



2020 APNIC Survey Presentation to Members

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Questions

Methodology

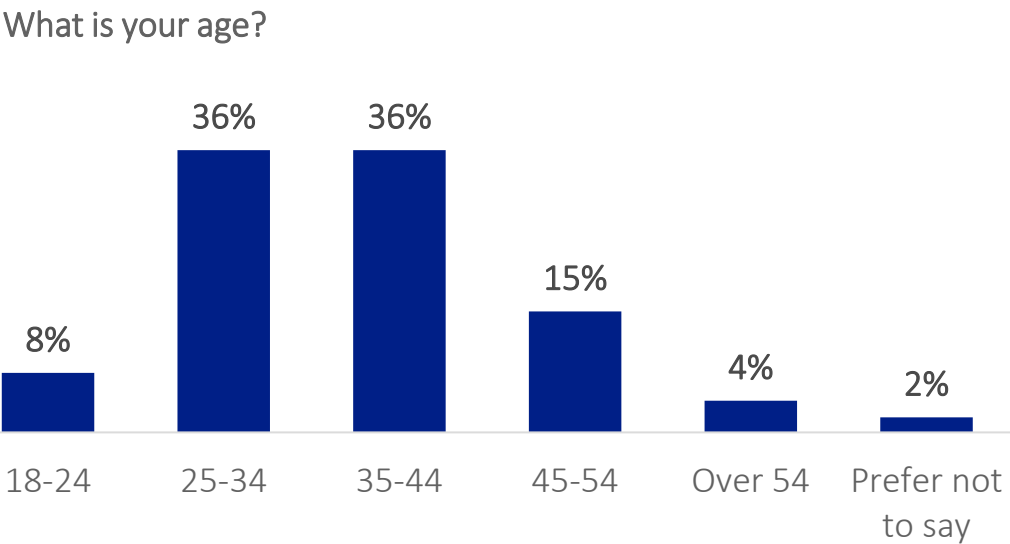
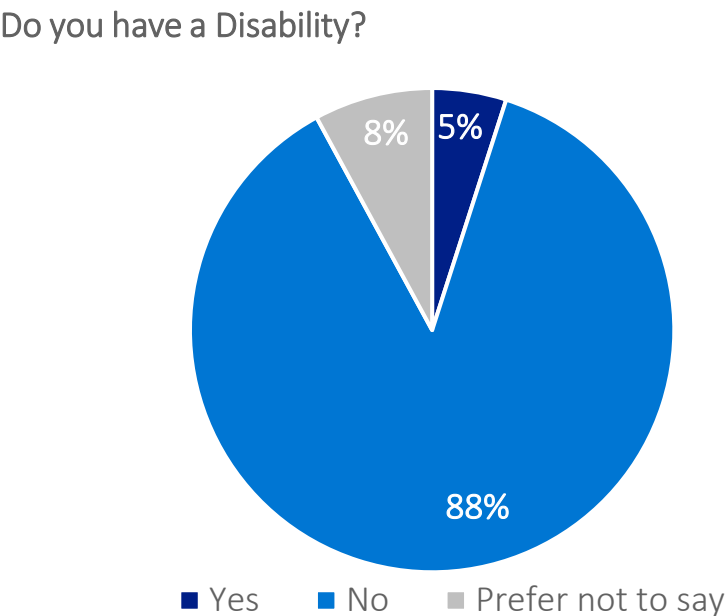
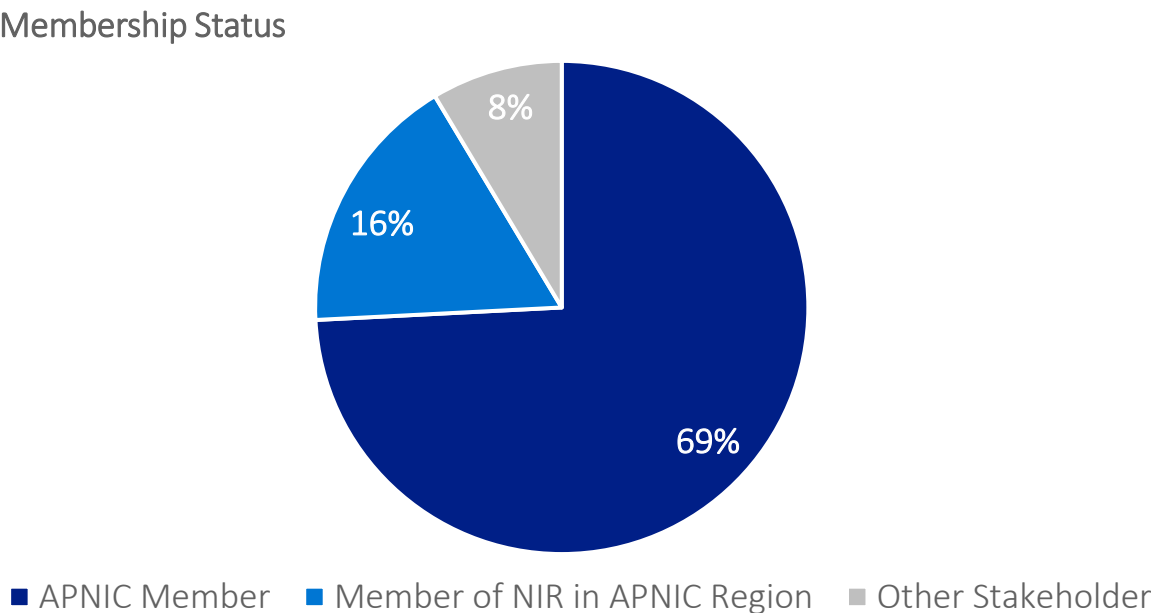
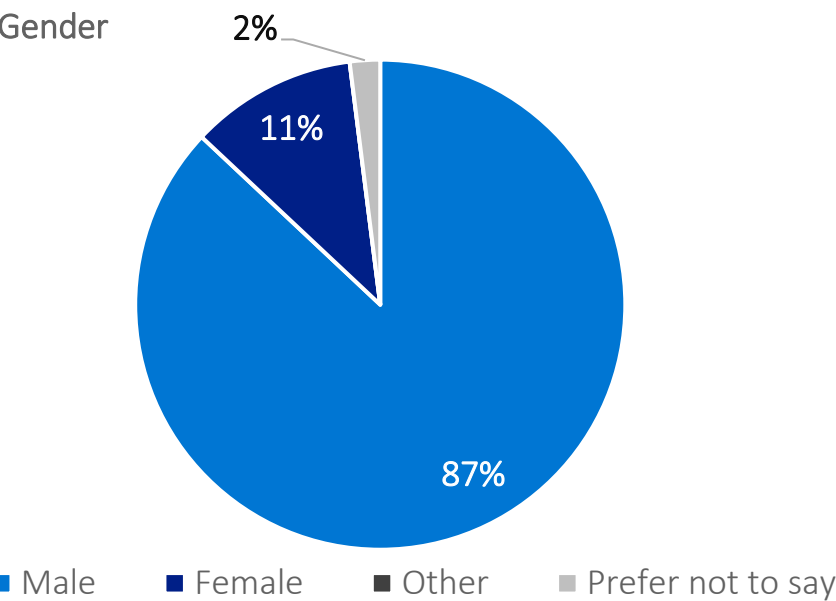
Community consultations

- This year, the qualitative aspect of the Survey used individual interviews, conducted via video conference or telephone call. The main effects of this change to the format were:
 1. More economies were consulted, providing a greater spread of opinion, and a wider range of issues and views were apparent
 2. Fewer Members from the same economy were consulted, and therefore the individual views expressed were not able to be tested across a wider audience for validation
- Forty-one interviews were conducted across 27 economies:
 - 28 APNIC Members
 - 7 NIRs
 - 6 APNIC Stakeholders

Online survey

- Online survey fielded between 13 – 31 July 2020
- A total of 1,659 completed responses were received and after data cleansing only 35 were removed, leaving completed responses of 1,624. This represents an increase of 31% from 2018

Sample



Region	Count	%
East Asia	255	16%
Oceania	296	18%
South East Asia	439	27%
South Asia	562	35%
Non APNIC Region	72	4%

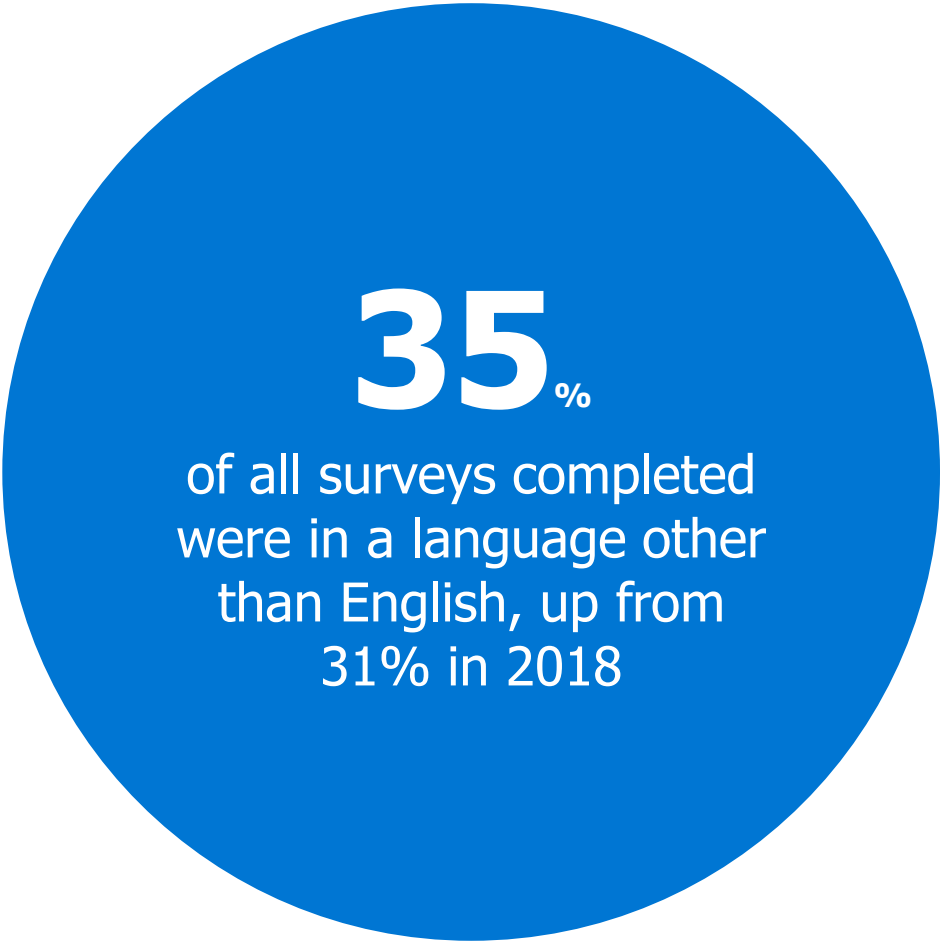
Development Status	Count	%
Least Developed Economy (LDEs)	476	29%
Other (Developed or Developing)	1,148	71%

English Proficiency	Count	%
I am fluent in English	683	42%
I can understand most English and have English conversations comfortably	511	31%
I can understand some English and have basic English conversations	351	22%
I understand little English and need assistance	79	5%

Language Translations

- Survey translated into 15 languages, up from eight in 2018
- Languages chosen based on level of perceived English proficiency, Membership size and level of engagement with previous surveys
- Could not translate Khmer successfully. Community feedback indicated issues with fonts in the survey instrument

Code	Language	2018	2020
BD	Bangladesh (Bengali)	41	157
CN	Chinese Simplified	101	75
CN	Chinese Traditional	56	59
ID	Indonesian	43	62
IN	Indian (Hindi)		3
JP	Japanese	60	45
KR	Korean	9	8
MN	Mongolian	49	39
MY	Malaysian		4
MM	Myanmar (Burmese)		52
NP	Nepali		10
PH	Philippines (Tagalog)		7
TH	Thai	30	29
PK	Urdu		4
VN	Vietnamese		14
Total		389	568





Key findings

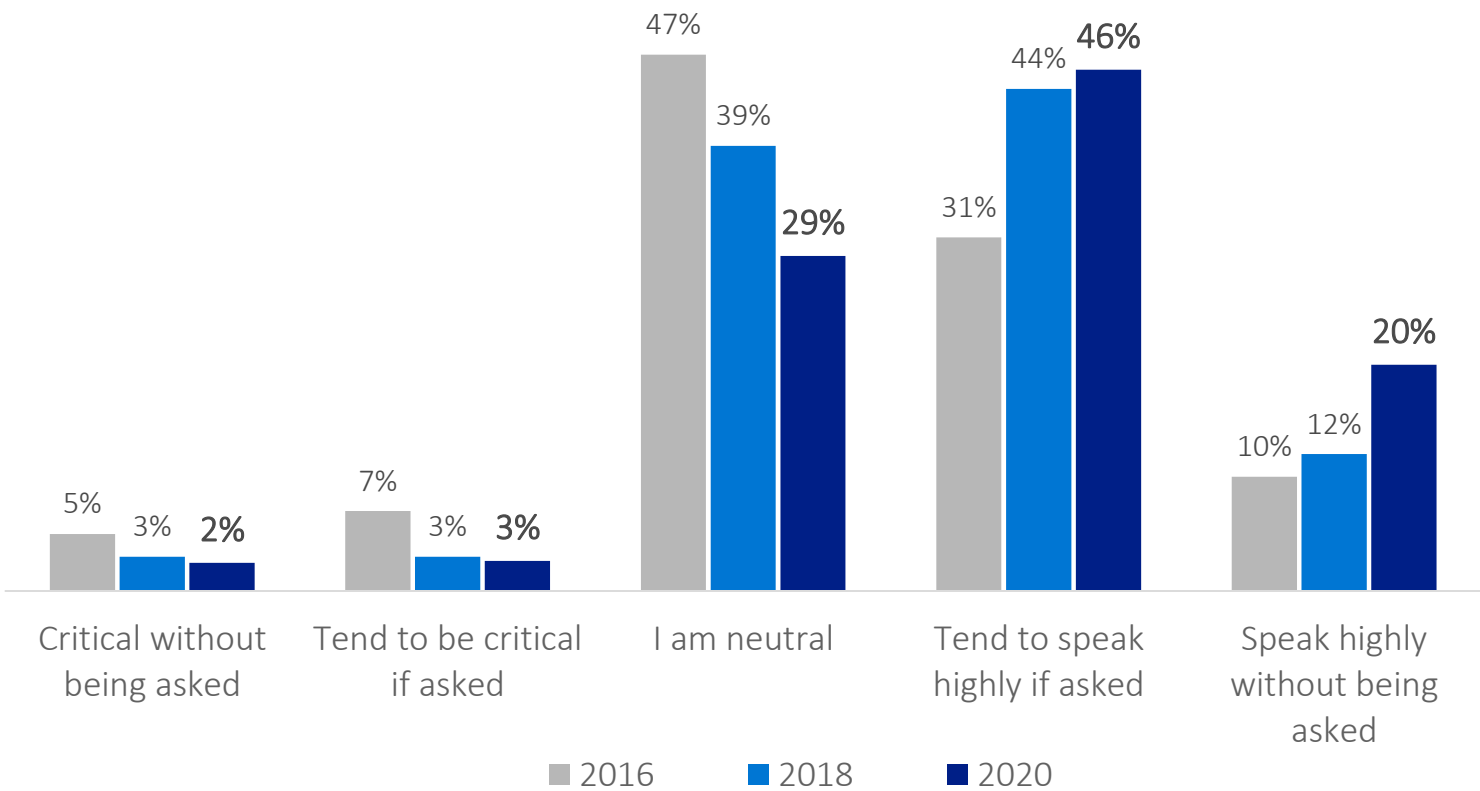
Key findings



Favourable endorsement of APNIC continues to rise

- Two thirds (66%) of respondents speak highly of APNIC, up from 56% in 2018 and 41% in 2016.
- Those who previously indicated ambivalence, now speak positively about APNIC.
- Very few speak negatively about the organisation.

Which of these phrases best describes the way you speak about APNIC to others?
(All respondents: 2016: n=1,167; 2018: n=1,241; 2020=1,624)

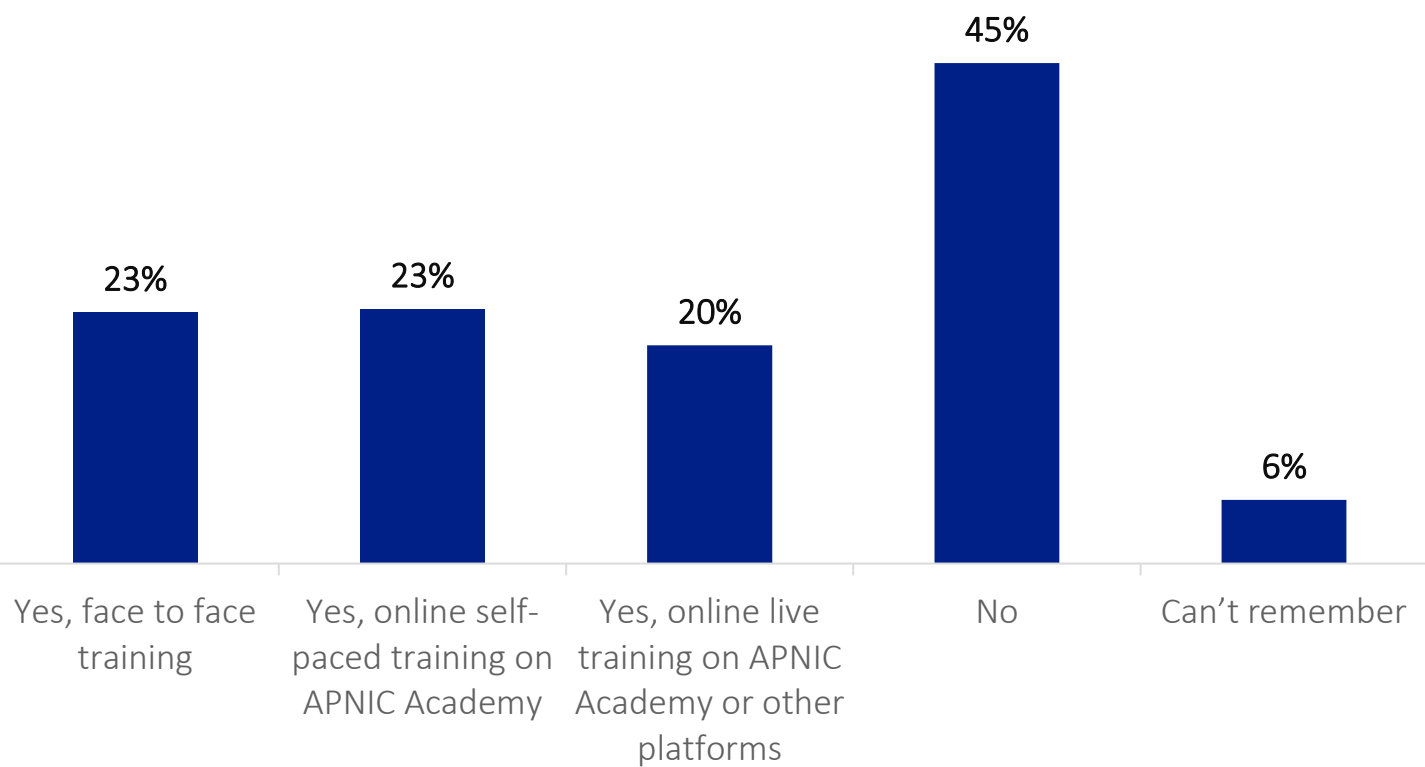


	Members	Stakeholders	East Asia	Oceania	SE Asia	South Asia	LDEs	Others
Sample Size	1119	503	255	296	439	562	476	1148
Critical without being asked	3%	2%	2%	1%	3%	3%	3%	2%
Tend to be critical if asked	3%	3%	2%	1%	4%	2%	3%	3%
I am neutral	27%	35%	35%	28%	33%	25%	25%	31%
Tend to speak highly if asked	49%	39%	45%	45%	46%	46%	47%	45%
Speak highly without being asked	19%	21%	16%	24%	14%	23%	22%	19%

Key findings

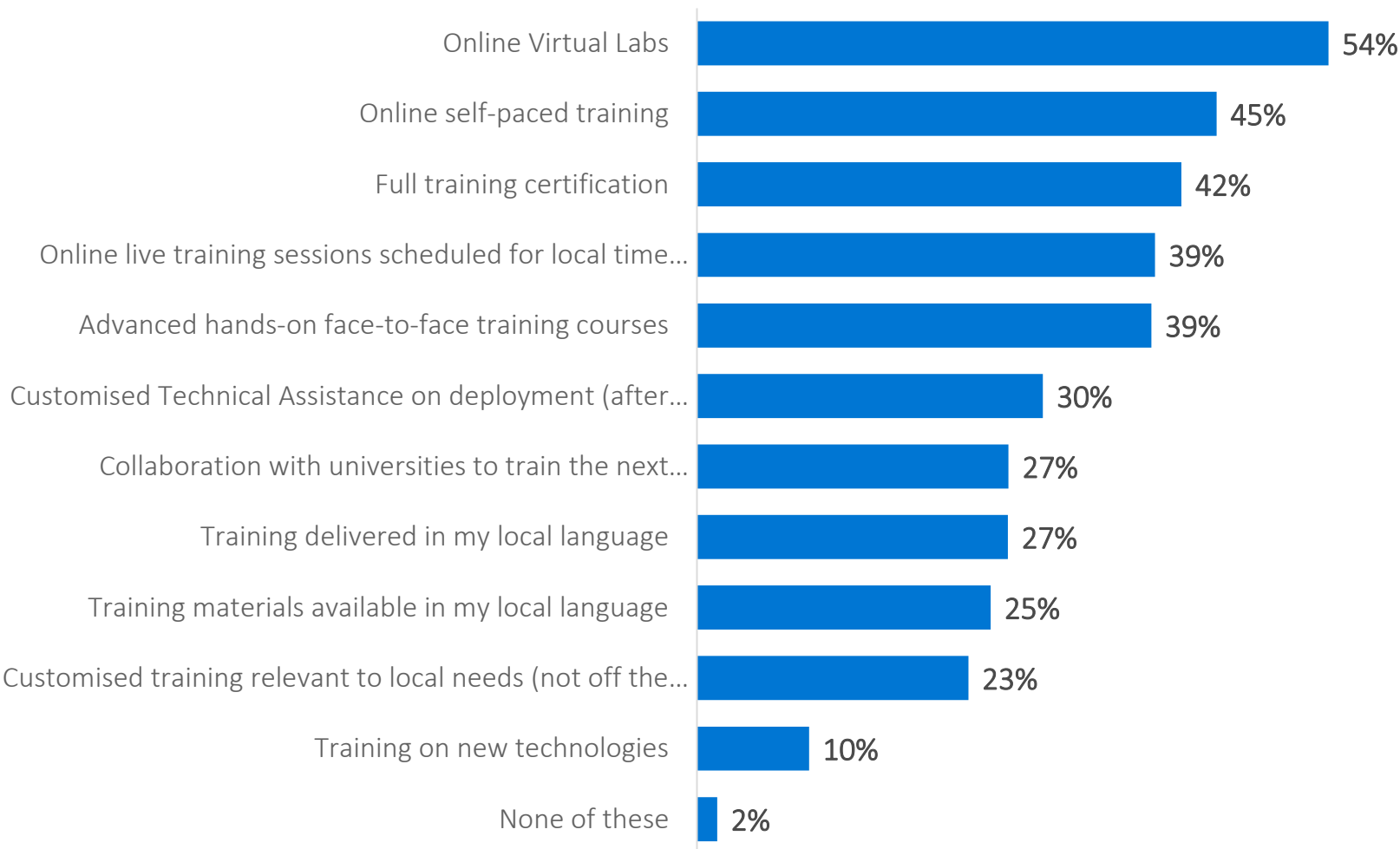


More respondents have attended APNIC training in the past two years



Have you completed any APNIC training in the past two years?
(All respondents: n=1,624)

- Up from 27% in 2018, 41% of survey respondents have attended APNIC training in the past two years
- Satisfaction has risen to 97%
- Online training offers the most value



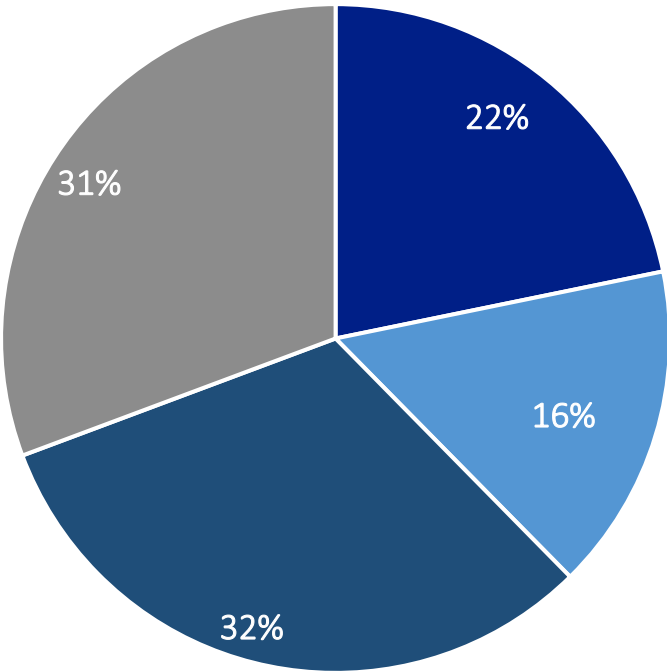
Which of the following training activities would be of MOST value to your organisation?
(All respondents Select up to 5. Base n=1,624; Total mentions: 5,872)

Key findings



Awareness and adoption of RPKI has improved

- Use of RPKI services has increased from 10% in 2018 to 27% in 2020.
- 70% of respondents were aware of RPKI, and 22% have already deployed it.
- Satisfaction with RPKI services is up 5%, with 94% providing a rating of above average, good or excellent



■ Deployed ■ Plans to deploy ■ Aware but not deployed ■ Not aware

	Members	Stakeholders	East Asia	Oceania	SE Asia	South Asia	LDEs	Other
Sample size	1119	502	255	296	439	562	476	1148
I am not aware of this	27%	38%	27%	33%	31%	31%	30%	31%
I am aware of this, but have not deployed it	28%	39%	38%	36%	30%	27%	25%	34%
We have plans to deploy	17%	13%	11%	17%	17%	16%	15%	16%
This is deployed in our network	27%	10%	23%	14%	23%	26%	31%	19%

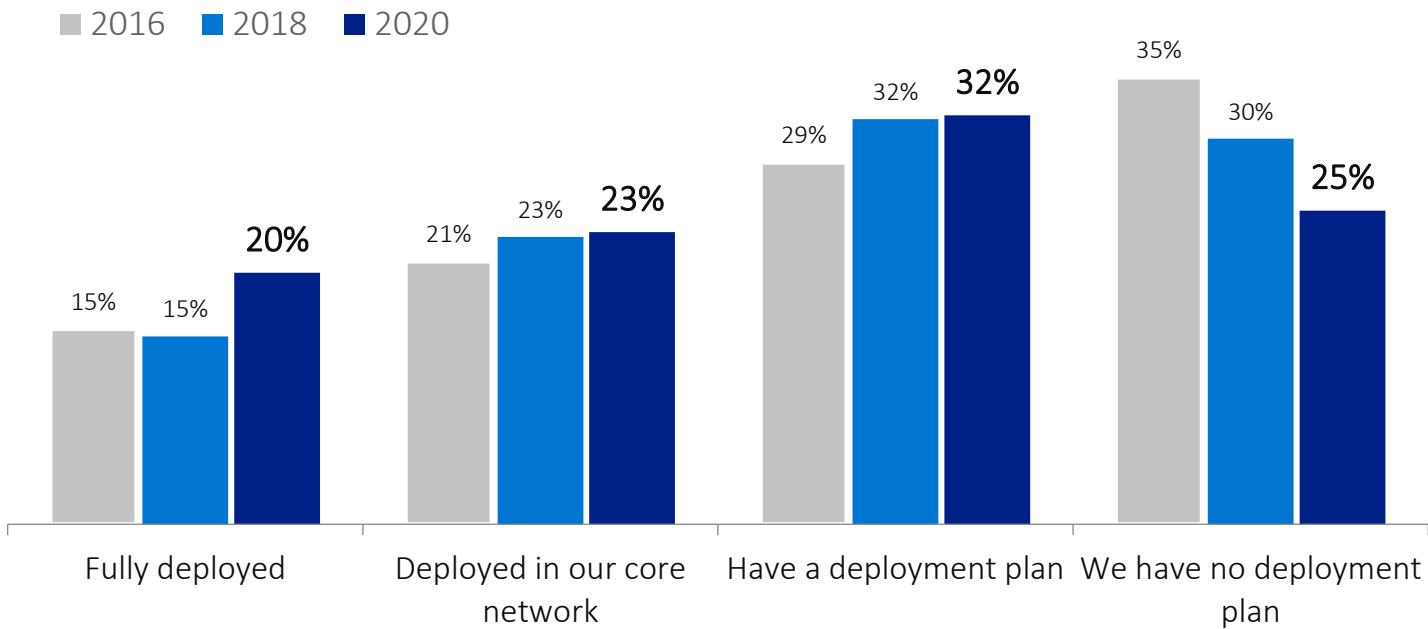
Significantly higher / lower than total

Please indicate the extent to which you are aware of, and have deployed, RPKI?

Key findings

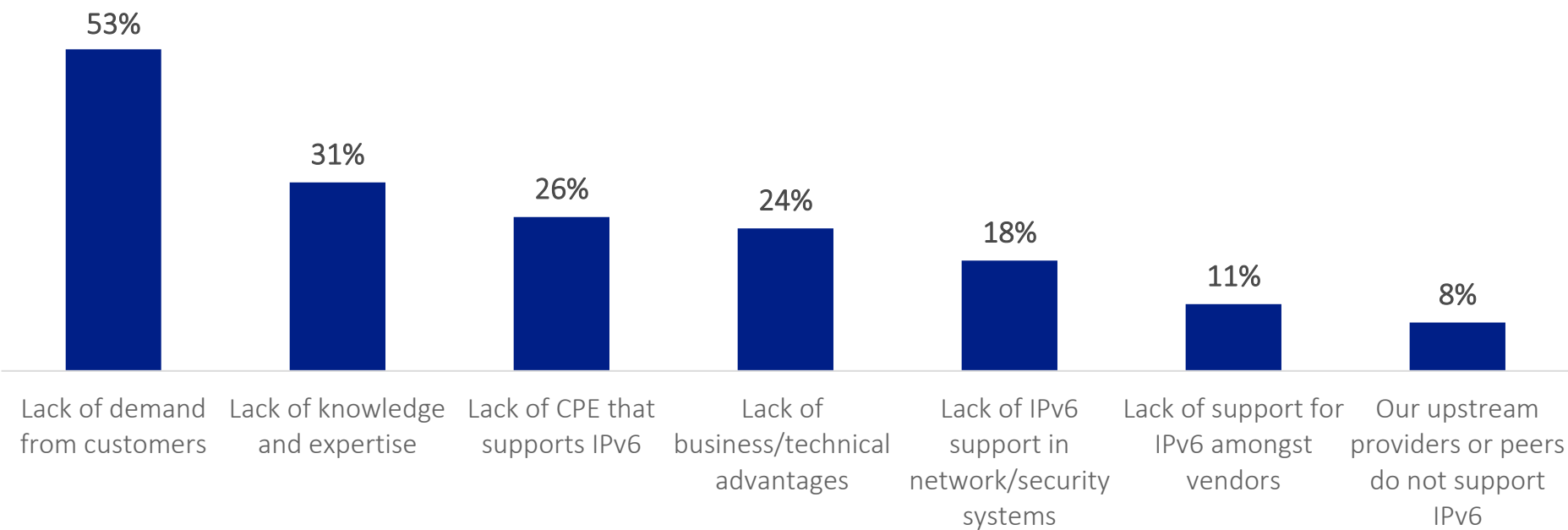


IPv6 uptake



Has your organisation already deployed or are you ready for deployment of IPv6?

- Reported full deployment of IPv6 has risen to one in five respondent organisations.
- This is up from 15% in 2016 and 2018.
- At 36%, organisations in East Asia are significantly more likely to report that IPv6 is fully deployed than organisations in other sub-regions.



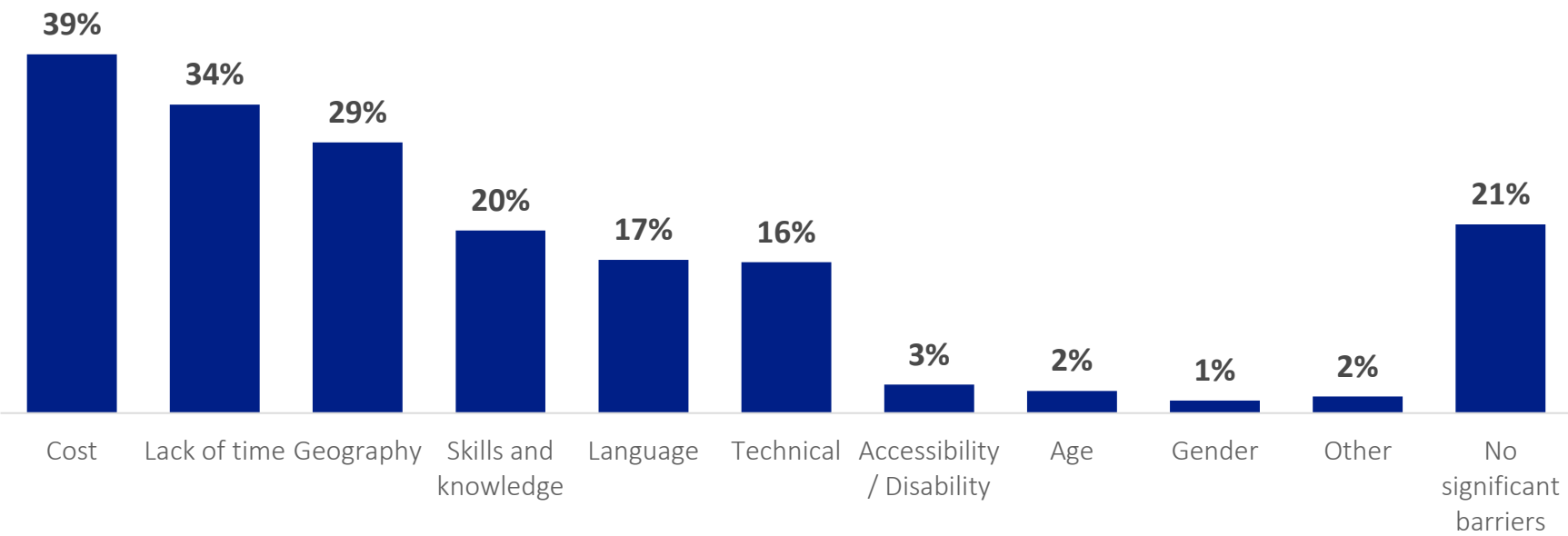
What is preventing IPv6 deployment in access or other networks?
(Members only. Select up to 2. n=262)

Key findings

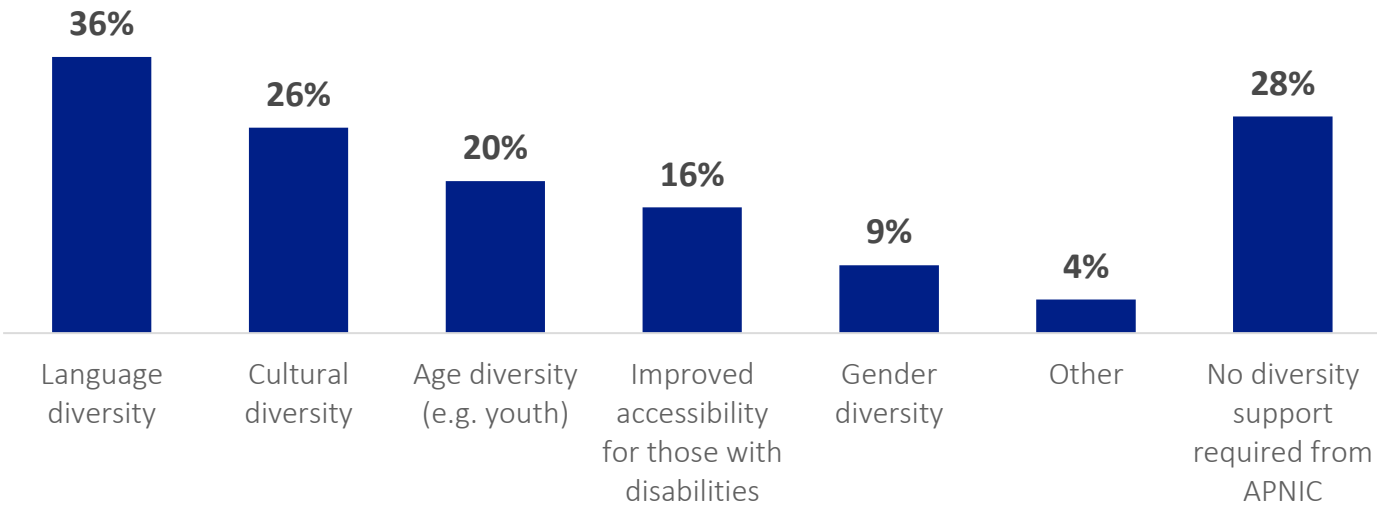


Encouraging participation

- Cost, time and geographic restrictions are the predominant barriers to greater participation
- 36% of respondents believe that additional focus on language support would encourage greater participation in APNIC activities
- Other suggestions to boost participation include promotion of activities to build awareness, enhanced remote access capabilities, and financial support



What do you think are the main barriers to participation in APNIC community activities?
(Select up to three (3) responses. Base n= 1,624, n=various)



Where should APNIC place additional focus to encourage greater diversity of participation in community activities?
(N= 1,624, n=various)

Key findings



Assistance with Internet development

	Members	Stakeholders	East Asia	Oceania	SE Asia	South Asia	LDEs	Other
Sample size	1120	504	255	296	439	562	476	1148
Supporting DNS root and TLD servers	38%	36%	32%	37%	38%	40%	37%	38%
Supporting IXPs	37%	31%	34%	36%	46%	27%	30%	37%
Internet industry associations	34%	38%	33%	33%	36%	36%	37%	34%
On CERTs	31%	39%	36%	44%	32%	28%	25%	36%
On NOGs	34%	28%	34%	32%	30%	34%	42%	28%
Supporting CDN caches	33%	26%	29%	20%	32%	41%	40%	27%
On IGFs or Schools of Internet Governance (SIGs)	16%	26%	18%	13%	19%	23%	22%	17%
On NRENs	6%	10%	6%	2%	8%	11%	11%	6%
None of these	7%	5%	3%	10%	6%	6%	5%	7%

Significantly higher / lower than total

If additional resources were available for Internet development, through assistance for community organisations or supporting shared infrastructure, where do you want APNIC to focus its efforts?

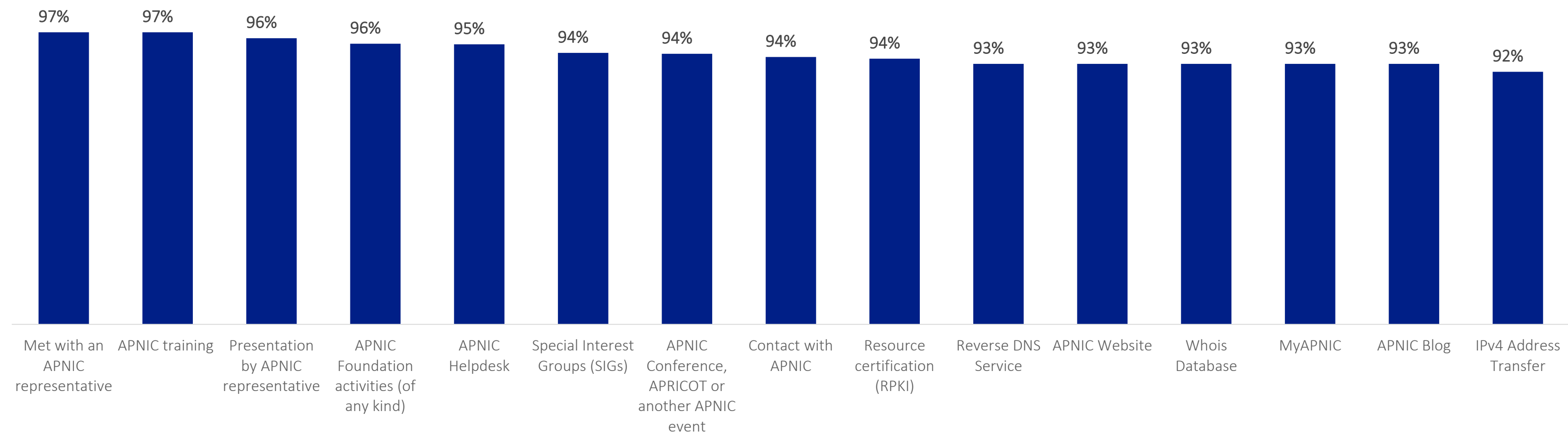
- Respondents want APNIC to focus on supporting DNS root and TLD servers
- Opinions were divided about where APNIC should focus its efforts in Internet development.
- APNIC Members, LDEs and those in South Asia want a focus on supporting IXPs, NOGs and CDN caches
- Stakeholders, developed and developing economies and those in Oceania would prefer a focus on CERTs.



Satisfaction with Services

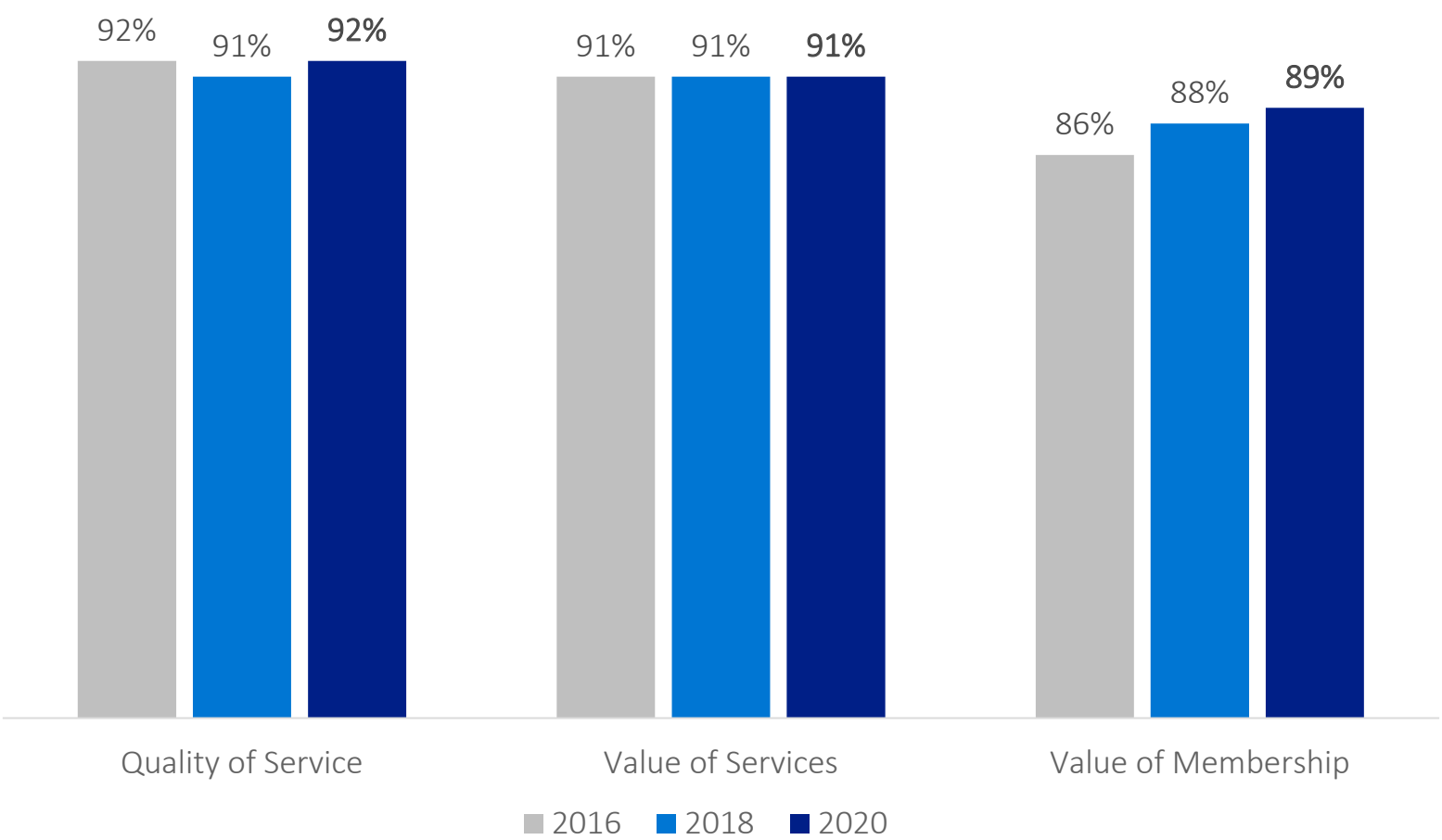
Top Rated APNIC Services

- Respondents are most satisfied with the personal interactions with APNIC
- Satisfaction with training has improved and is very high
- Although few have experienced the APNIC Foundation activities those who have rate their involvement highly



Thinking about the APNIC services and activities you have used or undertaken, how would you rate your experience?

Overall satisfaction – APNIC Members



- A majority of respondents rated the quality of service delivery positively, with 92% rating the quality of services above average, good or excellent
- 91% also provided a rating higher than neutral for the value of APNIC services.
- Slightly fewer (89%) rated the overall value of APNIC Membership as above average or better.
- The proportion of respondents rating the quality of APNIC services as ‘Excellent’ increased to 39%, up from 35% in 2018
- Excellent ratings for service value were also up slightly, to 40% of Members
- As in previous surveys, respondents from LDEs and South Asia are significantly more satisfied with service quality and value, and the value of membership

	Total	East Asia	Oceania	SE Asia	South Asia	LDE	Others
Sample Size	1119	255	296	439	526	476	1148
Quality of Service	92%	88%	89%	93%	97%	97%	90%
Value of Services	91%	90%	84%	93%	96%	97%	89%
Value of Membership	89%	92%	79%	89%	96%	95%	86%

Thinking about APNIC overall, how would you rate:
Members only: n=1,119

Significantly higher / lower than total



Challenges



In your own words, what is the main challenge for you / your organisation in providing Internet-related products, services & activities?

“The internet cost in the Pacific Island countries is still very high and this is a major challenge in the Pacific.” (Oceania)

“Security is major challenge, nowadays. APNIC should focus on this aspect for their members in terms of training, knowledge sharing & best practices.” (South Asia)

“Main challenge is as a developing country Sri Lanka does not have sufficient telecommunications infrastructure specially in rural areas.” (South Asia)

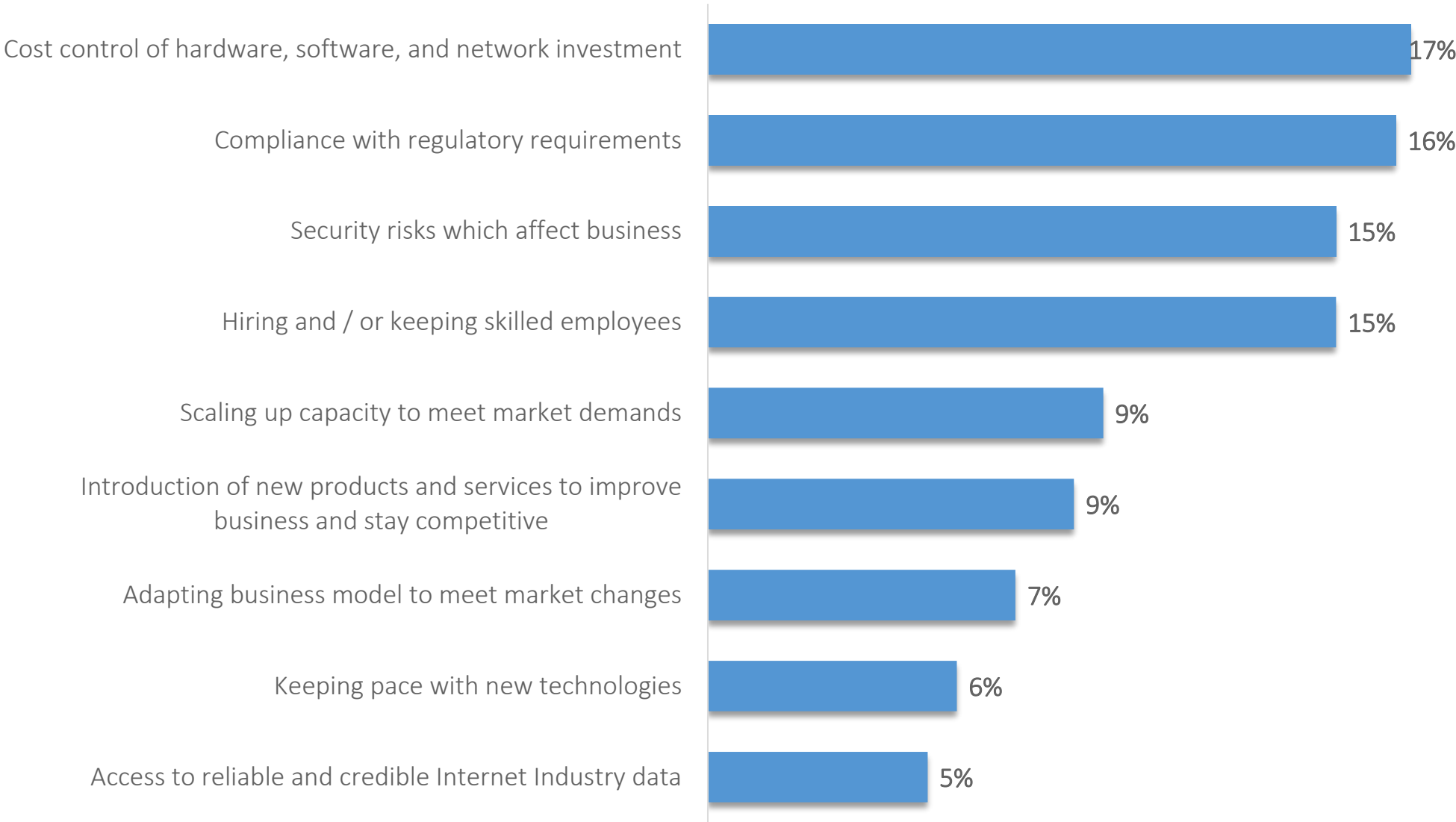
“Cost is the main challenge when it comes to Internet related products” (South Asia)

“Balancing rapid growth in usage and network expansion costs” (East Asia)

“High cost of internet connectivity and high cost of cyber security appliances.”

South Asia

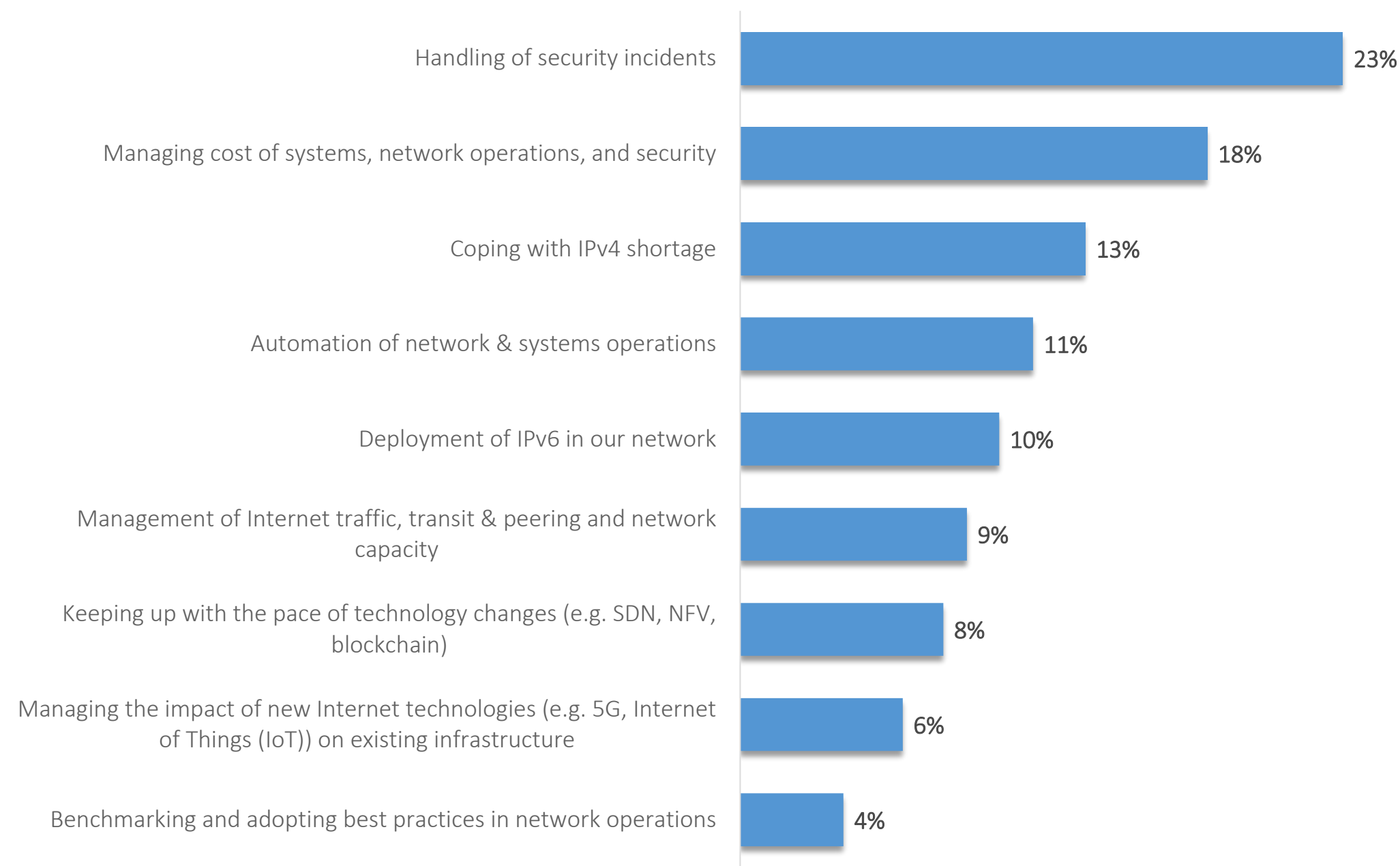
Strategic challenges



- Cost, regulatory compliance, security risks and the skills and knowledge of employees are the issues that Executives are most concerned about
- 17% of Executives ranked cost control as their top challenge, however those in East Asia (10%) are less likely to indicate this is an issue
- Compliance is the main issue for respondents in South East Asia (20%) and South Asia (22%)
- Maintaining a skilled workforce is a challenge, particularly in East Asia (24%) and Oceania (18%)
- Security risks which affect business is the top challenge for 15% of respondents, particularly in Oceania (24%)

Thinking about your Internet-related services, products or activities, what are the MAIN STRATEGIC challenges facing your organisation?
(Ranking Question. Respondents holding executive roles asked to rank at least top 3 items, n=286) (% Ranked 1)

Operational challenges



- Overall, the top three operational challenges remain the same as prior surveys
- Handling security threats is a challenge across all sub-regions, and at 27%, particularly for LDEs
- Managing the costs of systems, network operations and security is a bigger issue for those in Oceania and South East Asia
- A new challenge was added this year, automation of network and systems operations
- This is an issue for 11% of respondents, although fewer in East Asia (6%) rank this as an issue for them

Thinking about your Internet-related services, products or activities, what are the MAIN operational challenges facing your organisation? (Ranking Question. All Respondents asked to rank at least top 3 items, n=1,624. Issue rank=1)



How might APNIC best assist you or others with these challenges?

“Providing capacity building and other assistive training at a very low cost or no cost for the organizations that struggle to adapt in rapidly changing environments of technologies”. (East Asia)

“Provide more face to face training opportunities for the Pacific Island Countries” (Oceania)

“Provide more training and inform best practices in the implementation of new technologies.” (South East Asia)

“Provide more resources for network operators and smaller organization who need to respond to security incidents” (East Asia)

“APNIC is doing fantastic job by organizing technical trainings and workshops on latest technologies and they should organize more so people can more benefit.” (South Asia)

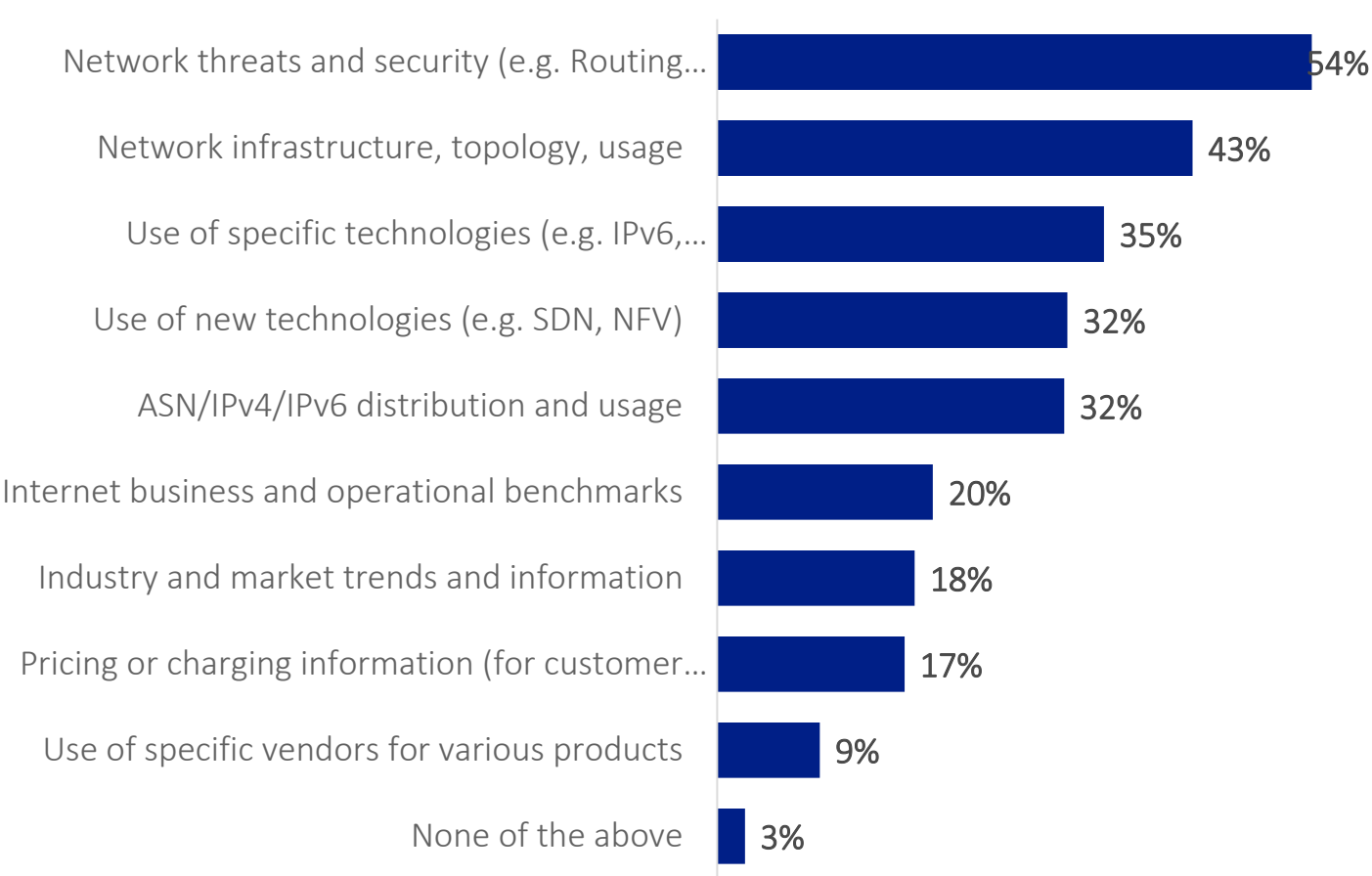
Overwhelmingly, the provision of education and training is the best support APNIC can provide to overcome respondents’ challenges.



Information & Internet Development

Trend & benchmarking data

- As with the 2018 survey, and reflecting the operational challenges, over half of respondents want trend and benchmark data about network threats and security
- Reflecting the interview consultations, data about network infrastructure, topology and usage is also useful
- Use of specific and new technologies, and ASN/IPv4/IPv6 distribution and usage is of value to around a third of respondents.



	Members	Stakeholders	East Asia	Oceania	SE Asia	South Asia	LDEs	Other
Sample size	1120	504	255	296	439	562	476	1148
Network threats and security	54%	54%	56%	68%	49%	51%	54%	54%
Network infrastructure, topology, usage	43%	44%	39%	46%	42%	46%	48%	41%
Use of specific technologies (e.g. IPv6, DNSSEC, RPKI)	36%	35%	40%	40%	33%	31%	29%	38%
Use of new technologies (e.g. SDN, NFV)	33%	31%	37%	28%	33%	31%	30%	33%
ASN/IPv4/IPv6 distribution and usage	32%	30%	29%	17%	32%	40%	36%	30%
Internet business and operational benchmarks	19%	21%	15%	14%	23%	23%	25%	17%
Industry and market trends and information	18%	18%	26%	17%	18%	15%	12%	21%
Pricing or charging information	16%	18%	16%	16%	20%	17%	20%	16%
Use of specific vendors for various products	9%	10%	5%	10%	10%	11%	11%	9%
None of the above	3%	2%	1%	4%	3%	2%	1%	3%

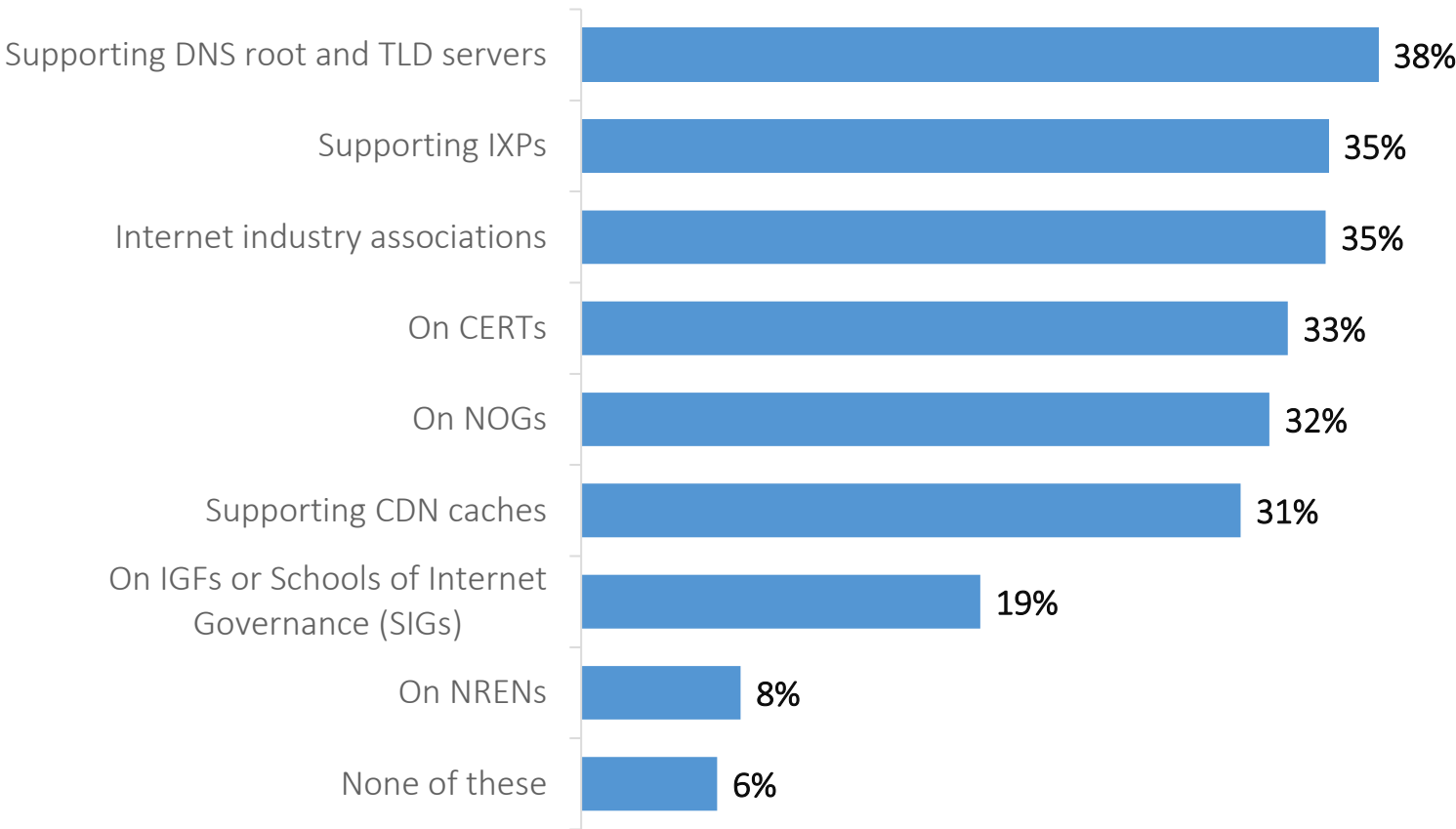
Significantly higher / lower than total

What types of Internet trend and benchmarking data services would be of MOST use to your organisation?
(All respondents. Select up to 3. Base n=1,624; Total mentions: 4,271)

Internet development

Community organisations / shared infrastructure

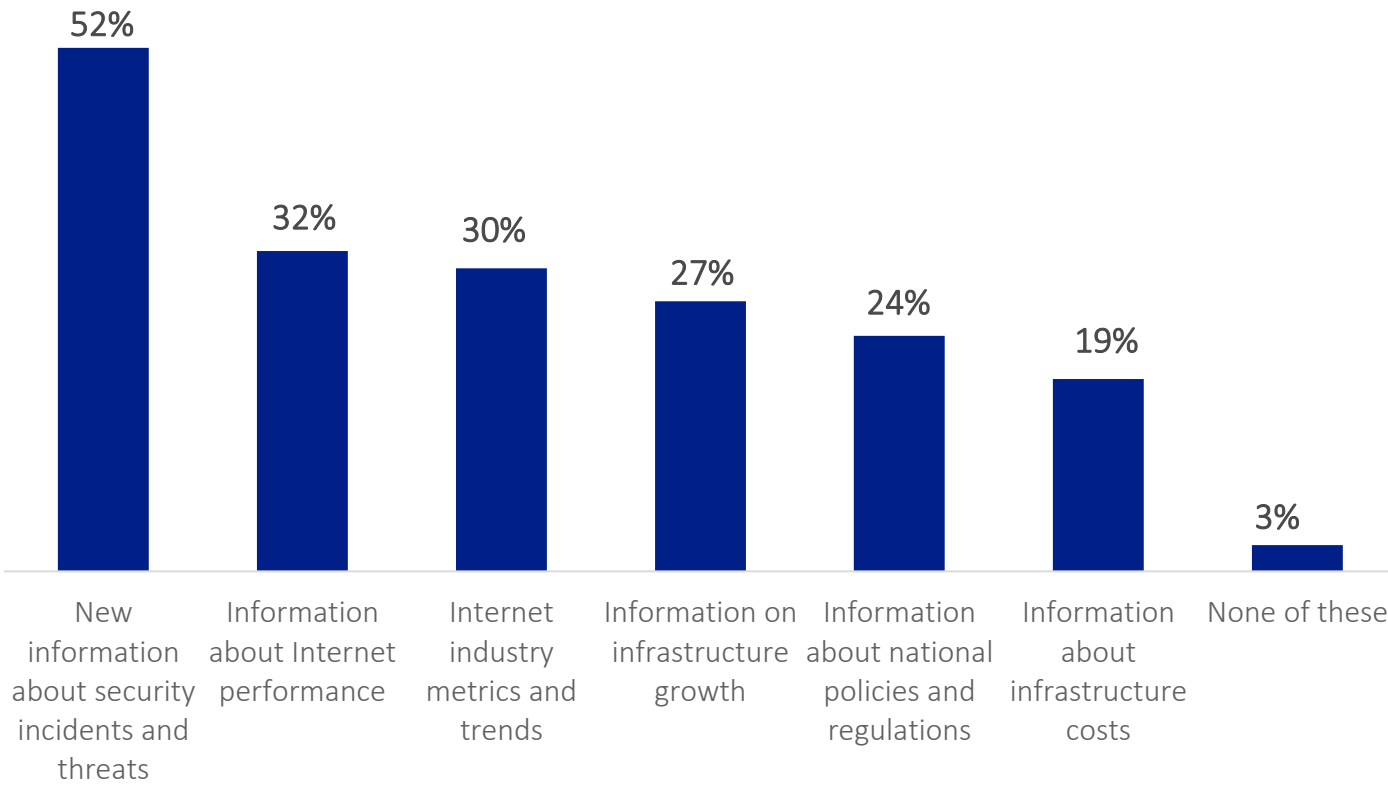
- Responses are evenly distributed across six suggestions for APNIC to focus on
- Supporting DNS root and TLD servers is the area most want APNIC to focus on
- LDEs want a focus on NOGs, while other economies favour attention on CERTs



If additional resources were available for Internet development, through assistance for community organisations or supporting shared infrastructure, where do you want APNIC to focus its efforts?
(All respondents. Select up to 3. Base n=1,624; Total mentions: 3,850)

Information services

- Reflecting the operational challenges faced with security, over half of respondents would like new information about security incidents and threats
- Those in Oceania are more likely to believe that new information about security would be beneficial than other sub-regions



If additional resources were available for Internet development in information services, what would provide your organisation with the most benefit?
(All respondents. Select up to 2. Base n=1,624; Total mentions: 3,043)

QUESTIONS