

WI-FI ACCESS FOR THE DAY

- To connect select SSID “**guest-wifi**” in the list of available networks
- On prompt enter Username “**5903**” and Password “**4hC939**”
- Open a browser and follow instructions to accept the usage terms

ENTERPRISE & IPV6 WORKSHOP

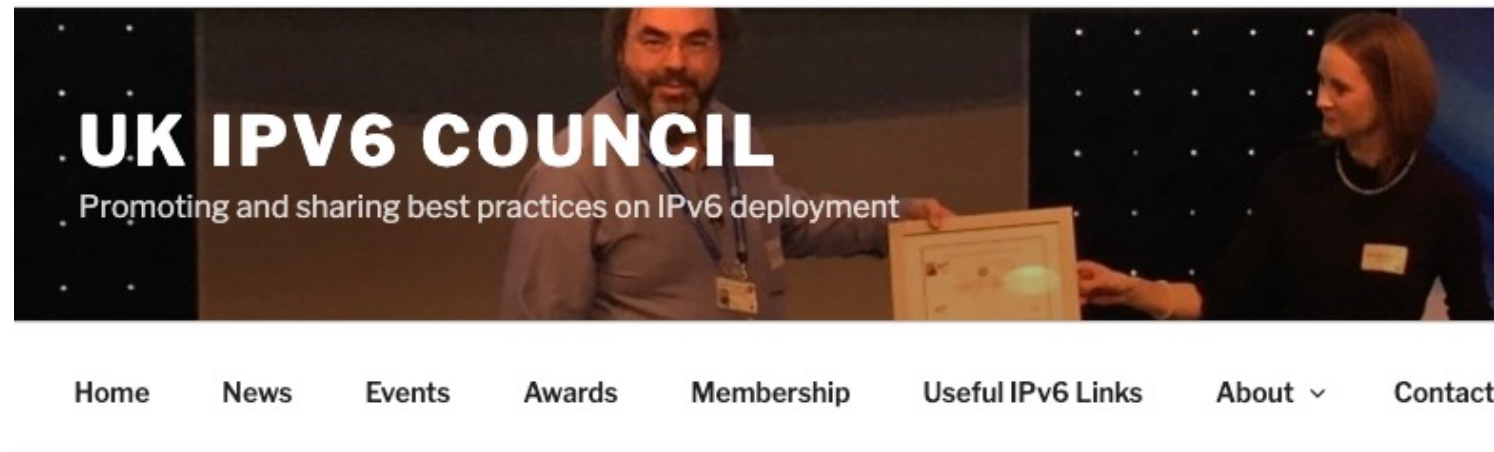
@Morgan Stanley

24 April 2023



Please note: All
presentations are **being
recorded** and will be
posted online.

WHAT IS UK IPV6 COUNCIL?



www.ipv6.org.uk

AGENDA — MORNING SESSION

10:00 – 10:30 **Welcome & Opening** – Veronika McKillop (UK IPv6 Council)

10:30 – 11:00 **IPv6 Thinking** – Tom Hill (BT)

11:00 – 11:30 **Considerations for IPv6 Address Planning** – Veronika McKillop (UK IPv6 Council)

11:30 – 12:00 **Applications & IPv6** – Tim Coote (Coote.org)

12:00 – 13:00 Lunch

AGENDA — AFTERNOON SESSION 1

13:00 – 13:45 **IPv6 Security & Myth busting** – Fernando Gont (SI6 Networks)

13:45 – 14:15 **Cloud & IPv6** – Radek Zajic

14:15 – 14:45 **Kubernetes & IPv6** – Nico Schottelius (Ungleich)

14:45 – 15:00 **Almost IPv6-only Network** – Ondrej Caletka (RIPE NCC)

15:00 – 15:30 Tea & Coffee break

AGENDA — AFTERNOON SESSION 2

15:30 – 16:00 **IPv6 at Imperial College London** – David Stockdale (ICL)

16:00 – 16:30 **Morgan Stanley IPv6 case study** – Andre Browning & Martin Baro (Morgan Stanley)

16:30 – 17:00 **IoT & IPv6** – Graeme Bragg (University of Southampton)

17:00 – 17:30 **Q&A with speakers**

After-meeting social in **The Henry Addington**, 22-28 Mackenzie Walk, E14 4PH

OTHER TOPICS RELATED TO ENTERPRISE IPV6 DEPLOYMENT

- Ways to deploy IPv6? Transition technologies, PINs, “gotchas”
- Accountability (management) with temporary/privacy addressing (SLAAC vs DHCPv6 logs)
- Wireless challenges - related to Android lack of DHCPv6
- IPv6 VPNs – in the sense of site-to-site VPN, not only remote-access VPN
- Service providers to business
- Multihoming – most enterprises are SMEs and will not do BGP peering with ISPs on their Internet Edge
- Rationale for and feasibility of IPv6-only
- And more...?

We might cover these areas in a future workshop.

QUESTIONS DURING THE PRESENTATIONS?

WE HAVE “MICROPHONE” RUNNERS 😊

THANK YOU TO OUR HOST

Morgan Stanley

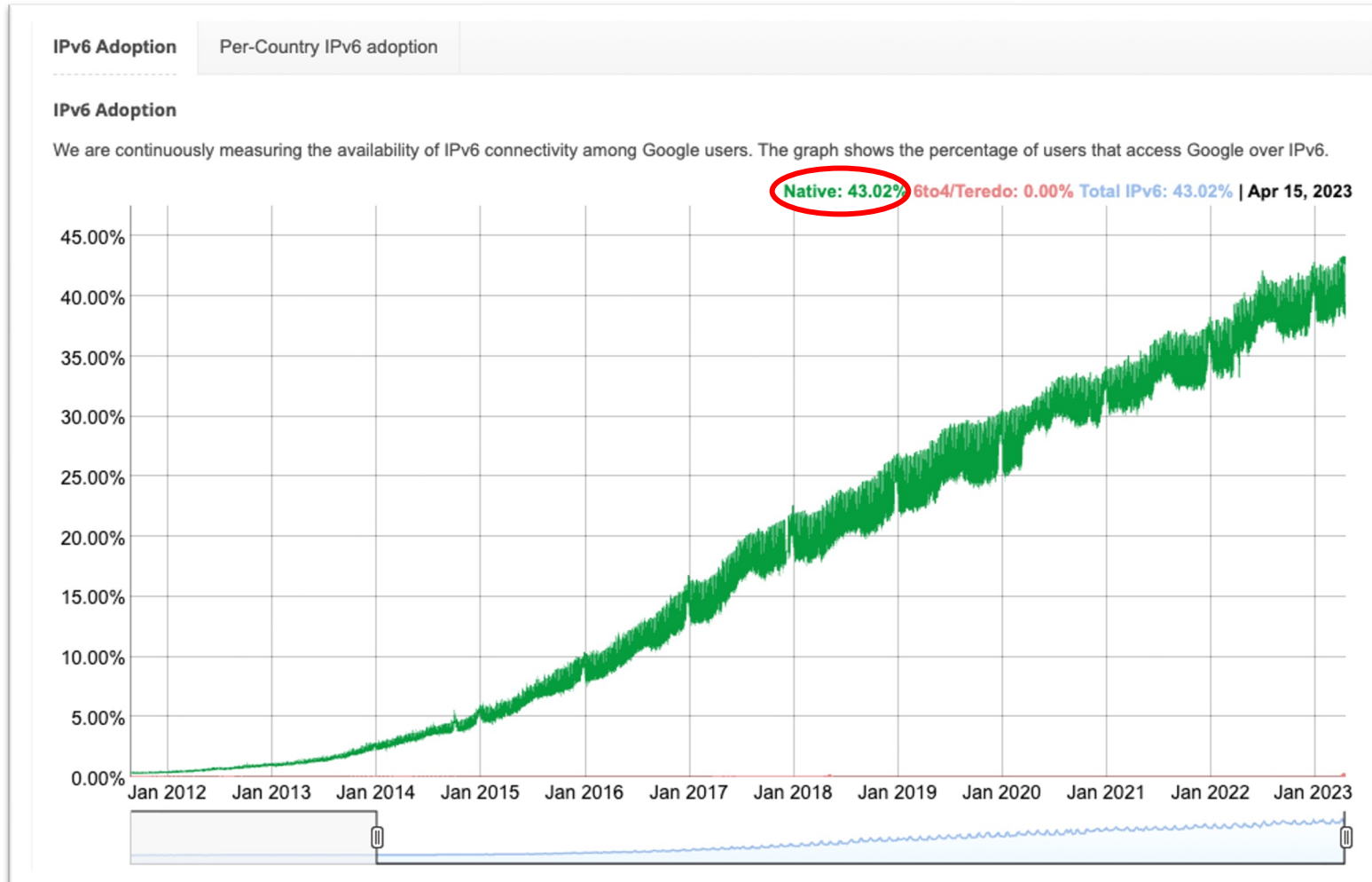
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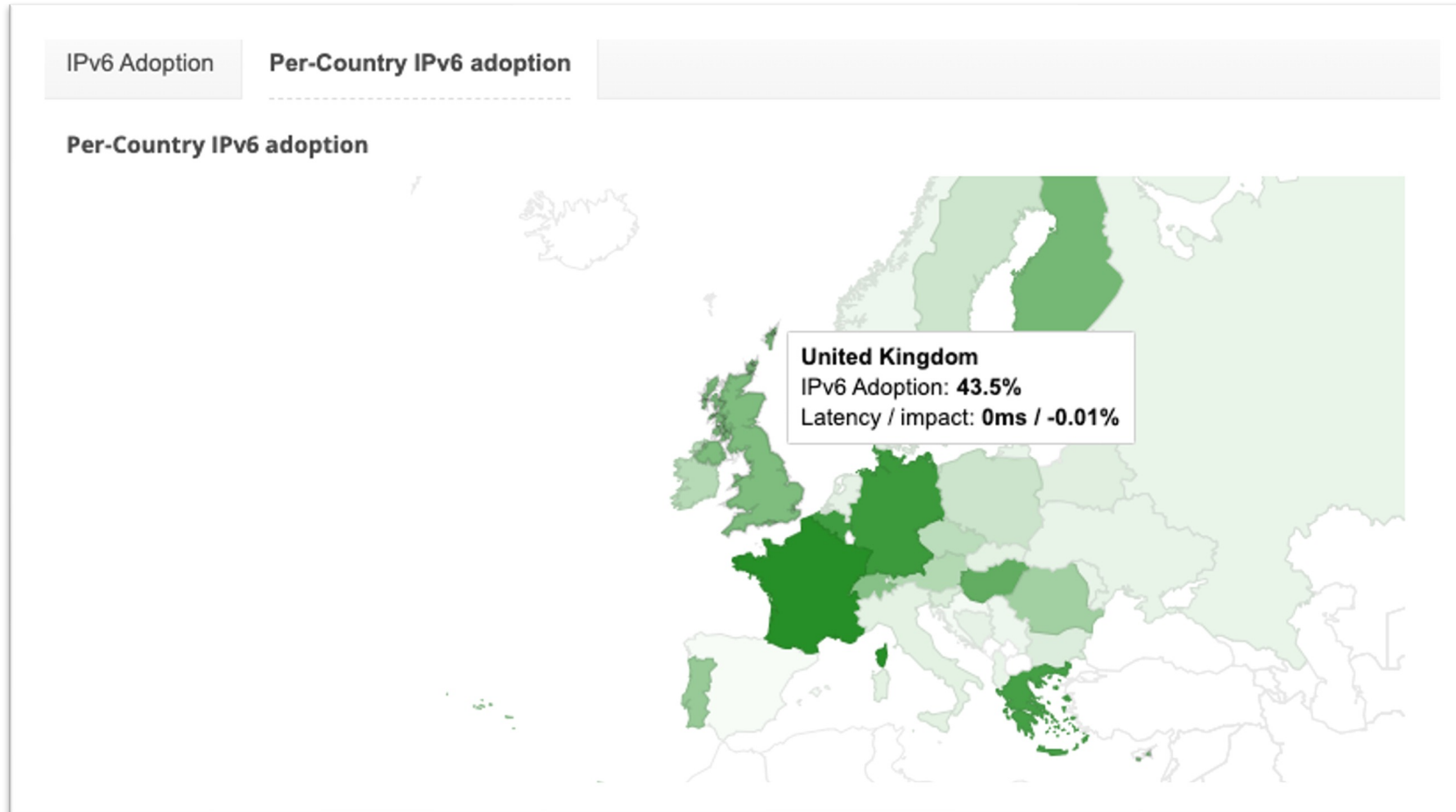
IPV6 (& LEGACY IP) UPDATE

GLOBAL IPV6 GROWTH – APRIL 2023




Source: [Google IPv6 Statistics](#)

UK IPV6 ADOPTION LEVEL – APRIL 2023



APNIC – 44.50%
Facebook – 38.45%
Akamai – 28.7%


IPv4 PRICE GROWTH

IPv4.GLOBAL
 By  **Hilco**
 Streambank

[BUY IPV4 & ASN](#)
[SELL IPV4 & ASN](#)
[IPV4 RESOURCES](#)
[ABOUT](#)
[CONTACT](#)

ANALYZE YOUR IPv4

Check out our IPv4 Analyzer widget and find what your addresses are worth.

IPv4.GLOBAL
 **Hilco** Streambank

IPv4 Analyzer

Your IP is:
85 68 142 141

IP BLOCK	PRICE RANGE
Prior Sales: /23 ARIN \$50.39 /23 ARIN \$47 /24 ARIN \$53 /24 RIPE \$46 /24 ARIN \$48 /24 RIPE \$49 /24 ARIN \$42.73 /24 ARIN \$6	

Source: [IPv4.global](https://www.ipv4.global) by Hilco Streambank

IPV4 PRICE IN FEBRUARY 2023



Source: [IPv4.global](https://www.ipv4.global) by Hilco Streambank

HOW TO JUSTIFY YOUR IPV6 PROJECT? THINK IPV4...

Infoblox Centre of Excellence articles (2022):

- [The True Cost of IPv4](#)
- [Attempting to Quantify the Hidden Cost of IPv4 Addressing](#)

NANOG85 Panel: [Buying and selling IPv4](#)

WORLD IS ENABLING IPV6

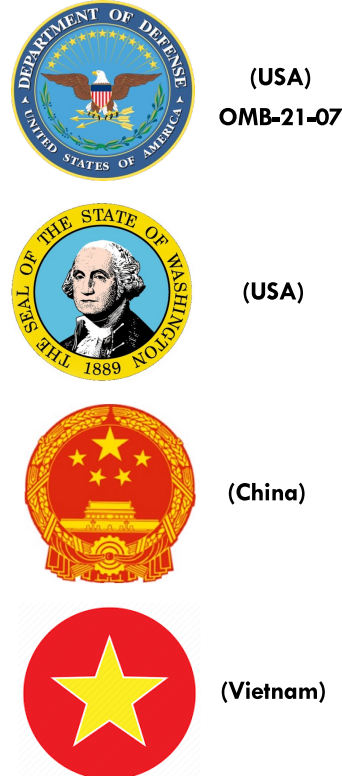
Internet access
changing to
IPv6-only



Reports of
speed benefit
of IPv6 = \$\$\$



(Renewed)
Government
requirements



Industry
pressure



Public Cloud
IPv6 support



AND OTHER REASONS STILL APPLY

Including...

- Ensuring robust access to your public-facing services for IPv6-only client devices
- Avoiding a rushed deployment; building technical credit not debt
- Removing NAT and private addressing complexity from network operations and management
- Minimising dependency on an ever-more fragile IPv4 network (witness CGN, etc)
- Security in an 'IPv4-only' network; IPv6 is supported on common platforms and on by default
- Enabling innovation at the edge
- For Higher Education - Supporting teaching and research – graduates with competitive knowledge
- Scalability for campuses of the future; IoT is increasingly using IPv6 (e.g., Matter)
- Being ready for IPv6-only applications and communities (the WLCG direction of travel)
- .. Are there others? Presumably, your business case is already made?

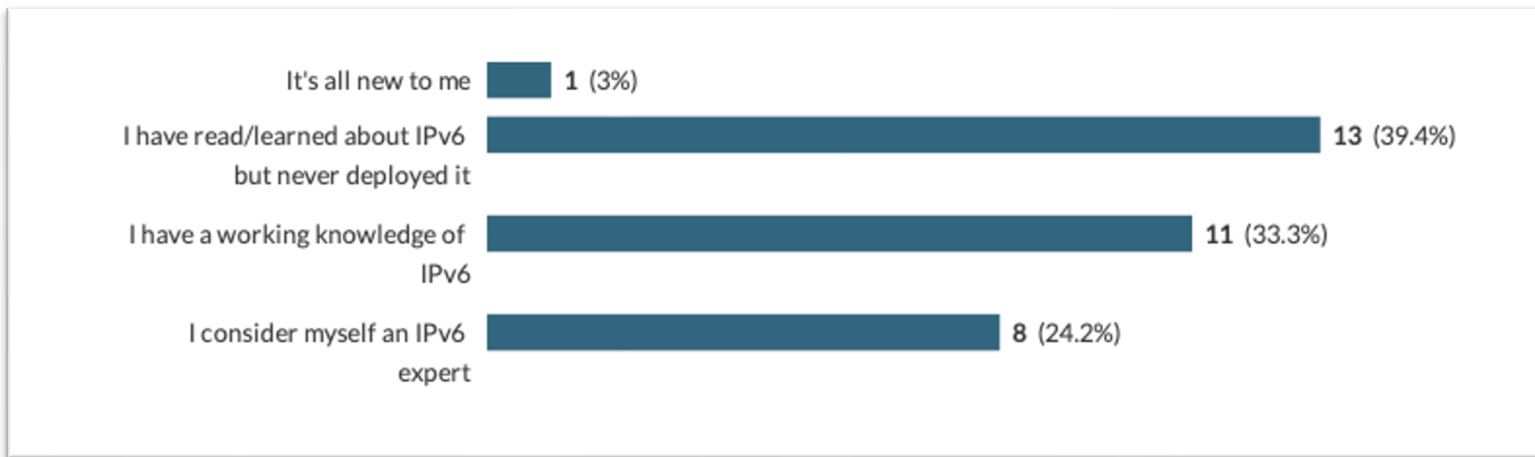
Courtesy of Tim Chown
(Jisc)



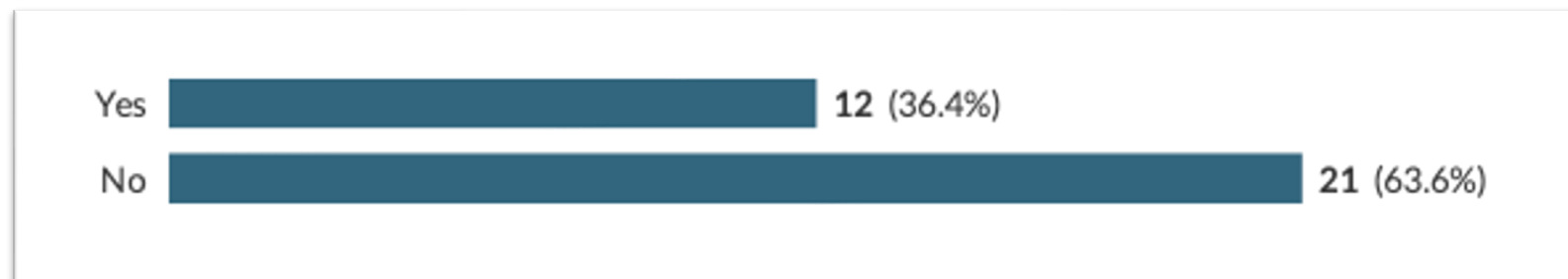
IPV6 READINESS SURVEY RESULTS

IPv6 READINESS SURVEY RESULTS – 1/7

1. What is your level of knowledge of IPv6?

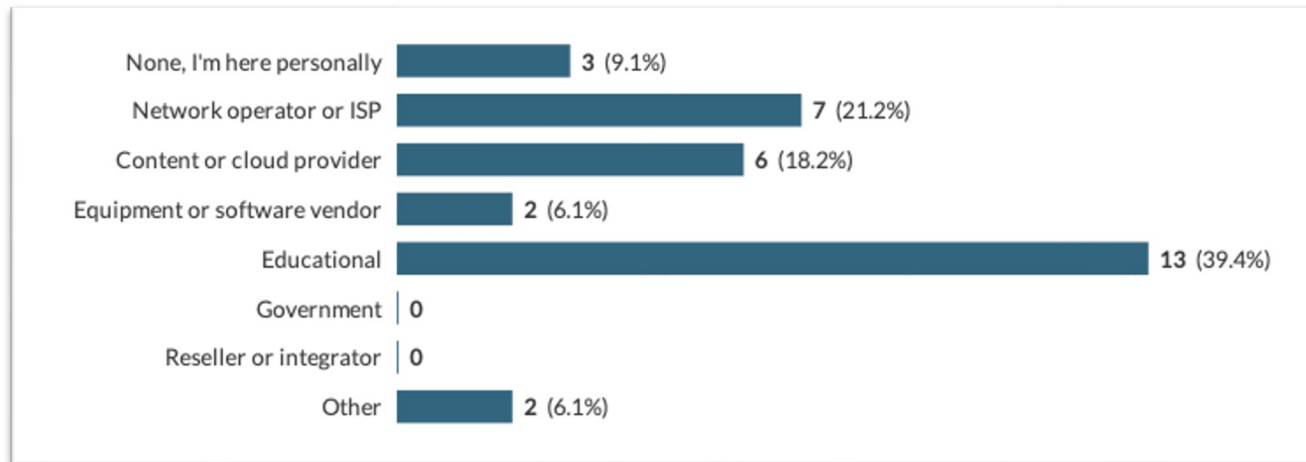


2. Have you received any formal IPv6 training?

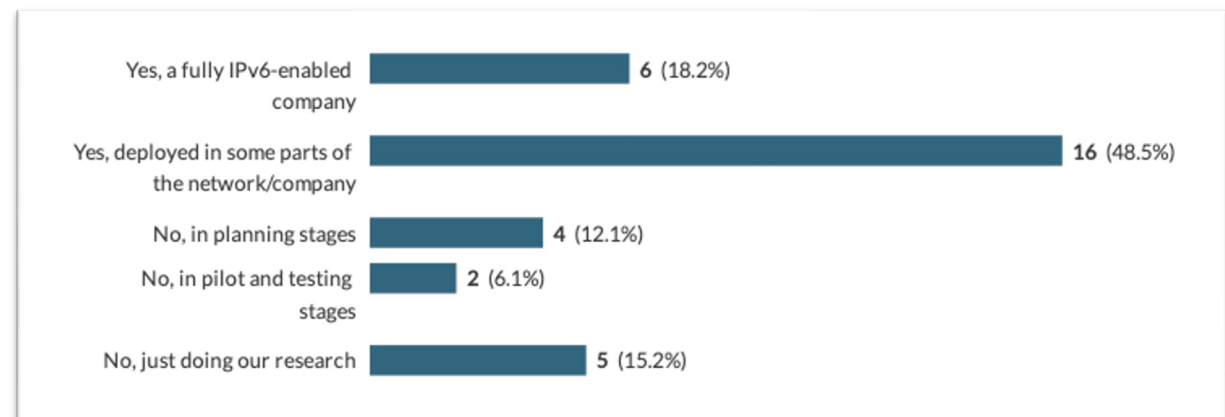


IPV6 READINESS SURVEY RESULTS – 2/7

3. What type of organisation are you representing today?

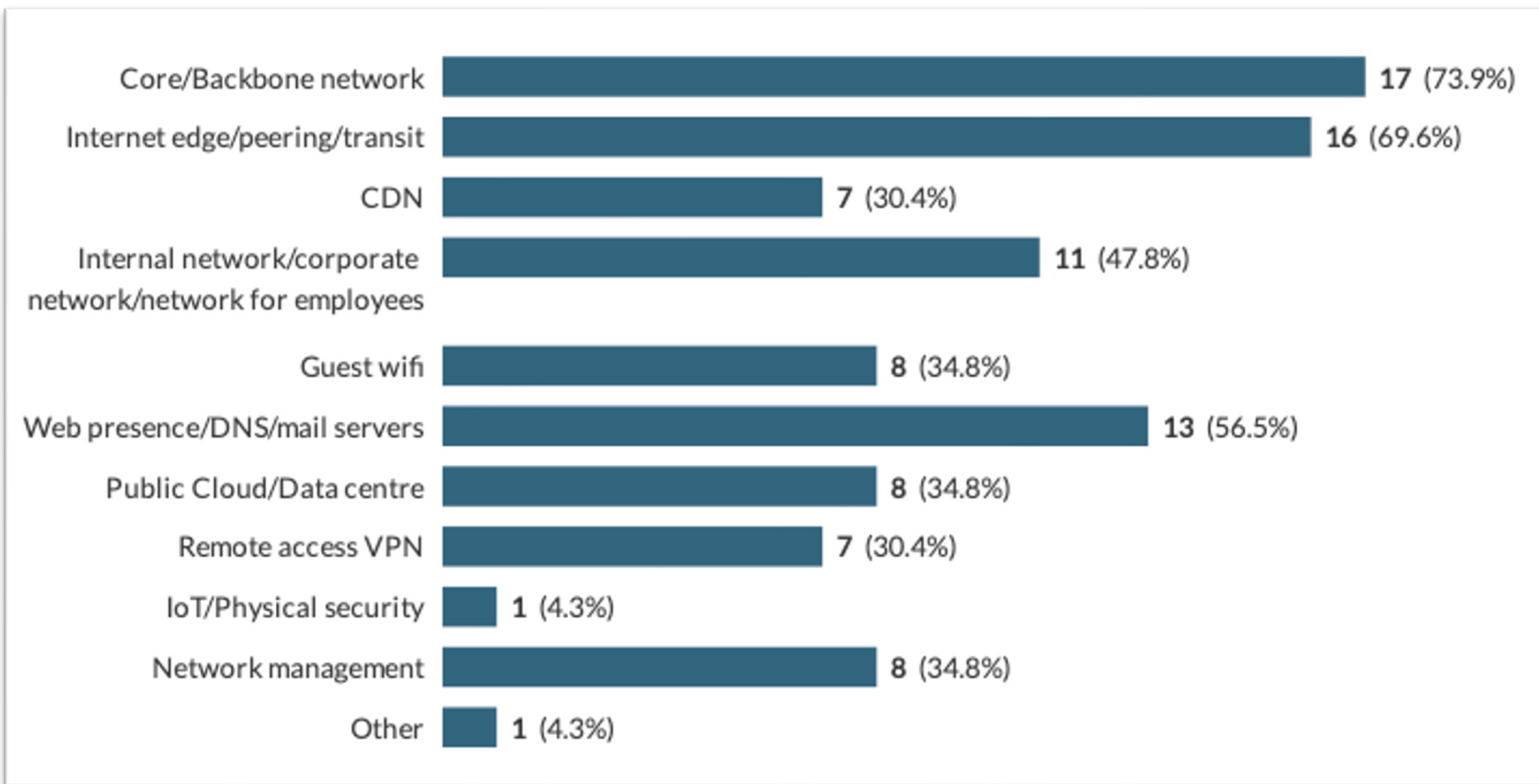


4. Have you deployed IPv6 in your organisation?



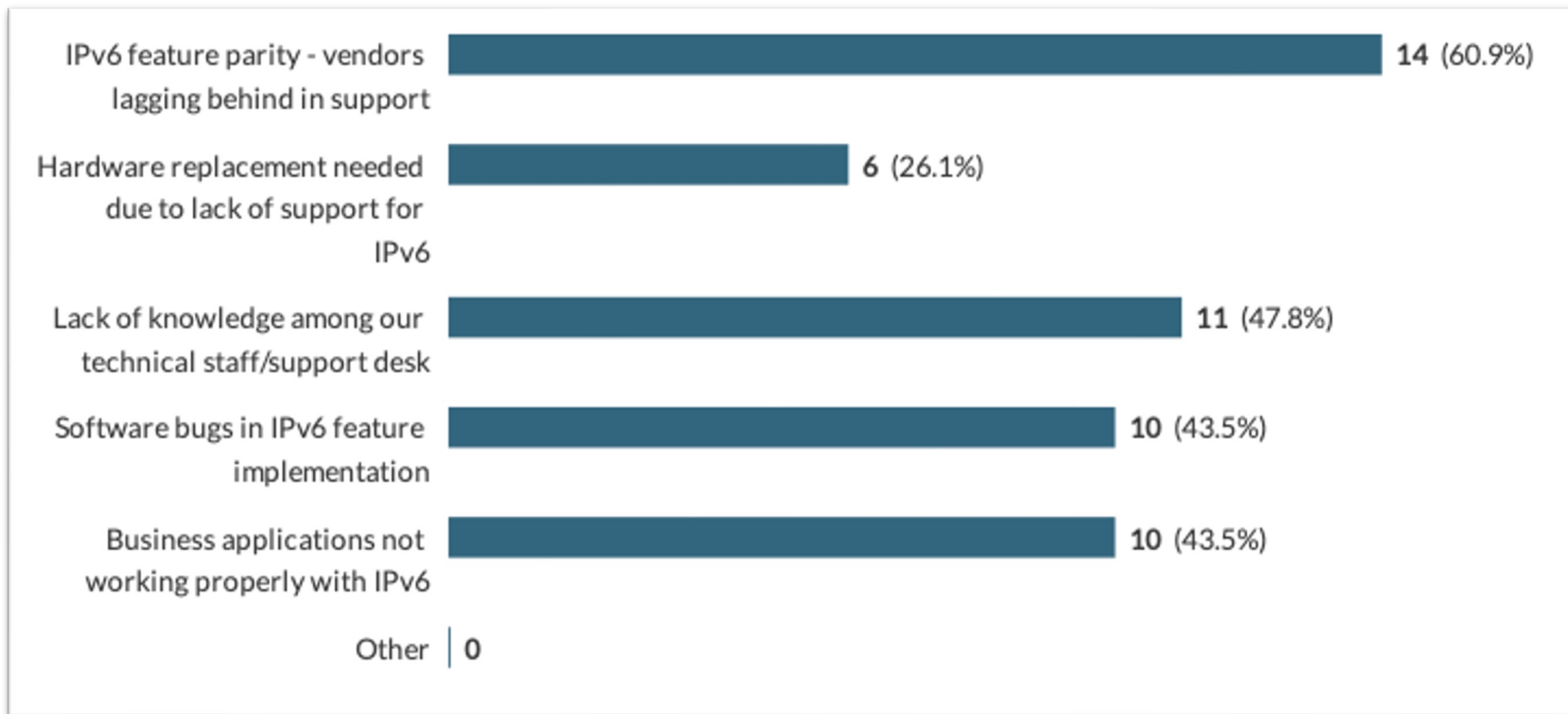
IPV6 READINESS SURVEY RESULTS – 3/7

5. If yes, which part of the network have you enabled it? (multi-choice)



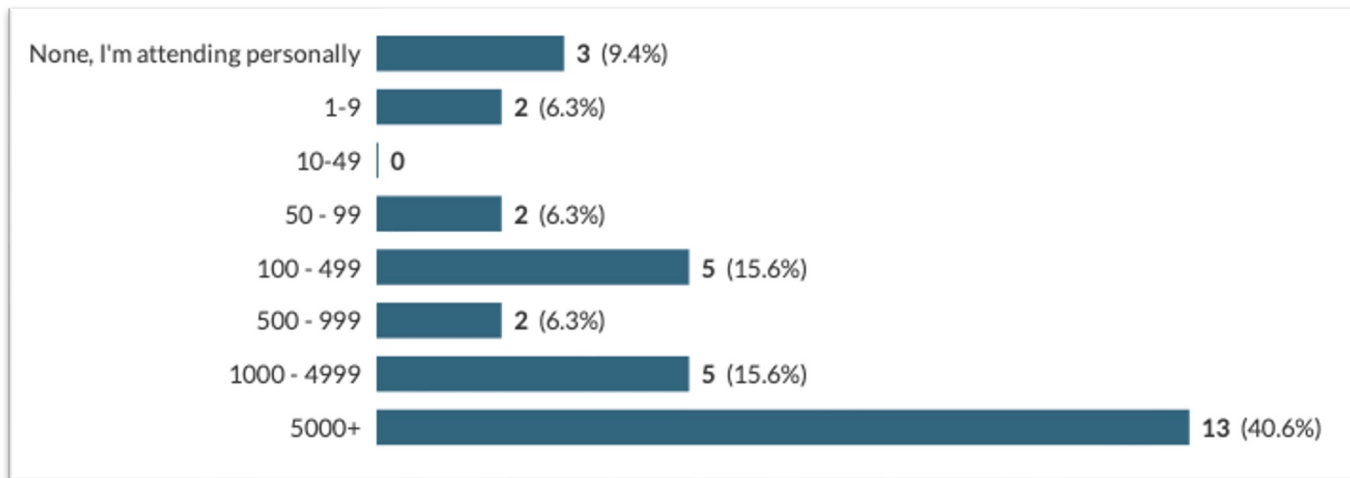
IPv6 READINESS SURVEY RESULTS – 4/7

6. What were the most impactful issues you have come across in your IPv6 deployment? (multi-choice)



IPV6 READINESS SURVEY RESULTS – 5/7

7. What is the number of employees in your organisation?

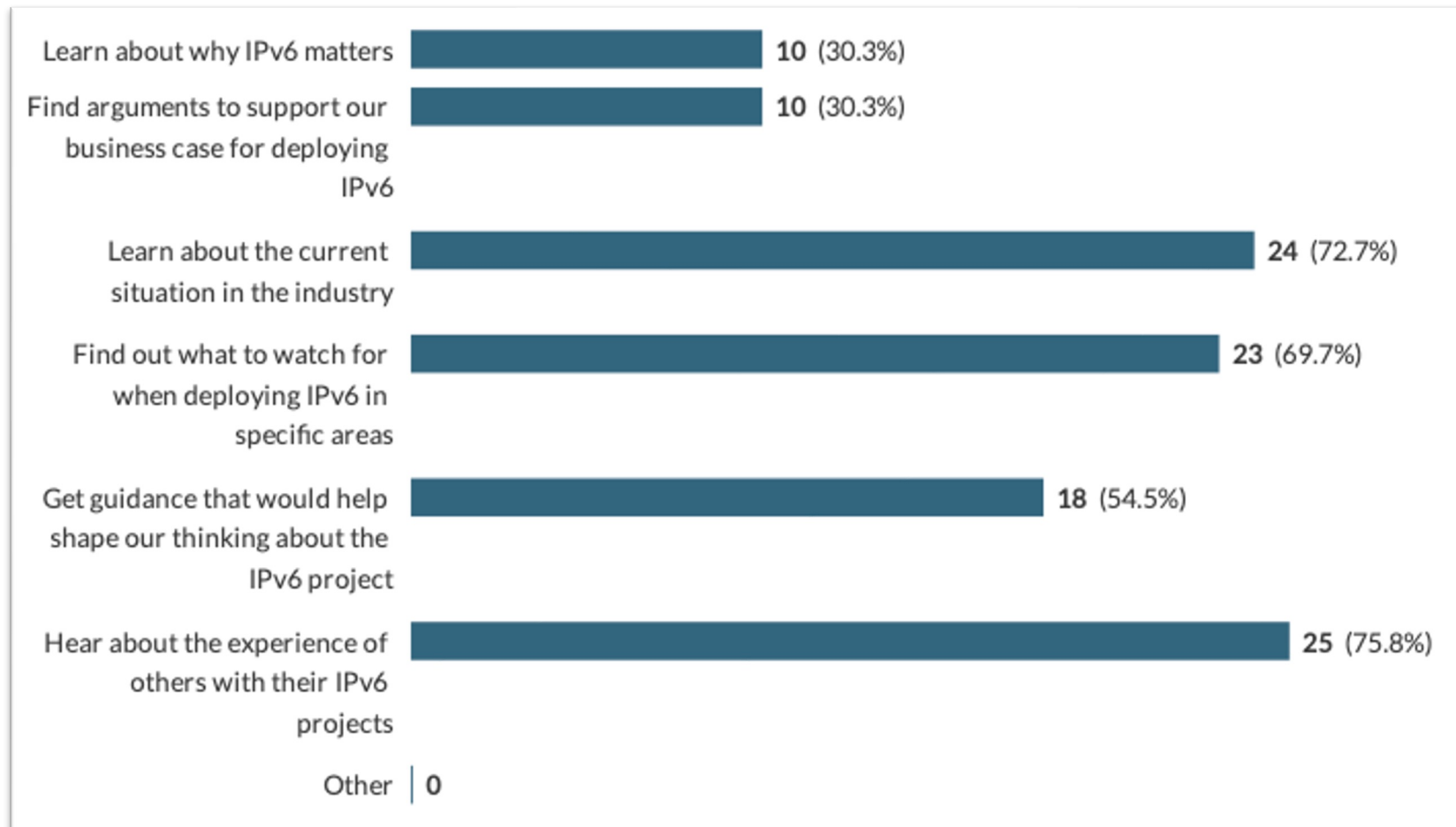


8. Does your organisation interview relevant job candidates on their IPv6 knowledge?



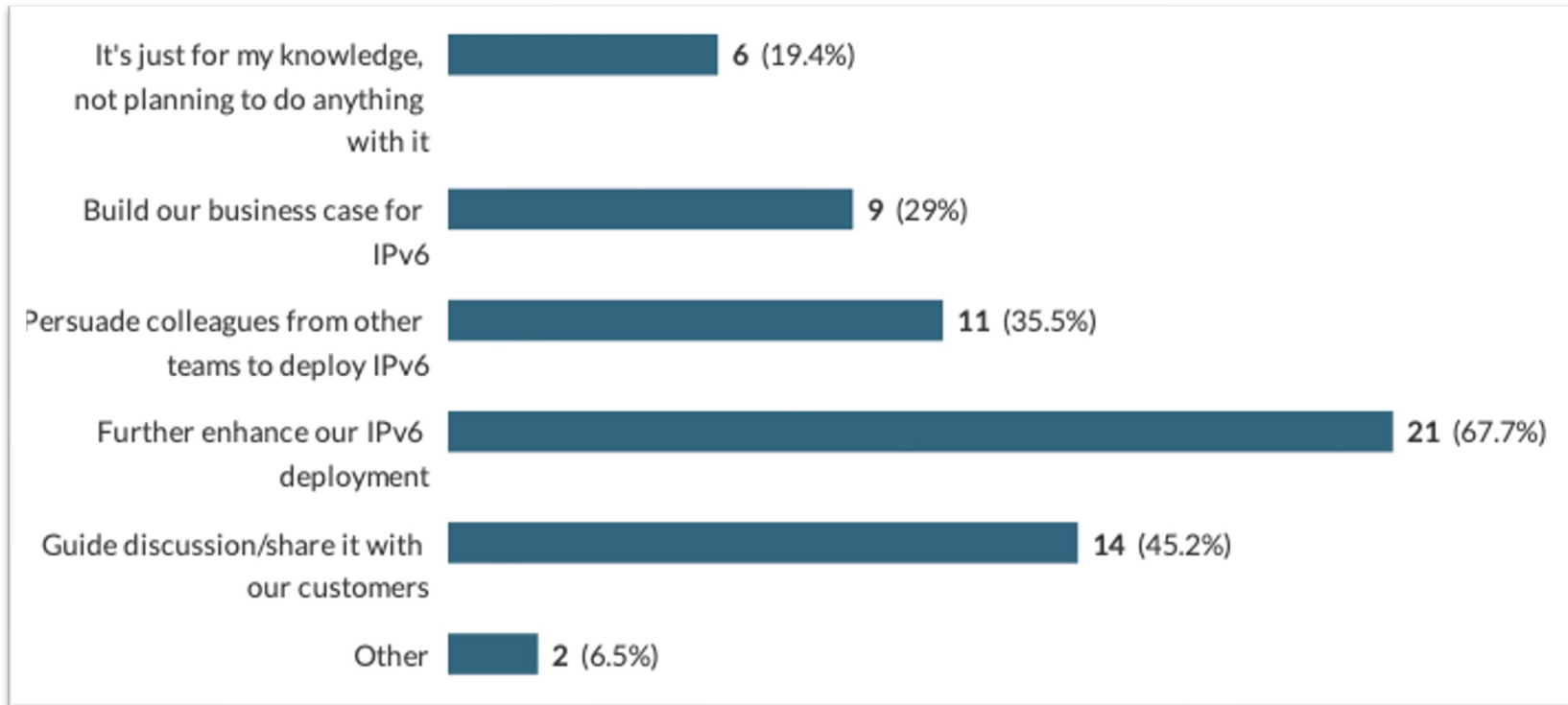
IPv6 READINESS SURVEY RESULTS – 6/7

9. What do you expect from this workshop? (multi-choice)



IPV6 READINESS SURVEY RESULTS – 7/7

10. What do you plan to do with the knowledge? (multi-choice)



WOULD YOU RESPOND IF YOU HAVE NOT DONE SO YET?

<https://tinyurl.com/IPv6-survey>

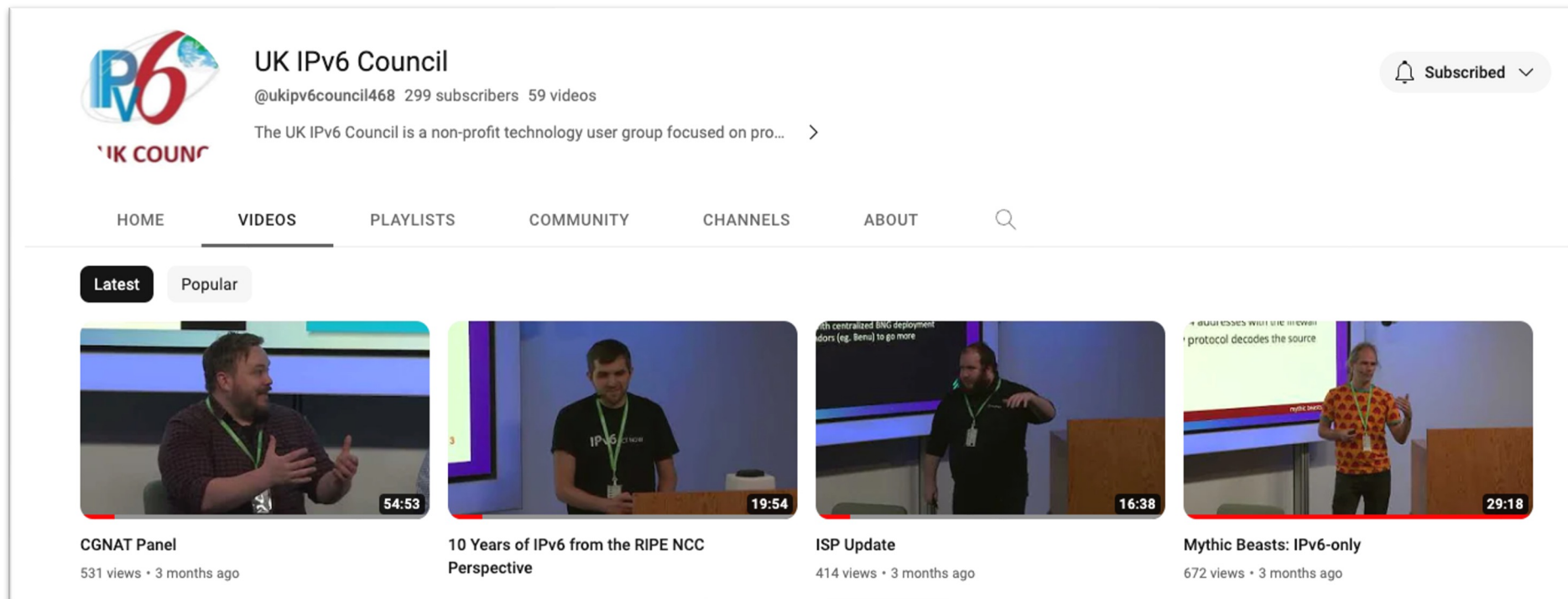
We will publish them on our website.

UK IPV6 COUNCIL - RESOURCES

www.ipv6.org.uk – all presentations since 2014

LinkedIn group ([UK IPv6 Council](#)) – all announcements

YouTube [channel](#)



The screenshot shows the YouTube channel page for the UK IPv6 Council. The channel name is "UK IPv6 Council" with the handle "@ukipv6council468", 299 subscribers, and 59 videos. The description states: "The UK IPv6 Council is a non-profit technology user group focused on pro...". The page is set to "Subscribed". The "VIDEOS" tab is selected, showing a grid of four video thumbnails. Each video has a title, view count, and upload time.

Video Title	Views	Upload Time
CGNAT Panel	531 views	3 months ago
10 Years of IPv6 from the RIPE NCC Perspective		
ISP Update	414 views	3 months ago
Mythic Beasts: IPv6-only	672 views	3 months ago

FUTURE ACTIVITIES & FUTHER RESOURCES

Annual Meeting in autumn 2023 – watch our LinkedIn group or website

Webpage with information which UK ISPs offer IPv6 connection

Procurement: RIPE 772 [Requirements For IPv6 in ICT Equipment](#)

[RFC7381](#) Enterprise IPv6 Deployment Guidelines (from 2014)

[Enterprises : How to deploy IPv6?](#)

- Guidebook published by ARCEP IPv6 Tack Force in France (2022)

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 & deploy IPv6