





# Agenda

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### Methodology

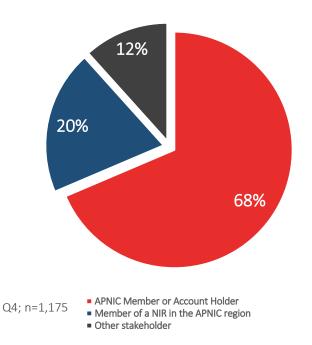
- Focus groups conducted in twelve economies, with fifteen sessions conducted by an independent facilitator, and one online focus group was trialled in New Zealand
- Online survey questionnaire developed by Survey Matters and based on results from the focus groups
- Online survey comprised:
  - Participation and Service Satisfaction
  - Industry Challenges
  - IPv6 Readiness
  - Training and Technical Assistance
  - Policy Development
  - Resource Allocation, External Relations & New Services
  - Member Engagement
- Survey designed as an anonymous link, distribution and promotion was done by the APNIC Secretariat



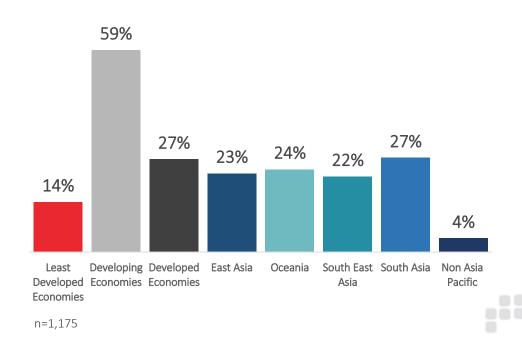
### Survey Sample

- 1,365 completed responses received
- 1,175 responses analysed after data cleansing
- Analysis looked at results by economy type (Least Developed, Developing and Developed) and Sub-region (East Asia, Oceania, South East Asia and South Asia)

#### Responses by stakeholder type



Responses by Economy type and Sub-region

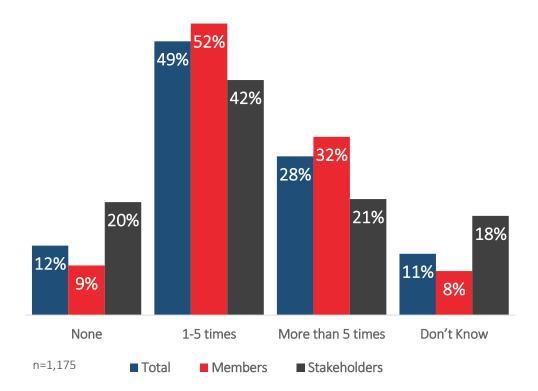






### **Participation**

Q 4 - How many times have you used an APNIC service or interacted with APNIC in the past two years?



84% of Members have used APNIC services or participated in APNIC activities over the past two years

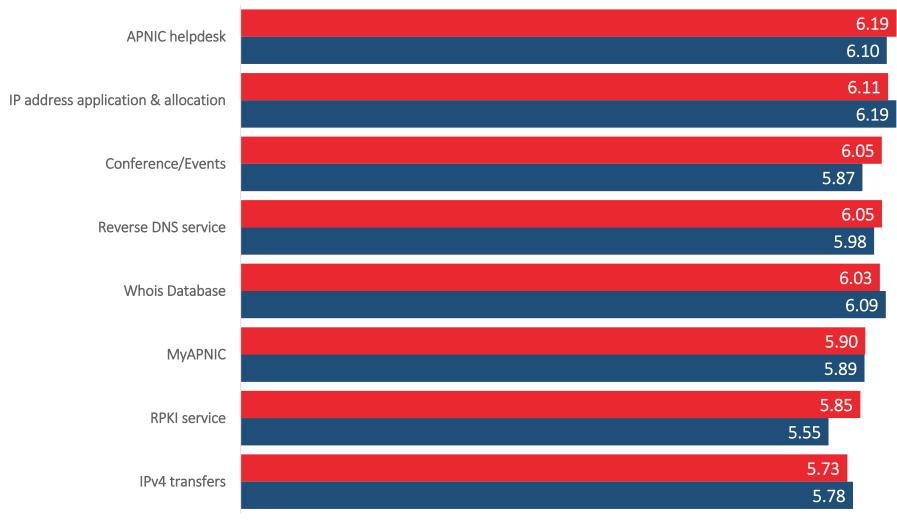
#### Over the past two years, have you:

Q 5 - Participation	Total	Member	Stakeholder
		735	295
Sample Size	1,030		
Visited the website	75%	77%	71%
Used MyAPNIC	59%	59%	0%
Applied for IP addresses	53%	53%	0%
Used the Whois Database	49%	53%	39%
Received IP addresses	45%	45%	0%
Read the blog	43%	41%	46%
Contacted the helpdesk	33%	33%	0%
Used reverse DNS	27%	27%	0%
Contacted APNIC	22%	0%	22%
Attend conference/event	22%	21%	24%
Attended training	22%	22%	20%
Personally met with APNIC	17%	16%	22%
Attended presentation	15%	13%	22%
Technical assistance	13%	13%	0%
Transferred IPv4 addresses	12%	12%	0%
Participate SIGs/Meetings	7%	5%	11%
Used RPKI services	5%	5%	0%
Policy Development	5%	4%	7%
None of these	2%	1%	5%
Other	2%	1%	4%



### Satisfaction with APNIC services

Q 6 - Respondents ratings of their experience using APNIC services and activities compared with 2014 Survey results.



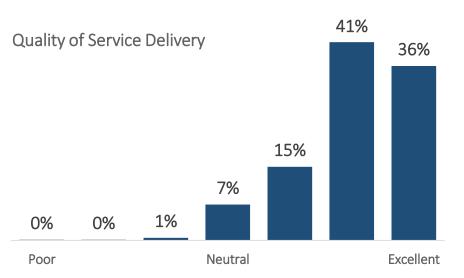
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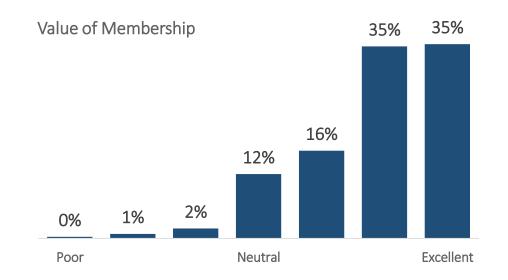


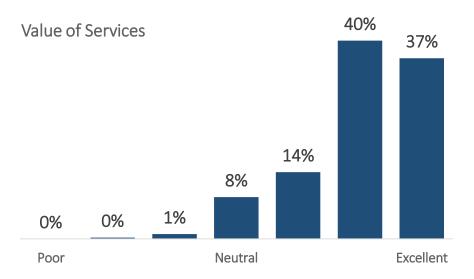
### **Overall Member Satisfaction**

#### Q8 - Respondents ratings of the quality and value of APNIC services and Membership

(n = 733)







APNIC Members rate the service quality and value highly, with over 90% of respondents rating these positively

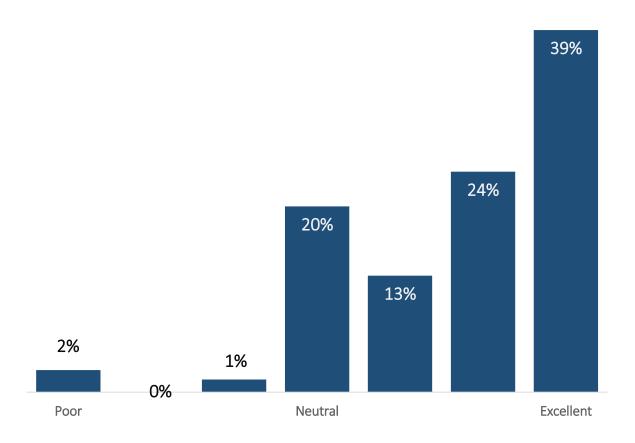




### Stakeholder Satisfaction

Q 9 - Respondents rating of APNIC Service delivery over the last two years.





"APNIC is a very professional organization. I have interacted with APNIC and its representatives in the past in various roles in my career. APNIC is dedicated to the improvement of the internet community in APAC. People in APNIC are knowledgeable and very helpful."

South Asia



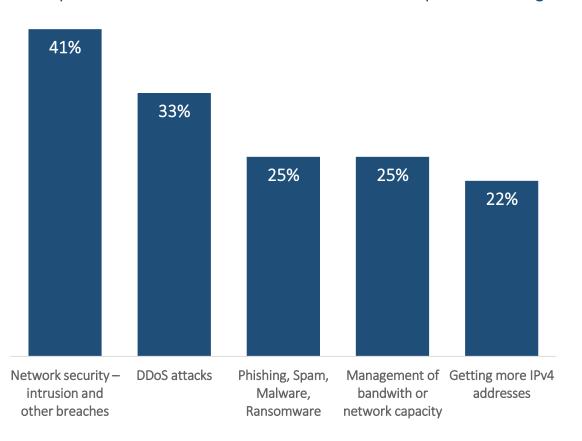




### Challenges Faced by Respondents

% of respondents who ranked the statement within the top three challenges

# Security is the biggest challenge facing respondents



Aggregated % by Issue	Rank1	Rank2	Rank3
Security Issues	41%	41%	36%
IPv6 Related Issues	30%	34%	33%
IPv4 Related Issues	13%	12%	10%
Other Issues	15%	13%	19%
Total	99%	100%	98%



# Does APNIC have a role to play?

Q 17 - Do you believe APNIC has a role to play in helping address these challenges?

	% Agree APNIC can assist
Getting more IPv4 addresses	80%
Routing security	67%
Brokers selling/leasing IPv4 addresses	65%
Risks of deploying IPv6	65%
Lack of awareness of IPv6 in my organization	63%
Customer unwillingness to use IPv6	61%
Network security – intrusion and other breaches	54%
Deploying IPv6 in customer networks	54%
DDoS attacks	53%
Cost of deploying IPv6	52%
Lack of IPv6 applications	50%
Phishing, Spam, Malware, Ransomware	50%
Management of bandwidth and network capacity	34%
Deploying NAT	33%
Hiring and/or keeping skilled employees	33%

"Provide guidance & best industry practice to tackle those challenges. Example, technical training for IPV6, DNS Security.
Increase IPV4 allocation per member would be good as well."

South East Asia

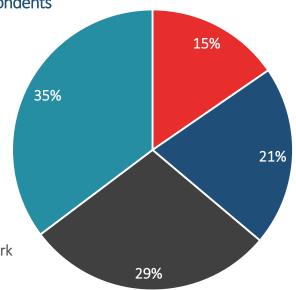




### IPv6 Deployment







■ Yes, IPv6 is fully deployed

■ Yes, IPv6 is deployed in our core network

■ Have a deployment plan

■ No

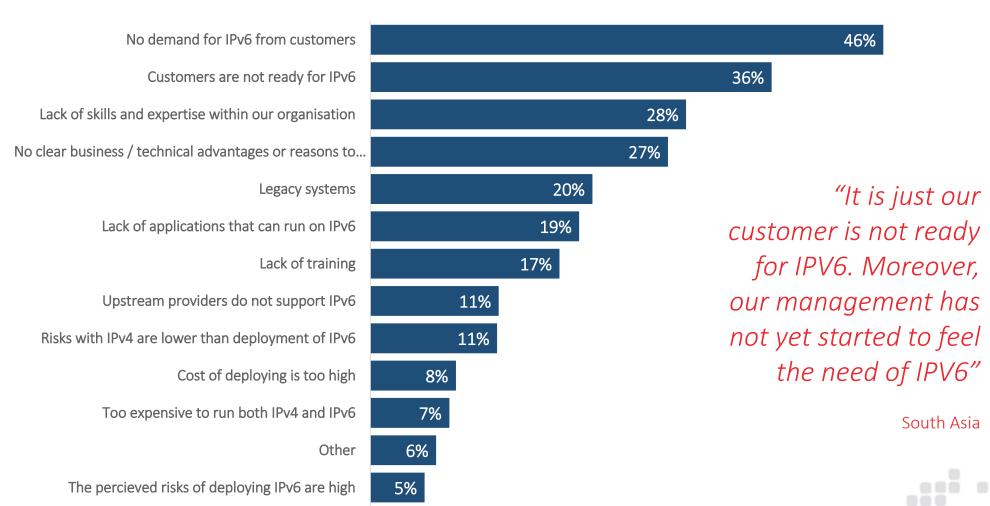
	LDEs	Developed Economies	Developing Economies	East Asia	Oceania	South East Asia	South Asia
Sample	136	279	390	134	251	160	221
Yes, IPv6 is fully deployed	8%	14%	19%	24%	7%	24%	10%
Yes, IPv6 is deployed in our core network	18%	17%	25%	28%	17%	20%	21%
Have a deployment plan	47%	21%	28%	18%	24%	33%	41%
No	27%	48%	29%	31%	53%	24%	29%



### Challenges affecting deployment of IPv6

#### Q 13 - Main challenges affecting deployment of IPv6

% Respondents Selected (Base n = 680, n = 1634)





### Most effective ways APNIC can assist with deployment

#### Q 14 - Most effective ways APNIC can assist organisations transition to or deploy IPv6

% Respondents Selected, (Base n = 676, n = 1701)

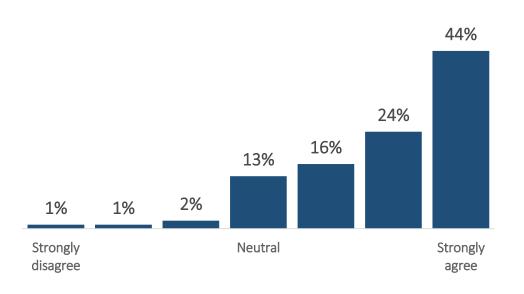
	Total	East Asia	Oceania	South East Asia	South Asia
Sample Size	676	99	233	122	200
Provide case studies and best current practices about IPv6	49%	46%	46%	59%	48%
Provide more advanced training in IPv6	46%	38%	35%	54%	61%
Promote the benefits of IPv6 to management and/or decision makers	39%	34%	42%	41%	35%
Promote the benefits of IPv6 to customers/consumers	38%	31%	36%	39%	40%
Facilitate knowledge sharing between member organisations on IPv6 deployment experiences	31%	24%	30%	38%	33%
Promote the advantages of IPv6 to hardware, software and/or content providers	24%	20%	25%	20%	29%
Promote the advantages of IPv6 to government and related organisations	20%	23%	21%	16%	21%
APNIC should take no action to promote or assist with the deployment of IPv6	4%	7%	6%	1%	1%

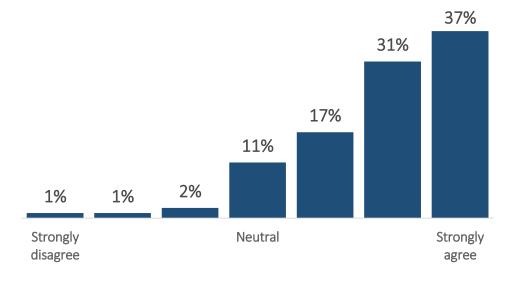




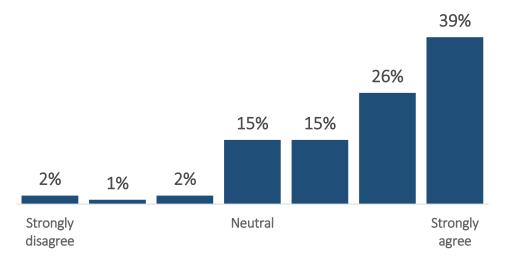
Q 31 - The provision of training is an important function of APNIC

Q 31 - Training offered should be responsive to Member needs





Q31 - APNIC should subsidise training where necessary



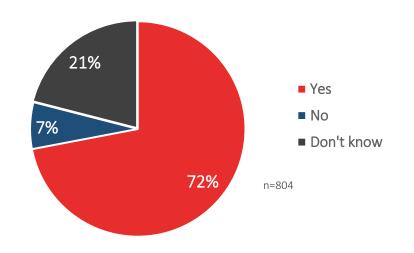
Respondents in least developed economies and South Asia are significantly more likely to consider training as an important function of APNIC than other economy types and sub-regions

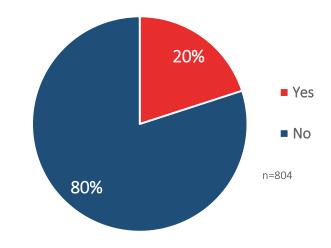


### External training resources and participation

Q 32 - To reduce reliance on Member funds, should APNIC seek additional external resources to help build its training and technical assistance?

Q 33 - Have you undertaken training in the last twelve months?





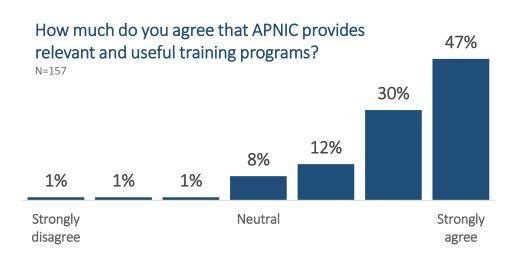
**72**%

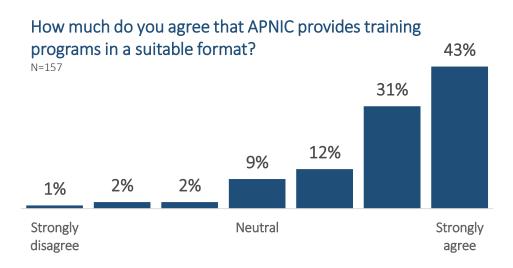
of respondents agree APNIC should seek additional external resources to build training and technical assistance services

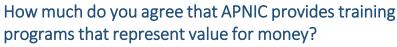


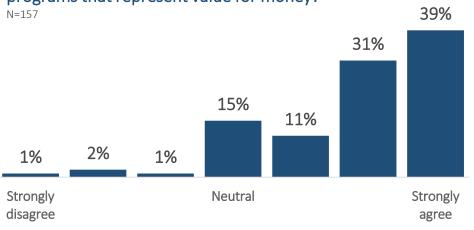


### Satisfaction with APNIC training

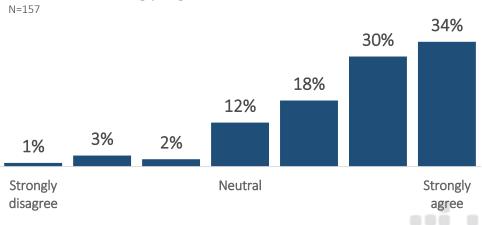








# How much do you agree that APNIC provides a sufficient number of training programs?





### Training topics of most interest

Training Topics	Respondents
Sample Size	799
Network security	70%
IPv6 deployment planning	55%
Routing protocols (BGP, OSPF/IS-IS etc.)	45%
Optimizing network architecture	43%
DNS and DNSSEC	41%
Software Defined Networking (SDN)	41%
Virtualization of network functions and/or services	36%
MPLS	34%
Best practices for inter-domain routing	33%
QoS	32%
Incident handling and response	23%
RPSL and Routing Registry	22%
IXP design, operation and management	20%
CERT/CSIRT operation and management	18%
Training of trainers in any of the topics listed here	16%
RPKI	15%
None of these – my organization does not require training support from APNIC	4%
Other (please specify)	1%

"APNIC should provide us more training for network security and IPv6 deployment."

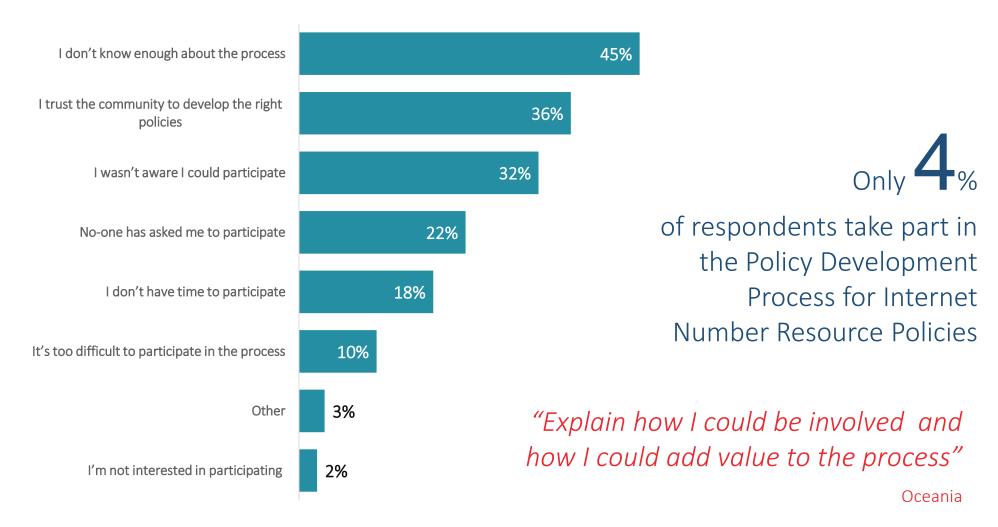
South East Asia





### Policy Development Process for Internet Number Resources

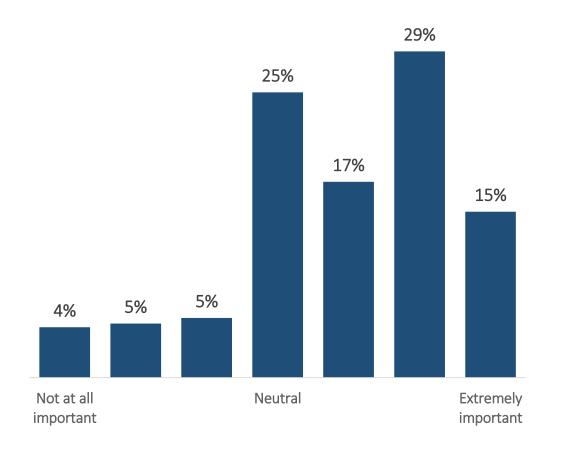
Q 37 - Reasons for not participating in APNIC Policy Development Process for Internet Number Resource Policies





### Local service delivery

Q 26 - Respondents ratings of importance of establishing local APNIC offices or agencies to deliver some services locally. (n=610)



From the free text comments provided by respondents about the services that they thought could be delivered locally, over 50% mentioned training.

"Trainings with minimal cost, gathering that can promote unity within members to share knowledge base or best practices"

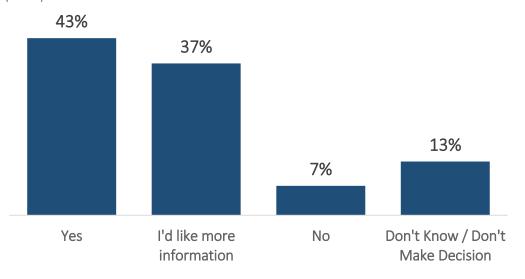
South East Asia





### Collecting regional industry data

Q 24 - Interest in contributing to trends and benchmarks for regional Internet infrastructure and related technical and business activities (n = 798)



Respondents in LDEs and South Asia are significantly more likely to be interested in contributing information than other economy types and sub-regions

Interest in contributing to trends & benchmarks	LDEs	Developed Economies	Developing Economies	East Asia	Oceania	South East Asia	South Asia
Sample	132	279	387	132	251	159	217
Yes	67%	26%	47%	42%	29%	45%	61%
I'd like more information before deciding	23%	42%	38%	38%	41%	40%	29%
No	2%	15%	3%	6%	14%	1%	3%
Don't know / I wouldn't make the decision	8%	17%	12%	14%	16%	14%	7%



### **External Relations**

Q 29 – On which organizations do you believe APNIC should focus its efforts?

Mean scores (n = 1,137)

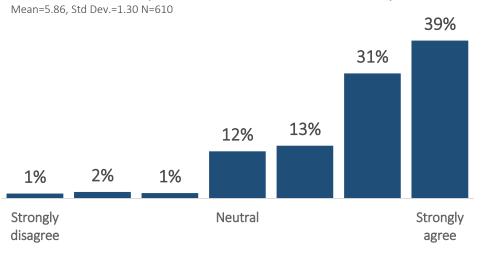






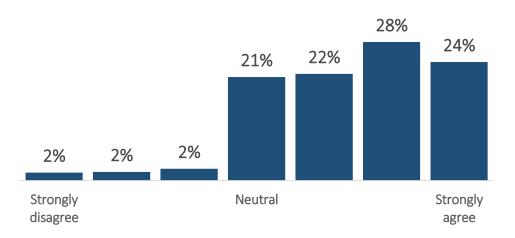
# Member engagement indicators

#### Q 22 - APNIC is respected in the Internet community



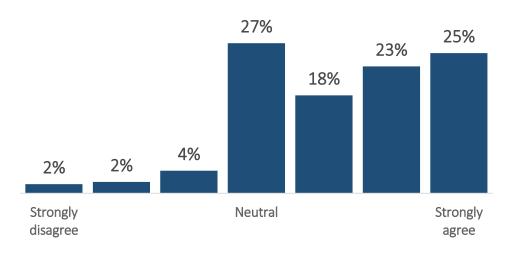
#### Q 22 - APNIC is open and transparent in all its activities

Mean=5.38, Std Dev.=1.35 N=610



#### Q 22 - I am treated as a valued Member of APNIC

Mean=5.25, Std Dev.=1.43 n=610



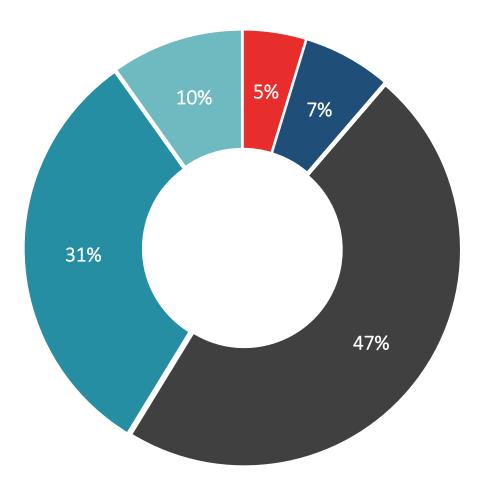
84% of respondents agree that APNIC is respected in the Internet community



### **Approval**

#### Q41 - Respondents endorsement of APNIC

(n=1,167)



"I am experiencing the changing from APNIC, it's getting better and better now"

East Asia





"APNIC staff interaction has always been extremely professional, friendly and helpful. APNIC is one of the few organizations for which are not just service providers, but a key Member of your community of practice."

South East Asia

