

COVER NOTE

This report is submitted as an analysis and report of Focus Group interviews held across the Asia Pacific region in eighteen different cities from March 1st – 23rd April 2014.

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Submitted on: 16 May 2014

APNIC Member and Stakeholder Survey 2014

Report on focus group meetings

Background

As a membership-based service organisation, APNIC relies on input from members and the wider community of stakeholders for planning purposes. It obtains this input through a regular formal survey process.

APNIC has conducted seven previous “Member and Stakeholder Surveys” to canvas community views on APNIC services and performance, on suggested improvements and on priorities for the future development and direction of the organisation.

In March 2014, APNIC launched its eighth survey. As with previous surveys, the “APNIC Member and Stakeholder Survey 2014” was commissioned by the APNIC Executive Council and executed independently with the following objectives:

- Identify members’ concerns in regard to existing services, as well as future needs as viewed by Members and Stakeholders
- Maintain anonymity of all respondents
- Reach the highest number of respondents to the online survey.

The selected consultant was Professor Ang Peng Hwa of the Singapore Internet Research Centre (SIRC). Anne Lord and John Earls carried out the focus groups and individual interviews.

As in past surveys, focus group discussions were used as the initial process of identifying the issues felt to be most important, and therefore to be included in the formal survey instrument.

This focus group report provides a summary of issues identified in the focus group discussions together with quoted comments to give the flavour of the discussions.

The findings reported here are those of the focus group participants and do not reflect the views of the consultants nor of APNIC. In order to protect the anonymity of participants, identifying details including individual speakers, organisations or meeting locations have been removed and withheld by the consultants. These details will not be released under any circumstances.

The 2014 focus group meetings

In March and April 2014, focus group meetings were held in the following cities:

Auckland
Beijing
Chennai
Colombo
Dhaka
Hong Kong
Islamabad
Jakarta
Kuala Lumpur

Melbourne
Mumbai
Noumea
Singapore
Taipei
Tokyo
Ulaan Bator
Vientiane
Yangon

Participants were selected and invited by APNIC staff. Some of those invited brought others from their organisation or community and attendees were free to speak on any matter they chose.

The APNIC Executive Council (EC) and Executive Leadership Team (ELT) identified a list of issues as a basis for discussion aimed at identifying items for the survey. They also provided the consultants who conducted the focus groups with a list of aspects related to each issue, which could be used to stimulate discussion. These are included as appendices to this document.

The issues are listed as:

1. IPv4 Address Transfers
2. APNIC Services
3. APNIC Priorities
4. APNIC Management and Fees
5. IPv6
6. Internet Security
7. AP Community Building
8. AP Internet development/capacity building
9. Global Internet cooperation and collaboration

Observations

1. Members who attended could be divided into three groups:

a) The large majority who knew relatively little about APNIC and whose needs were predominately, more training and technical assistance.

b) A group who felt that they were reasonably well informed on current Internet issues that were of interest to them.

c) A group who sought more information on APNIC operations, especially in regard to project decision making, costs and related benefits.

2. While all members had and have the same needs in regard to APNIC core functions, their needs in relation to other services which APNIC provides or could provide, appear to be related to three main variables which are size, technical maturity and knowledge and local economic circumstances.

3. Many of the participants had limited knowledge of the services provided and the roles performed by APNIC. After the consultants pointed out that they were not members of APNIC staff, they provided information where they felt it could be helpful.

An example would be the first item discussed which was IPv4 Transfers. Even those who were aware of such transfers had a limited knowledge, except when they had been a party to such a transfer. Yet there is detailed information available on the APNIC website.

Most members had the view, after their basic dealings with APNIC's core function of address allocation, their other work pressures dominated. This meant that they used other APNIC services on an "as needs" basis and were not well informed as to all the services available.

Key findings

The outcomes of the focus group meetings are summarised as follows with findings grouped under each of nine headings below.

The material collected focused on member's perceptions of their current views and future needs, especially in regard to their knowledge of and relationship with APNIC.

Considerable use is made of quotations to give an indication of how people actually felt, as well as their factual opinions on the various issues.

These focus groups were concluded in mid-April 2014 and it may be that some circumstances and opinions may have changed since that time.

1. IPv4 Address Transfers

The main views put forward were that APNIC should have a role, which protected the interests of members and ensured the ongoing accuracy of WHOIS. "We trust APNIC."

While most people were aware of IPv4 transfers, their knowledge was extremely hazy, both as to what the policy was, what had taken place so far and the process/procedures involved.

It was also generally agreed that there should be a consistent policy across all RIRs and not simply between ARIN and APNIC.

Other comments made were:

- "Lack of IPv4 addresses has accelerated the use of large scale NATs."
- "Leasing would assist the needs of mobile operators."
- "APNIC had a special role in assisting the interests of less developed and

landlocked economies.”

- “APNIC could play a role in aggregating purchases and obtaining a lower price for those in need.”
- “APNIC could use some of its reserves to buy back IPv4 and ensure that it went to cases of demonstrated need.”
- “There should be a small transfer fee to cover APNIC costs and avoid cross subsidisation.”
- “Some organisations were offering addresses for sale because they wanted the money. If the price in the market increased then this trend could also increase.”
- “An open market after all RIRs were exhausted would mean that organisations would move to the RIR where they got the best value.”
- “Transfers between regions and then between entities increased the risk of error and needed careful monitoring but consistency in between RIR transfer policy was desirable.”
- “There needs to be a fast track procedure, for which at least some members would be willing to pay a premium.”

2. APNIC Services

There was general agreement that APNIC basic services had progressively improved over the years, hostmasters were doing a good job and turn around times for requests were acceptably short.

An issue raised by a range of people was the need for a review of staff levels, related services, costs and a system overhaul. It was argued that the reduction, simplification and automation of the basic address issuing function was an appropriate time for such a review with the aim of cost reduction. A participant asked whether helpdesk work could be outsourced to local representatives. This decline in basic service demands would also flow on to a lesser need for training in this area.

Other comments and suggestions made were:

- “Less developed economies really need a pre-service education program on service availability, structure of APNIC and what APNIC does on their behalf. The additional cost of such a program is to the benefit of all.”
- “There was a concern that MyAPNIC required more knowledge than naïve users had in order to obtain benefits. Reverse DNS was not seen as user friendly.”
- “Training was generally seen as good but a particular area where more was

needed was “how BGP can improve incoming traffic” and this needed a week of “sit down with hands on”.

- “Training would be much more effective if it was in the local language rather than in English with a translation.”
- “While the current services could be considered satisfactory there is no published plan in regard to future services to which members have had the opportunity to input.”

APNIC was given credit for its support of NOGs.

- “APNIC could do a number of things to assist. It could collaborate with experienced NOGs to produce a “best practice” document to aid new starts. This should clearly set out what were seen as three phases Birth – Adolescence - Maturity. APNIC should be very involved in the Birth stage. In Adolescence all participants should be required to make a presentation on their experiences to date. In Maturity the local NOG should run the operation and APNIC (and others) should provide the input sought by the local organisers.”
- “There was a concern that people were very lax in doing their own updates while at the same time saying how essential WHOIS was to their operations. There are always objects out of date. Deleting former employees is difficult. There is no batch process for deleting former employees and removing all related objects. This is very time consuming and APNIC should take some **action.**”

3. APNIC Priorities

It should be noted that those attending were provided in advance with a document entitled “Introduction for Focus Group Participants” (Appendix A) which contained a graphic describing the “Internet Ecosystem”. Members were asked to study this prior to discussing issue number 3.

The majority found the diagram confusing and or unduly complex. One said, “I am an old hand and even I do not find this helpful”. The top level on the left of the diagram was considered out of proportion “all these are not equal” another said, “APNIC is a number registry not an industry association”. These comments are included here because others present then supported them.

In the Ecosystem diagram there is a circle above the main circle, which covers resource distribution and registration services. These were considered by almost all participants to be the core priority for APNIC. A large majority considered that any training, which was directly related to these services, should be considered part of the core.

The next priority group for APNIC, stressed to be **at this time**, were considered to be Security, IPv4 Transfers, IPv6 and Internet Governance. A caveat was expressed

that while Internet Governance was currently important, it was not seen to warrant the scale of resource investment with members feeling somewhat disconnected from the process.

The next priority, which was seen in the bottom circle, was Policy Development followed by the group under Capacity Building. For the Infrastructure set in that circle the general view was that APNIC should act as a catalyst rather than an activist.

In the remaining circle Internet Security and Internet Governance have already been given a higher priority. For the remaining items in that circle the general view was that members did not have sufficient information on objectives, process, cost or benefits, for example in regard to Research and Data Collection and Measurement. How were the priorities determined? What were the cost/benefits? What was the value to operators? Could local economies benefit from collaboration and cost sharing with local language entities?

A number of other suggestions were made:

- “A key role for APNIC would be to facilitate information sharing and best practice sharing on a practical basis at local levels.”
- “Could more formal collaborative arrangements be made with ISOC for local coordination?”
- “Could there be a simple way for members to gauge the cost/benefit of projects and the method of allocating cost/project?”
- “Could consideration be given to more emphasis on education and less to advocacy?”
- “Could a higher priority be given to ensuring the accuracy of the APNIC database?”
- “Could there be some discussion and clarification on the relationship between enablers and providers?”

4. APNIC Management and Fees

Management

The large majority were satisfied with the management of APNIC.

Some quotes:

- “APNIC seems to be relatively well run and managed. However the whole issue of managing the IPv4 to IPv6 transition will be a real management challenge.”

- “Management – is good on basic issues but more focus is necessary on the changing environment in which APNIC finds itself.”
- “APNIC is well run and managed. As a member of over ten years standing I have to say that there has been a dramatic reduction in paper work over that period for which management must be commended.”
- “APNIC is well run and managed but we need some more working groups or lists to encourage member input like RIPE, but I realise that participation is a cultural problem in the Asia Pacific. What ideas does APNIC have to resolve this issue? That would be good management.”
- “Management, from what I know is fair and well managed – so I am fine with that but a bit concerned about the future issues.”
- “It is the future strategy or lack of it that scares me.”
- “We assume they must be ok because we have never had any problems.”
- “Management do not provide members with enough information and appear reluctant to meeting requests for more information.”

Fees

The view of the large majority was the fees were not unreasonable but in this case there were far more caveats.

Some quotes:

- “Fees are OK – but fee issues should be covered in detail in the range of questions in the survey.”
- “Fees are not unreasonable but we can see it depends on size and relative important to each organisation. Subsidising smaller and less well developed is a good idea.”
- “Because we are a government department we do not have enough time to process payments from anyone in the way businesses operate. We really need two months for both the notice and the invoice.”
- “We would like more detailed information on where our money is spent. That should not necessarily be taken as a negative but as question of value.”
- “We have some practical difficulties with payment methods. Wire transfers are often difficult so we often pay with our personal credit cards. We need APNIC

to allow us to pay our fees in multiple instalments with our credit cards as we often hit a credit card payment limit.”

- “I would like a 60-day notification for renewal as it often takes a long time internally to organise payment. No concerns about the fees per se.”
- “The fees are too coarse at the low end. Very small and small need to pay less and the larger should pay more. If we want the Internet to spread, countries like Myanmar should get IPv4 for free. It only has about 1% penetration.” (This was not a comment from Yangon)
- “Charging by objects would put the burden where it can be afforded.”
- “The whole question of fees needs to be revisited because they need to be based on where we are going and that is quite unclear and apparently unplanned.”
- “If APNIC went to Objects there might be some initial cost/system set up loss but we could do a deal with RIPE to get their system. There could be initial helpdesk impacts but it would work out no more expensive in the end and would be more equitable.”
- “I work for a large international organisation and I have a particular time problem. I would like to see a two-month cycle instead of a one-month cycle. I have a rigid process to follow which at my end is quite inflexible”

5. IPv6

The majority view was that cost was the major inhibitor to adoption and this would be further delayed by the increasing use of CGNs. Many believed that the issue would be resolved over time, but that we were looking at many years, even decades. There was a feeling of “no urgency.”

Comments included:

- “More work needs to be done on the big end of town technically and commercially. The aim should be to have major, popular services only available on IPv6.”
- “CGN’s are an ongoing and growing liability and will cause lots of problems.”
- “There is a great deal of preaching and far less happening. Ultimately it is a matter of cost and return on investment. So nothing will really happen until there are serious financial drivers. APNIC needs to avoid getting sucked into too much resource allocation. It is their job to manage the process of allocation

effectively not necessarily to promote change and get involved in all the implementation aspects at ground operational level. People turn to APNIC for help in this area because they don't have to pay. That doesn't make it APNIC's function and responsibility."

- "Obviously more needs to be done **generally** to promote adoption but by whom and at what cost? APNIC is not a bottomless resource sink."
- "Whose responsibility is it and do wider groups understand the risks to their businesses and activities – never mind the greater good."
- "We are not providing IPv6 services due to the extra investment cost required and the need to pay an additional licence fee. We are unable to pass the costs on to the customer. How to sell IPv6 to customers is a challenge."
- "The ICANN/ RIR movement needs to employ somebody like Malcolm Turnbull. He understands the technical aspects and has the **financial** knowledge which would allow him to approach the big bosses in business with an argument pitched at how they make decisions."
- "Some people have it on their backbone but the real issue is to get it to customer premises equipment and out to the end of the line. I, and everyone else, need to be replacing the cable modem in their home with one that is IPv6 capable."
- "While things can be "enabled" there is not much "usage". A big deterrent factor is that the hardware is more expensive and there is frequently a range of minor bugs in the less expensive hardware devices, which will handle IPv6. Top of the range is **very** expensive."
- "There is a lack of content from providers and this will continue as long as IPv4 is still available - by whatever means."
- "A major issue for all members of all RIRs. We have done a lot to stimulate action and interest but it is all lost because of cost and no killer reason for action. Again there is a very key role for APNIC to come up with some new approaches. If they can this would be very valuable. We also wonder what the basis of the fee calculation is? There does not appear to be a clear rationale that we understand."
- "Developing countries may need training but is it up to APNIC to train everybody? Perhaps some train the trainer programs but really suppliers are much better experienced and equipped to undertake this than APNIC."

6. Internet Security

There was universal agreement that this is not only a very important issue but also that it was one, which would only grow in importance. However there was quite a variation in what APNIC's role should be, where it should provide information only and where it should take positive action.

Comments included:

- “There is certainly a need to provide a service which informs people about where to go for information, being aware and passing on information is good, especially for small economies. However APNIC is **not** a security organisation.”
- “CGN's (Carrier Grade NAT's) are an ongoing and growing liability and will cause lots of problems.”
- “This is definitely a growing issue and the survey needs to have questions about how much people know, what the barriers are to implementation and adoption much more widely.”
- “The biggest challenges were DDoS attacks. Can APNIC play a role here in some way?” (It was explained that this was currently often covered in APRICOT tutorials)
- “Most of us are aware of RPKI and of DNSSec but no-one has deployed them. In fact we are not using route objects either. And we know our root zone is not signed.”
- “It was a good idea to hire a new staff member with a relevant background. Working with LEAs is a really good plan and requires even more effort.”
- “The recent Google hijack would have been prevented if people accepted the need for ROA (Route Object Authentication).”
- “The requirement for people with legacy space to pay a full fee before certification is silly. A major block of members with legacy space will not pay, which puts the whole Internet at risk. RPKI should be treated as an exception for the good of the Internet on such a critical issue which would be of universal benefit.”
- “While I think collaboration is important we do not want the trust anchor controlled by one global body.”

- “Before Snowden I think I was a bit naïve, I believed I understood the need for stability and integrity – but not the implicit magnitude and the extent of the risk! Sadly action is unlikely for the common good due to sectionalised interests especially at country/economy level.”
- “There is strong demand in security services like CCTV to protect people's homes. This increases the demand for IP addresses. Some are forced to use NAT. They felt that IPv6 was more security “exposed” while a NAT offered some kind of security. Despite this they were **not** in favour of using NAT's, which complicated service delivery and troubleshooting.”
- “No anti spoofing by many people. Is it because they are ignorant? Too lazy? Lack resources? Don't understand the risk? Don't appreciate their responsibility to their customers?”
- “A big issue and growing. Denial of service in particular is currently a big problem for us. Using fixed addresses is very risky. The problem will become even worse when we have widespread use of 4G later this year and people want to use it for remote security home control.”
- “We are not really clear as to APNIC's role here, while we acknowledge the importance of Security to the Internet. What is the relationship and priority between such issues as DNSSec, RPKI and Denial of Service and where do these fit into APNIC priorities and APNIC resource allocation. Which raises the issue that we don't know as much as we should about where our money is spent.”

It is also worth noting here that a good number of interviewees did not understand these technologies and talked instead of cyber security and policy responses, phishing, spam and DDos attacks.

ISSUES 7, 8 & 9

While a few participants had a reasonable knowledge of these issues, the very large majority knew very little. They asked questions about the background, APNIC's position and the relevance to themselves. So the consultants spent most of the time giving a briefing and answering questions. In doing so they stressed that they were not members of APNIC staff and that they were giving their personal views in each case.

7. AP Community Building

As indicated previously most people had a very limited knowledge and sought a briefing on the APNIC position and the relevance to their organisations.

Comments included:

- “There need to be more conferences and workshops. A big problem is that the help available at a technical level frequently does not reach the Technical Director – let alone top management.”
- “Internet Governance and Security are both very important. They are areas where money should be spent but in a measured way and with full accountability.”
- “We agree that this is an important area. Conferences are valuable. The smaller sub regional meetings are a good idea but APNIC should be a catalyst to getting things going and not end up with all the administrative costs. Getting NOGs started and then giving the responsibility to the locals is the way to go. People need to be weaned!”
- “The level of outreach should depend on the maturity and need of the particular economy. Many small, new members have no idea of what APNIC does, what APNIC can do for them or what the benefits are apart from getting addresses.”
- “People know that APNIC exists but not much else – especially if you have legacy space. Why would you know anything about APNIC? Isn't it really irrelevant in those circumstances? There is no compelling operational reason to deal with APNIC. As long as your upstream accepts your traffic when you say, “here is my block and my ASN number” it is not a concern.”
- “The AP (Asia Pacific) community consists of many entities. Certainly APNIC needs to play a part but again that part does not appear to be clear, well defined or understood by members.”

8. Internet Development/Capacity Building

Once again the concept was only well understood by relatively few but after explanation by the consultant, it received a considerable amount of support. In many cases this was qualified with the view that members would like to know more of the objectives and the resource allocation.

The comments that follow give a good indication of members' views and input:

- “The process is important but we are not really sure as to what all is covered and we need far more information.”
- “APNIC needs to be sensitive to its changing environment and respond within its remit. Any extension of remit needs to be well debated in member meetings and agreed.”
- “There is a need to look at the outreach models used in other industries and disciplines and some cases not only use their model but, where relevant collaborate and offer to provide speakers.” “CAUDIT” was quoted as an example.
- “Again this is an area which requires localised, needs based consideration. APNIC is made up of many different and diverse strata.”
- “APNIC’s role should be that of facilitator. It could produce material that **others** could deliver. Capacity building is internal jargon.”
- “NSRC does much more of this than APNIC on a much smaller budget. It is not a question of sending people out to tell end users how to get address space as per the APNIC model. It is about helping people to make sure their operation functions successfully. People like Philip Smith do what is really necessary.”
- “Beside the technical aspects we need more information on other aspects to ensure the viability of our business - especially for small and medium firms. eg what is happening in marketing and pricing to **sell** IPv6 adoption as an excellent current key issue. It needs a **holistic** business case.”
- “What good ideas are being used in other economies that are best practice? APNIC can provide a simple, convenient mechanism for selling. If this cannot be done effectively then all the technical skill and knowledge goes to waste.”
- “There is a particular need to help the development of economies that are disadvantaged but again within a plan. If capacity building means helping those who don’t have capacity that’s fine but not building capacity unilaterally throughout the region”

9. Global Internet collaboration and cooperation.

There was a similar lack of knowledge from the large majority of participants who could not really perceive how this impacted their operations. Again, a considerable part of the discussion was devoted to providing an explanation and answering questions. The more knowledgeable were probably equally divided between those

who supported the process and those who believed that it was consuming an undue proportion of APNIC's resources. The latter felt that this applied especially to the time of high-level staff and the consequent travel costs.

Comments included:

- “The model sounds fine in theory but there needs to be more movement to collaborate practically at basic level and get away from high level theory and waffle. Eg. The IGF papers are increasingly becoming incomprehensible to other than the few who spend too much time on it or people who have no legal background.”
- “Who decides which things are important and who is responsible? This is an area where roles are not really clear so how can we decide on the level of importance?”
- “There is a lot of jargon here, which people do not understand and therefore do not really support in terms of value for our money. What do terms like multi-stakeholder really mean? And Internet governance? While APNIC may have a role, what are the boundaries of APNIC involvement? APNIC is not a bottomless resources pit.”
- “No one understands the term “multi-stakeholder”. We just use the registry services and that is more or less it.”
- “The recent major changes emerging certainly requires APNIC to be involved but there is a need to bring members along. Is Obama panicking? There is a strong resistance from Republicans that will strike a chord with many Americans. Don't get overconfident that Obama will win. This will be an epic battle.”
- “The EC need to look very hard at the interests of the wider membership and realise that in the AP they have an obligation to be aware of the unsaid as well as the said. Have we forgotten the bottom up approach applies to everything? The business and operational model needs to be re-evaluated. APNIC has become reactive which is implicitly defensive. They need to be much more aware of the future challenges and act proactively in members' interests. That impacts the budget needs and therefore the fee levels.”
- “What is “multi-stakeholder”? We don't really understand this model. We assume that it means, “to make things work?” We don't really see that APNIC has much influence. We find it very hard to collaborate with ISPs in some other countries who are only out for their own ends. However we do support APNIC and rely on them to represent our interests in many of these matters.”

- “An Internet site overcoming jargon in **simple** terms. While technical people understand their own issues there are all sorts of new and increasing buzzwords which **we** as members want to understand from somebody who understands our needs and us e.g. multi-stakeholder.”
- “APNIC needs to monitor global issues especially on behalf of smaller members with limited resources, inform them in simple terms, represent their interests but be careful how much APNIC money is spent. Two things are to be focused on always - Bottom up - No Government control.”

APPENDICES

APPENDIX A - The Focus Group discussion document given to prospective attendees

Introduction for Focus Groups Participants

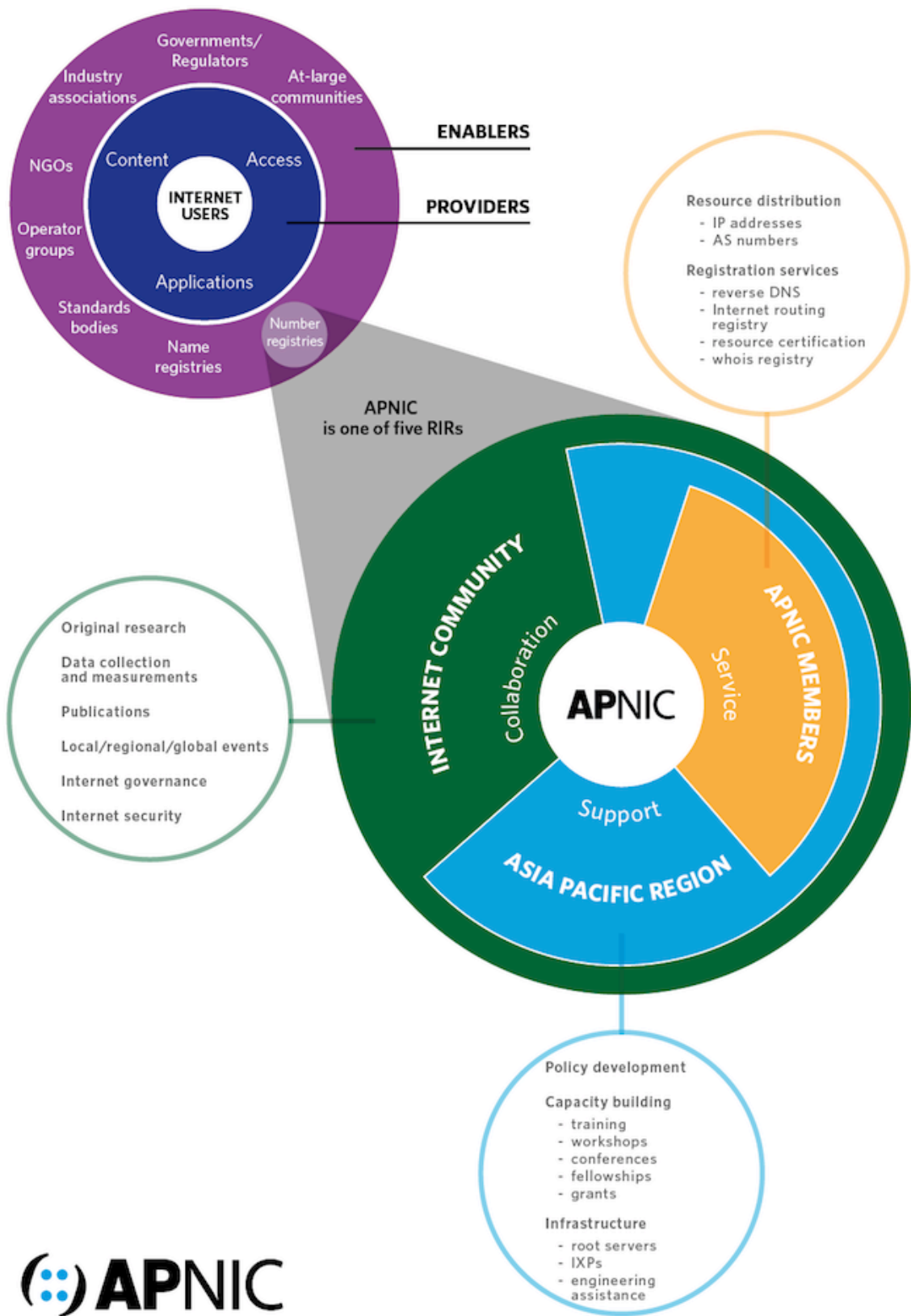
APNIC's main function is to provide relevant services that meet the needs of APNIC members. It conducts regular Surveys to collect Member views on current service provision, identify future needs and to inform Members of the extensive range of services that are available. Focus groups are conducted prior to each survey so that Members themselves drive the Survey questions and information. These are conducted in a range of locations that cover the main groupings of the 56 economies in the Asia Pacific. These are South,

Southeast, Central-east, and Oceania. Information from the discussions in each Focus Group are not attributed to any individual participant, but summarised collectively so that each individual remains anonymous.

While the following is the list of general issues for discussion, participants are welcome to raise other issues, which they consider relevant:

1. IPv4 Address Transfers
2. APNIC Services
3. APNIC Priorities
 - a. Prior consideration of the attached Internet ecosystem diagram would be helpful
4. APNIC Management and Fees
5. IPv6
6. Internet Security
7. AP community building
 - a. Prior consideration of the attached Internet ecosystem diagram would be helpful
8. AP Internet development/capacity building
9. Global Internet cooperation and collaboration

APNIC in the Internet ecosystem



addressing the Internet in the Asia Pacific

At the very end of a network, there is an Internet user. There are more than two billion Internet users around the world. Nearly half of the world's Internet users are in the Asia Pacific, which is the fastest growing region of Internet users.

Users get their Internet connection from access providers, fixed or wireless. This allows them to access content and use a variety of applications. There are many Internet access, content, and applications providers.

There are also many enabling organizations that help the Internet to grow seamlessly as a single, global, interoperable network: governments and regulators, industry associations, network operator groups, standards bodies, name registries, and the number registries.

APNIC is one of the five Regional Internet Registries (RIRs) that distribute and manage Internet number resources in the Asia Pacific region.

APNIC is a not-for-profit organization that distributes IP addresses and AS numbers to its Members. APNIC also provides other services such as reverse DNS, Internet routing registry, resource certification, and maintaining the APNIC Whois Database.

APNIC is a community where any interested party can participate openly in developing policies for managing and distributing IP addresses. APNIC is actively involved in supporting the Asia Pacific region with capacity building and infrastructure assistance projects.

APNIC belongs to an ecosystem that oversees the stability, interoperability, and growth of the global Internet. APNIC partners with many organizations to enhance service delivery and to help improve the overall operation and governance of the Internet at a global level.

APPENDIX B - The Focus Group discussion list with “prompts” to be used by the consultants who conducted and moderated the group sessions.

FOR FOCUS GROUPS

1. IPv4 Address Transfers

Possible discussion topics:

- Within region transfers
- Inter-region transfers
- IPv4 space shortage
- Needs priority
- Leasing

2. APNIC Services

Possible discussion topics:

- Training
- Helpdesk
- Whois
- Conferences
- Website
- Resource delegation

3. APNIC Priorities

Possible discussion topics:

- Prior consideration of the attached Internet ecosystem diagram would be helpful

4. APNIC Management and Fees

Possible discussion topics:

- Executive Council
- Secretariat
- Corporate Governance
- Fee schedule

5. IPv6

Possible discussion topics:

- Awareness
- Business and Management attitude to IPv6
- Barriers to adoption
- Alternative solutions

6. Internet Security

Possible discussion topics:

- Route hijacking
- RPKI
- DNSSEC

7. AP community building

Possible discussion topics:

- The level of outreach and support that your economy receives from APNIC
- Knowledge of APNIC
- Your information sources
- Prior consideration of the attached Internet ecosystem diagram would be helpful

8. AP Internet development/capacity building

Possible discussion topics:

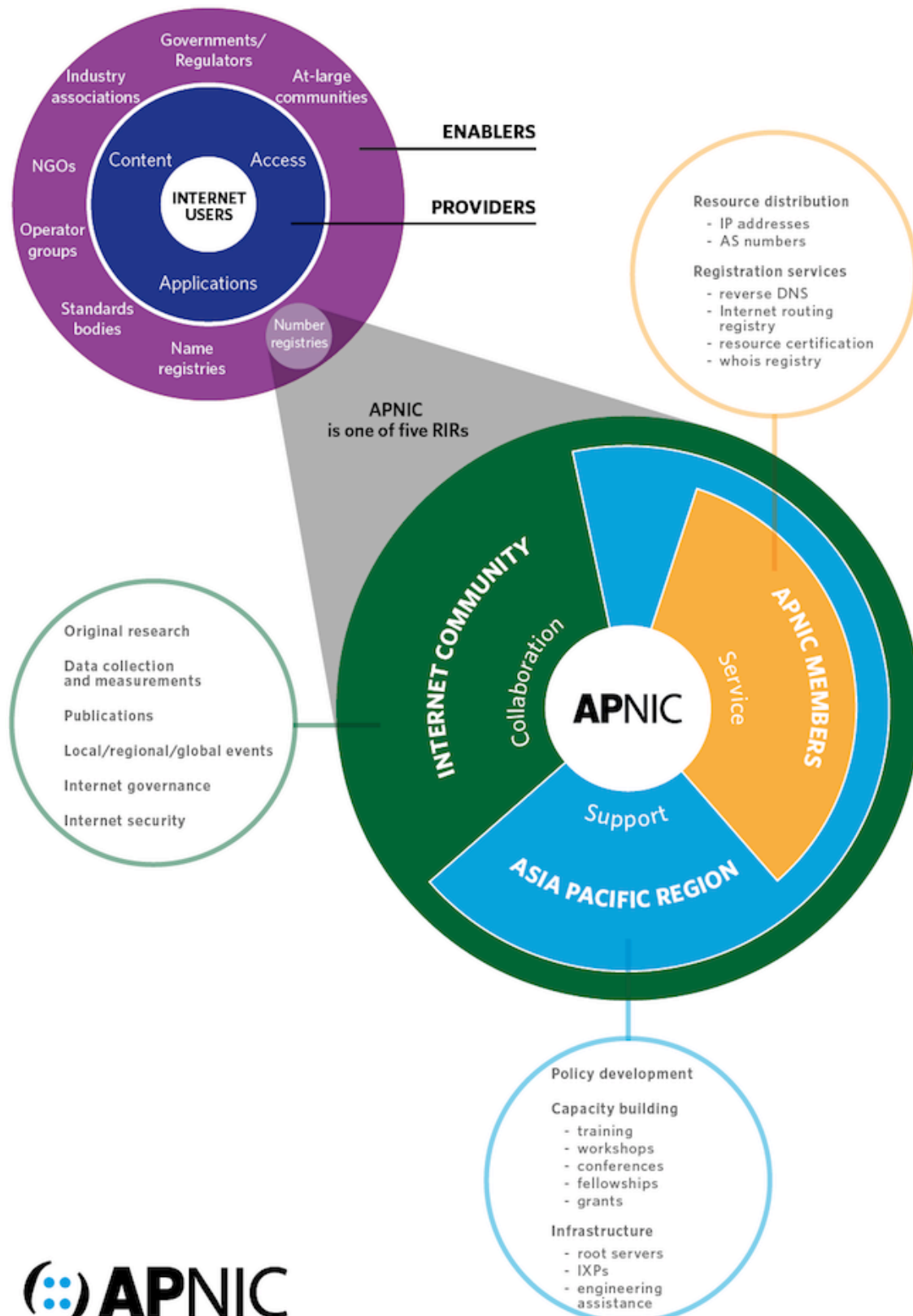
- Skill shortage
- Root Server Development, IXP
- Your economy's Internet infrastructure
- Future demand challenges

9. Global Internet cooperation and collaboration

Possible discussion topics:

- Multi-stakeholder model / Internet governance
- Key participants

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APNIC is a not-for-profit organization that distributes IP addresses and AS numbers to its Members. APNIC also provides other services such as reverse DNS, Internet routing registry, resource certification, and maintaining the APNIC Whois Database.

APNIC is a community where any interested party can participate openly in developing policies for managing and distributing IP addresses. APNIC is actively involved in supporting the Asia Pacific region with capacity building and infrastructure assistance projects.

APNIC belongs to an ecosystem that oversees the stability, interoperability, and growth of the global Internet. APNIC partners with many organizations to enhance service delivery and to help improve the overall operation and governance of the Internet at a global level.
