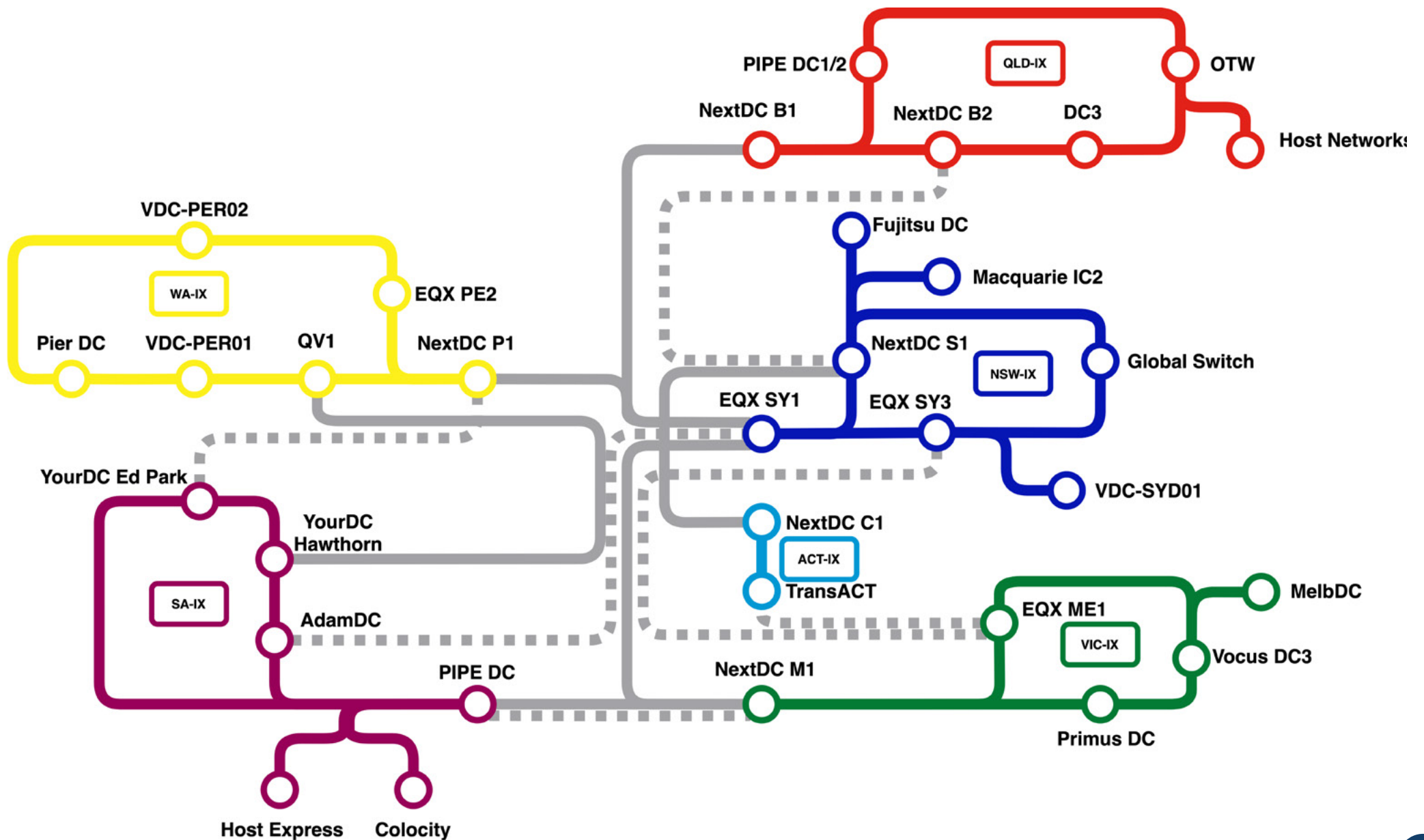- Melbourne to be completed when travel allows

Implement RPKI

- Completed 1 Sept 2020
- Route servers upgraded

100G Facebook caches 1H FY20-21

- To be deployed in Brisbane, Melbourne and Perth

New content and mirrors for the IXes – in train. Watch this space!

IAA
THE NUMBERS

418 MEMBERS

318 MEMBER ASNs

627 TOTAL MEMBER PORTS

IPv4
93175
11.53%
Unique IPv4 Routes available
11.53% Percentage of global table

2 COUNTRIES

37 POPs MANAGED

IPv6
35947
37.18%
Unique IPv6 Routes available
37.18% IPv6 Percentage of global table

8 STAND ALONE IXes

INTERCAPITAL EXPANSION PROJECT

We have conducted a study of our intercapital link capacity and undertaken a significant upgrade program, ensuring path diversity and an appropriate level of capacity for our VLL, extended reach and cache fill requirements.

Intercapital Backbone Upgrades

- NSW-QLD – Completed 4 × 10G

- NSW-VIC – Increasing from 2 × 10G to 4 × 10G

- VIC-ADL – Increasing to 2 × 10G

- ADL-PER – Increasing to 2 × 10G

- ADL-SYD – Increasing to 2 × 10G

We are also planning expansions to the intra-IX rings over the coming year as and when capacity is required.

All links are 10Gbps   ■ NEW links as part of intercapital expansion project   ■ Existing links   ■ For removal
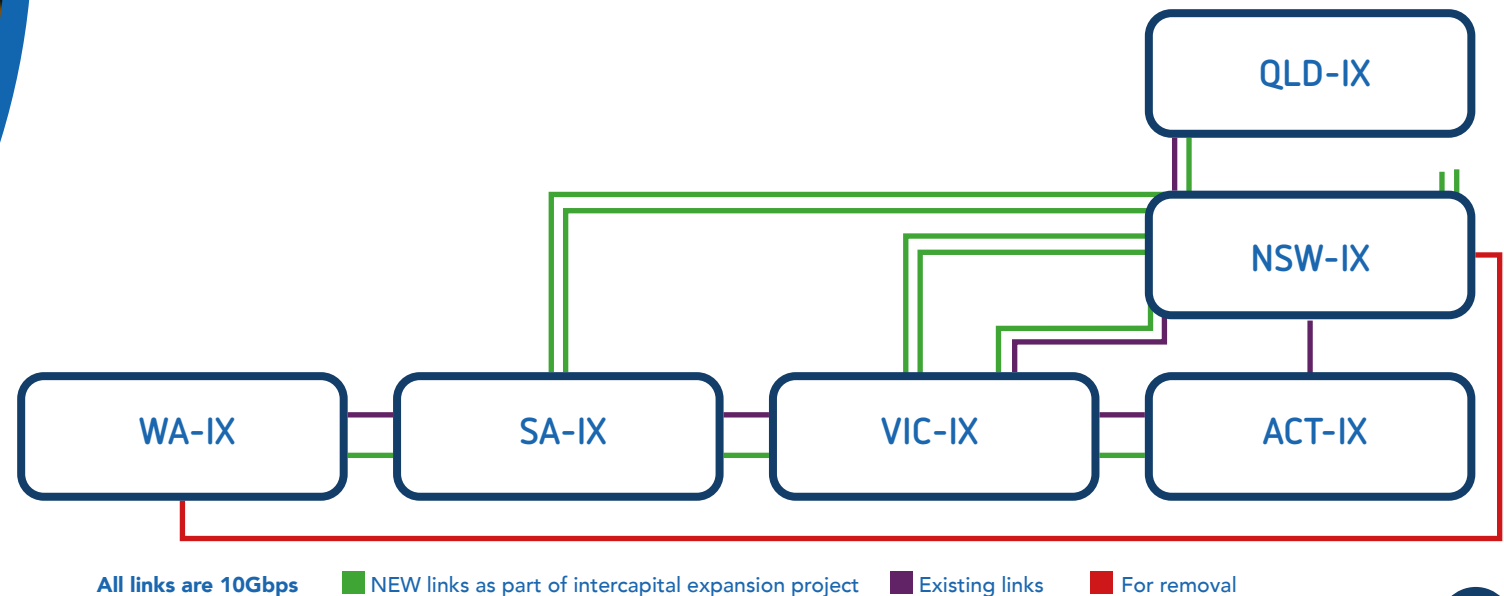
NETWORK PRODUCTS

- INTERNET PEERING
- EXTENDED REACH PEERING
- VIRTUAL LEASED LINE (VLL)
- AWS VIRTUAL PRIVATE CONNECTION (VPC)
- EXPRESS ROUTE

IX STATISTICS

EACH EXCHANGE SAW SUBSTANTIAL INCREASES IN THE AVAILABLE ROUTES THIS YEAR
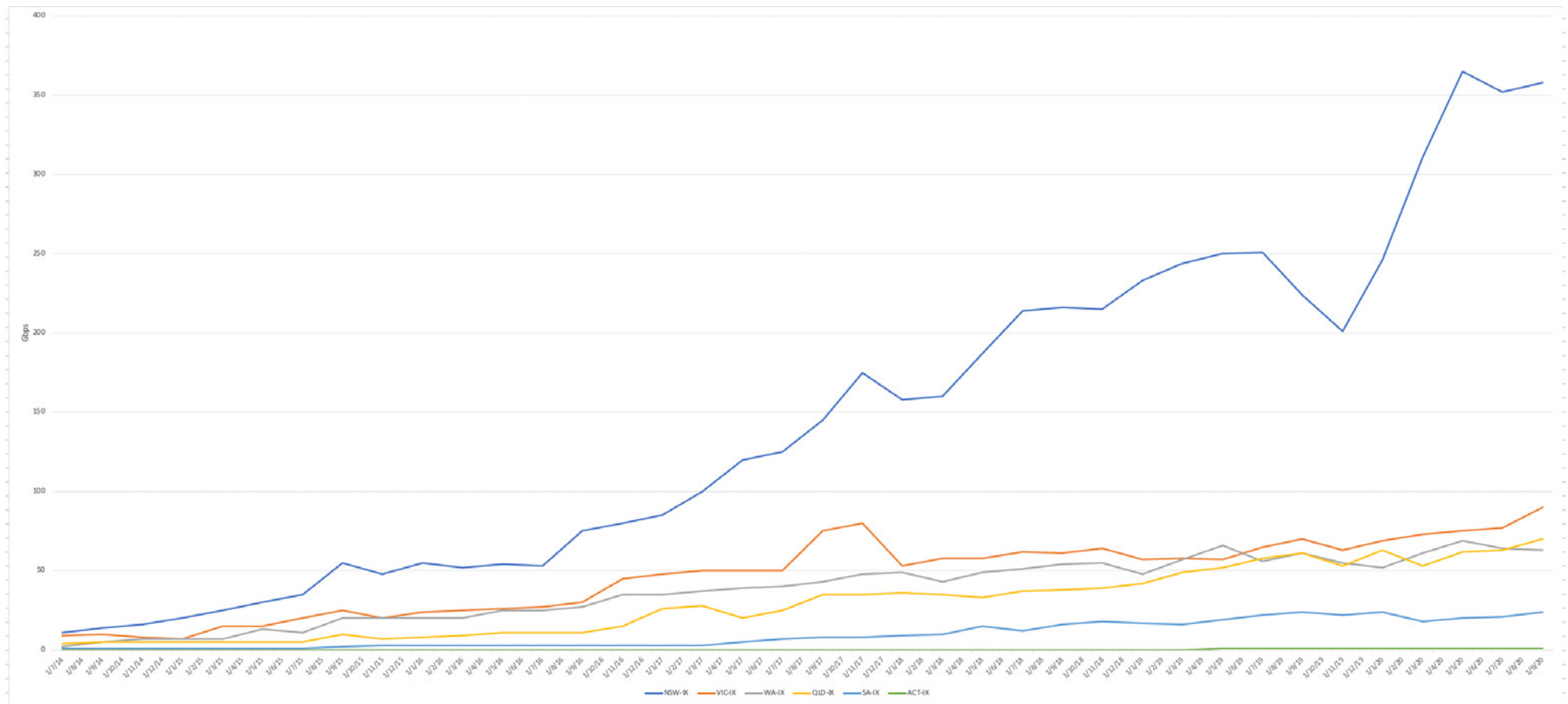
IX STATISTICS

Statistics over the year

	Min	Max
NSW-IX	21 Gbps	426 Gbps
VIC-IX	20 Gbps	142 Gbps
WA-IX	10 Gbps	76 Gbps
QLD-IX	4 Gbps	73 Gbps
SA-IX	1 Gbps	26 Gbps
ACT-IX	5 Mbps	120 Mbps

Statistics over the calendar year

	Min	Max
NSW-IX	69 Gbps	513 Gbps
VIC-IX	20 Gbps	142 Gbps
WA-IX	2 Gbps	76 Gbps
QLD-IX	6 Gbps	76 Gbps
SA-IX	1 Gbps	28 Gbps
ACT-IX	23 kbps	120 Mbps

ALONG WITH PRACTICALLY EVERY OTHER INTERNET PROVIDER WE SAW A SIGNIFICANT INCREASE IN TRAFFIC CORRESPONDING WITH THE DECREASE IN HUMAN MOVEMENT.
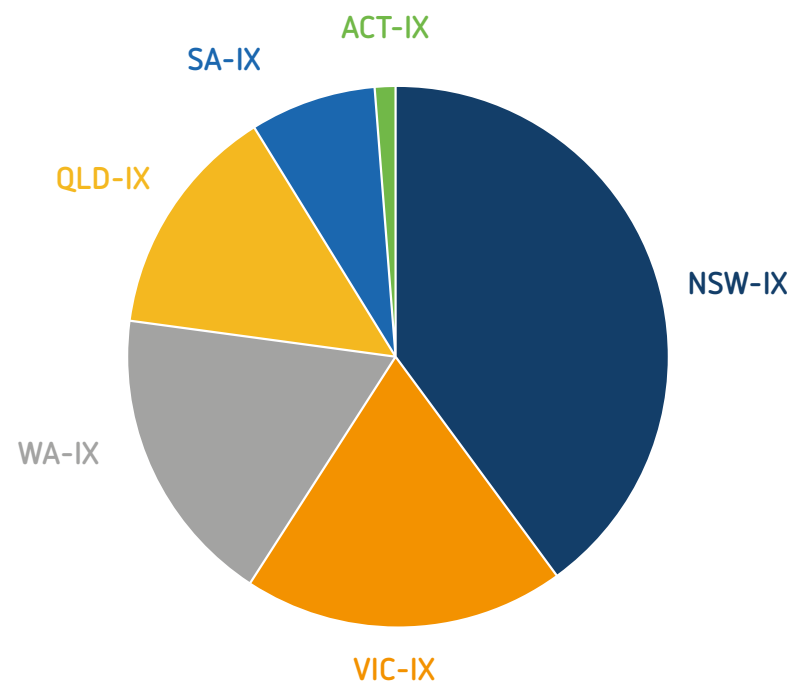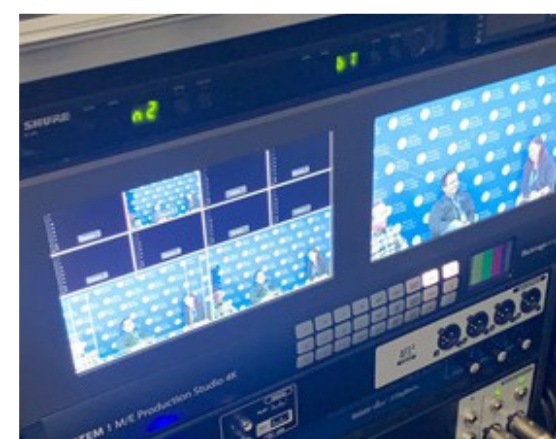
IXA ACTIVE PORTS FY19-20

Chart legend: 1G, 10G, 100M, 40G, 100G

Y-axis (left): 1G, 10G — 0, 100, 200, 300, 400, 500, 600
Y-axis (right): 100M, 40G, 100 — 0, 2, 4, 6, 8, 10, 12, 14, 16, 18, 20
X-axis: JUL, AUG, SEP, OCT, NOV, DEC, JAN, FEB, MAR, APR, MAY, JUN
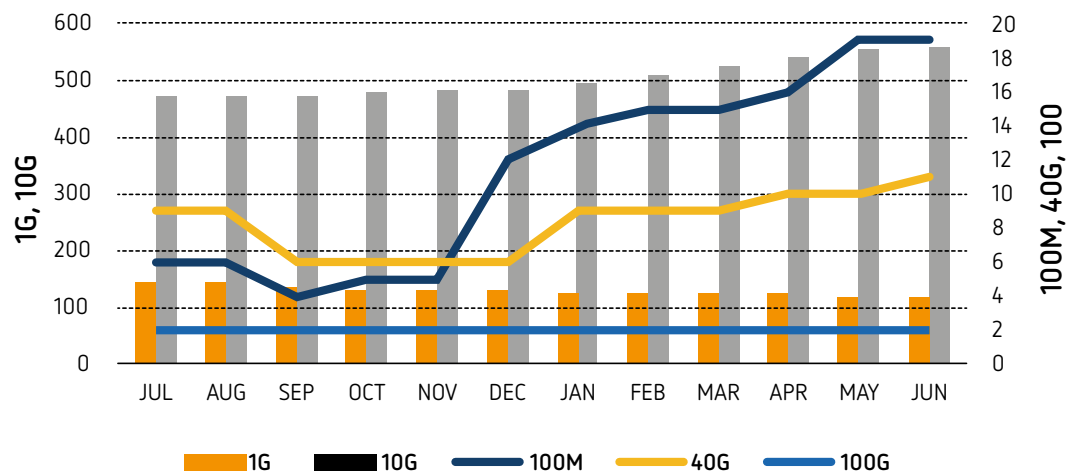
UNIQUE PEERS AT END JUNE 2020

Pie chart segments: NSW-IX, VIC-IX, WA-IX, QLD-IX, SA-IX, ACT-IX

Our events have formed a large part of our engagement with members this year.

We completed our **Unplugged** event series with some great socials in Brisbane, Sydney, Melbourne, Adelaide, and Perth. The monthly catch ups around the nations capitals gave us a forum to chat face-to-face with members about what the year had in store for many businesses and more broadly the technology sector. They gave us an insight into member needs, and allowed us to develop our goals for the year ahead to accommodate them. We also hosted some fun end of year socials to celebrate with members across the country.

With the arrival of COVID-19, like many organisations, we had to adapt our events calendar, introducing the online event series, **Life Under Lockdown.** This gave us the opportunity to bring exciting topics to our members and keep in touch as everything went virtual.

The first Life Under Lockdown event looked specifically at how the internet has held up during the pandemic and featured an exceptional panel comprising members Aussie Broadband (Phil Britt), Vocus (Brett O'Hara) and Field Solutions Group (David Hooton) interrogated in a fun and engaging style by our new CEO. Our second event in the series took a more practical approach on the implementation of RPKI with a step by step guide from APNIC's Tashi Phuntsho and foreshadowed our own implementation plan.

Once again in September 2019 we sponsored another successful AUSNOG event in Melbourne.

IAA fulfilled our hosting duties for **APRICOT 2020** in February and would like to thank everyone who attended the event at Melbourne's Crown Promenade.

Despite travel restrictions caused by COVID-19, APRICOT 2020 still attracted over 560 people, across 60 economies, making APRICOT the biggest industry event IAA has been involved in, to date.

With five days of workshops and over 50 presentation sessions during conference week, the IAA team worked tirelessly to ensure the smooth running of the network. At times during the fortnight, there were over 1000 devices connected to the Wi-Fi simultaneously. Who'd have known we had that many tucked away in our pockets!

The 25th anniversary of APRICOT was celebrated at social events across the city. Storms didn't deter conference goers attending the opening social at Melbourne Town Hall, organised and sponsored by IAA.

The success of APRICOT's 25 years promoting Internet technology and operations across the Asia Pacific region was marked at a formal dinner at the stunning Plaza Ballroom.

Despite travel restrictions, we have still successfully worked to bring the industry together.
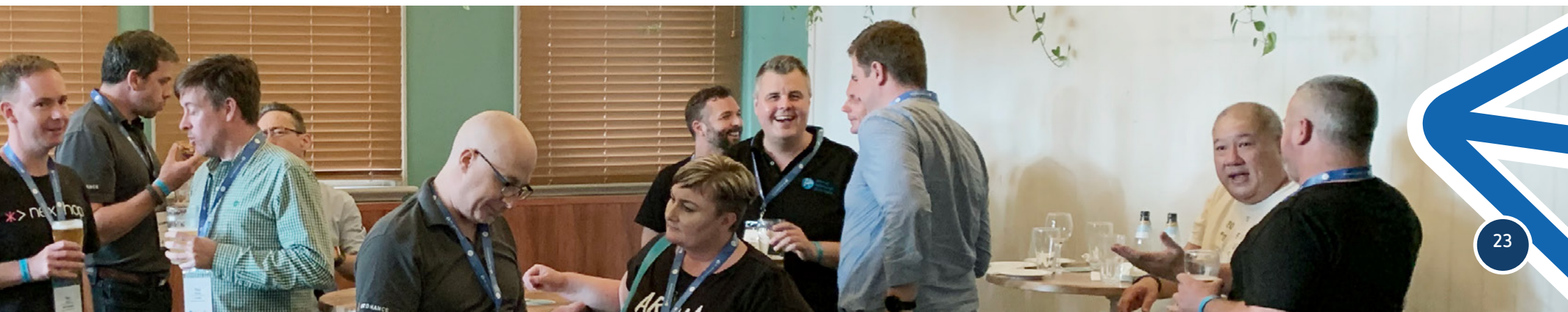
PUBLIC POLICY ENGAGEMENT

IAA dipped its toe into the public policy water this last year with two member round tables, one to discuss future NBN scenarios and one on the Assistance and Access Bill (also known as the Telecommunications and Other Legislation Act). In each of these, members were able to express their views on the impact of these public policy initiatives.

By putting these views to the Independent National Security Legislation Monitor, we are confident that our voice will be taken into account when the federal government releases its response to the review of the AA Bill (due late 2020). This type of legislation imposes significant burden on members as it is complex and cumbersome, especially for smaller Internet providers.

We trust members will continue to make their views known to us so that we may represent you effectively and coherently. Our CEO regularly meets with regulators, politicians and broader industry stakeholders on these and other matters.

KELLIE IRELAND

REMEMBERING
KELLIE IRELAND

In September 2019 the unthinkable happened within our organisation when lost a very dear friend and leader. Kellie Ireland started with WAIA in 2012 as a bookkeeper, and with her talent for organisation enabled us to grow to where we are today. Kellie's vigour, enthusiasm, and fun character meant we all enjoyed being with her and what we were doing, and we did it well in response.

To mark her contribution, the Association will sponsor programs that support and sustain women both entering the industry and for those who are already a part. This will take the form of sponsoring coding workshops, mentoring and conference attendance. We hope members and stakeholders will assist us in making this a sustained success that both honours Kellie's contribution and amplifies it into the future. Kellie we miss you. Our hearts are broken.

This year some overdue expenditure on new switching and compute capacity and maintenance was made, having been deferred from previous years. Following this, the incoming CEO led a full budget planning process, and the Board approved a formal, full year budget for FY 20/21. This marks the adoption of improved forecasting and planning. Staffing also increased from 5.7 FTE to 7.8 FTE.

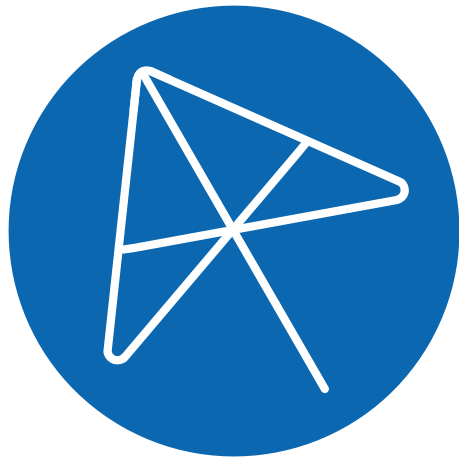A full billing audit was conducted to improve invoice clarity and accuracy and ensure discount policies were applied consistently and fairly.

Staff and the Board undertook a market review and appointed Perpetual as our external investment manager. This will enable more strategic management of member funds for future projects.

FINANCIAL SUMMARY

	FY19-20	FY18-19
Total Income from member services	$2.98m	$2.6m
Net Year surplus (deficit) after tax	$547,434	$512,447
Cash Balance	$2.3m	$1.5m

FINANCIAL POSITION

	FY19-20	FY18-19
Assets	$2,983,635	$2,359,585
Liabilities	$167,669	$91,054
Member Funds	$2,815,966	$2,268,531

Internet Association of Australia