Navigating IP Addresses

Insights from Your Regional Internet Registry

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Who Are We?

- The RIPE NCC is a not-for-profit membership association

- We allocate and register Internet number resources (IPv4, IPv6 and ASN) for RIPE NCC members and so-called End Users

- We provide data services for network operators

- We organise bi-annual RIPE meetings

Poland: Some Statistics

- 9th of 10 biggest memberships in the RIPE NCC service region

- 687 members and 737 LIRs

- 2,533 ASNs

- 71,842 allocated IPv4 /24s

- 6,194 allocated IPv6 /32s

Number of LIRs over Time

Figure 1:
Number of Local Internet Registries over time

CZ Czechia   HU Hungary   PL Poland   SK Slovakia
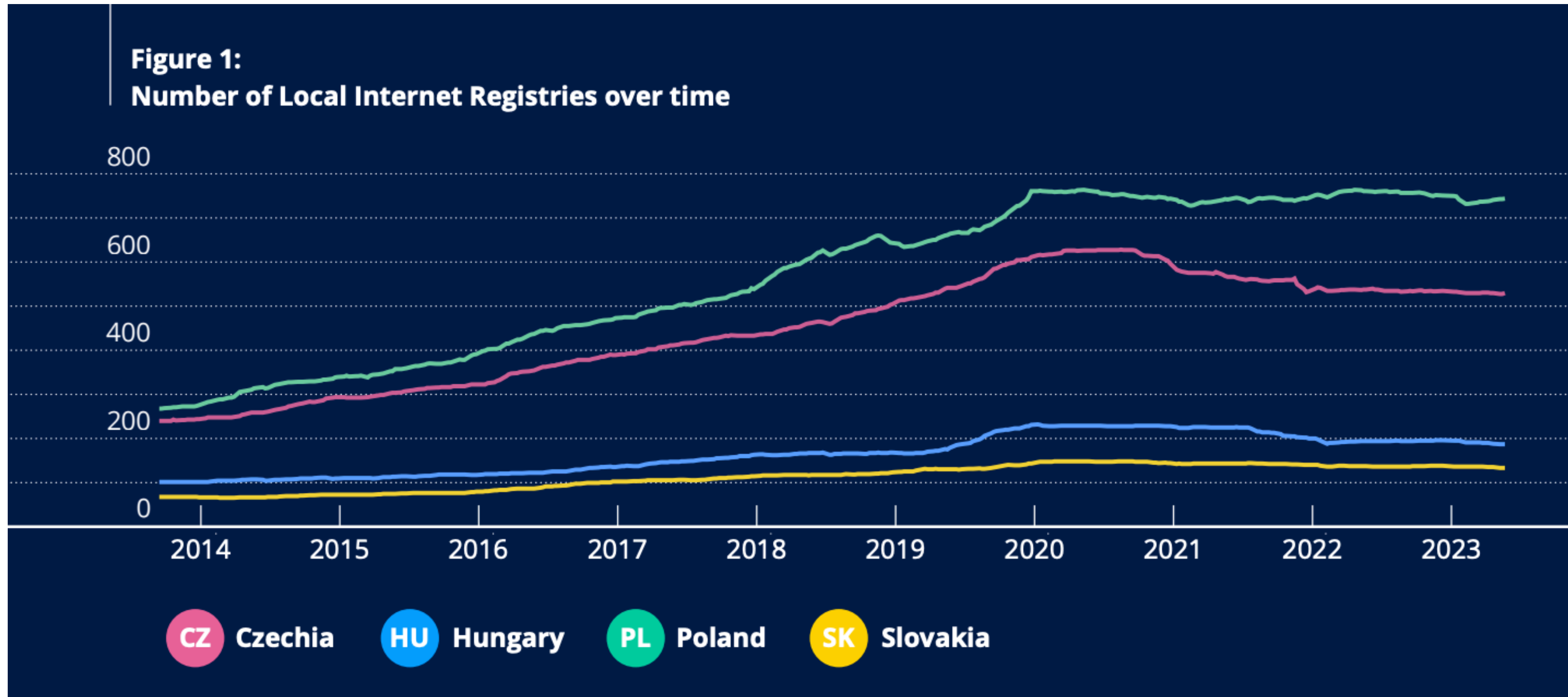
IPv4 Depletion - New IPv4 Policy

- On 25 November 2019, the new policy kicked in

- Each LIR can receive one /24 allocation (256 addresses) from the waiting list

- Only LIRs that have never received an IPv4 allocation from the RIPE NCC before can receive one /24 allocation from the RIPE NCC

IPv4 Addresses in 2024

- Waiting list for returned address space: https://www.ripe.net/ipv4-waiting-list

- LIRs in queue: **962**

- Days that the first LIR in the queue has been waiting: **453**

IPv4 Waiting List Graph

Legend: LIRs in queue | Days that first LIR has been waiting
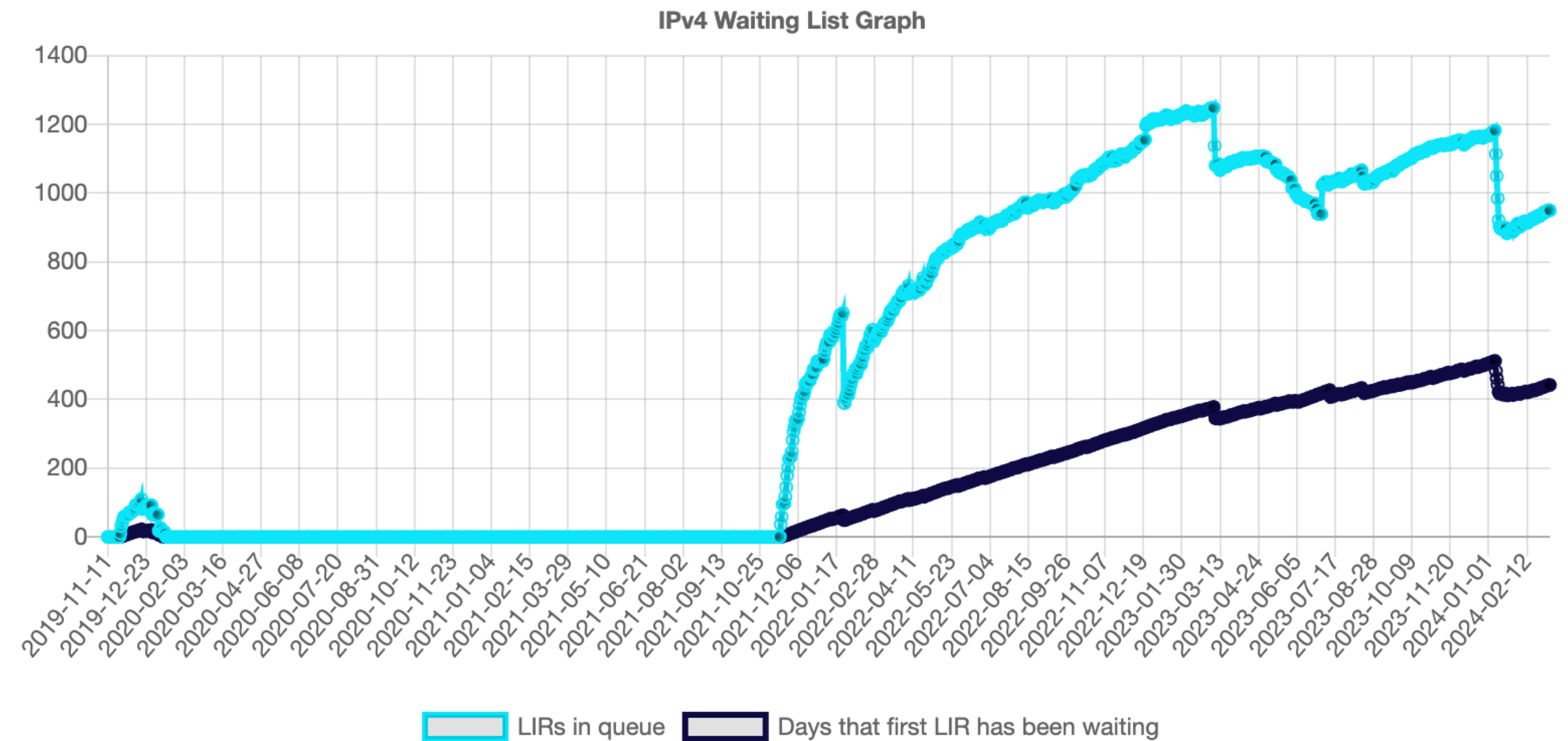
The Waiting List and Polish LIRs?

- Since November 2021, when the IPv4 waiting list became active, 62 Polish LIRs have received a /24 allocation

- Presently, there are 32 Polish LIRs (out of 442) waiting to receive a /24 from the IPv4 waiting list
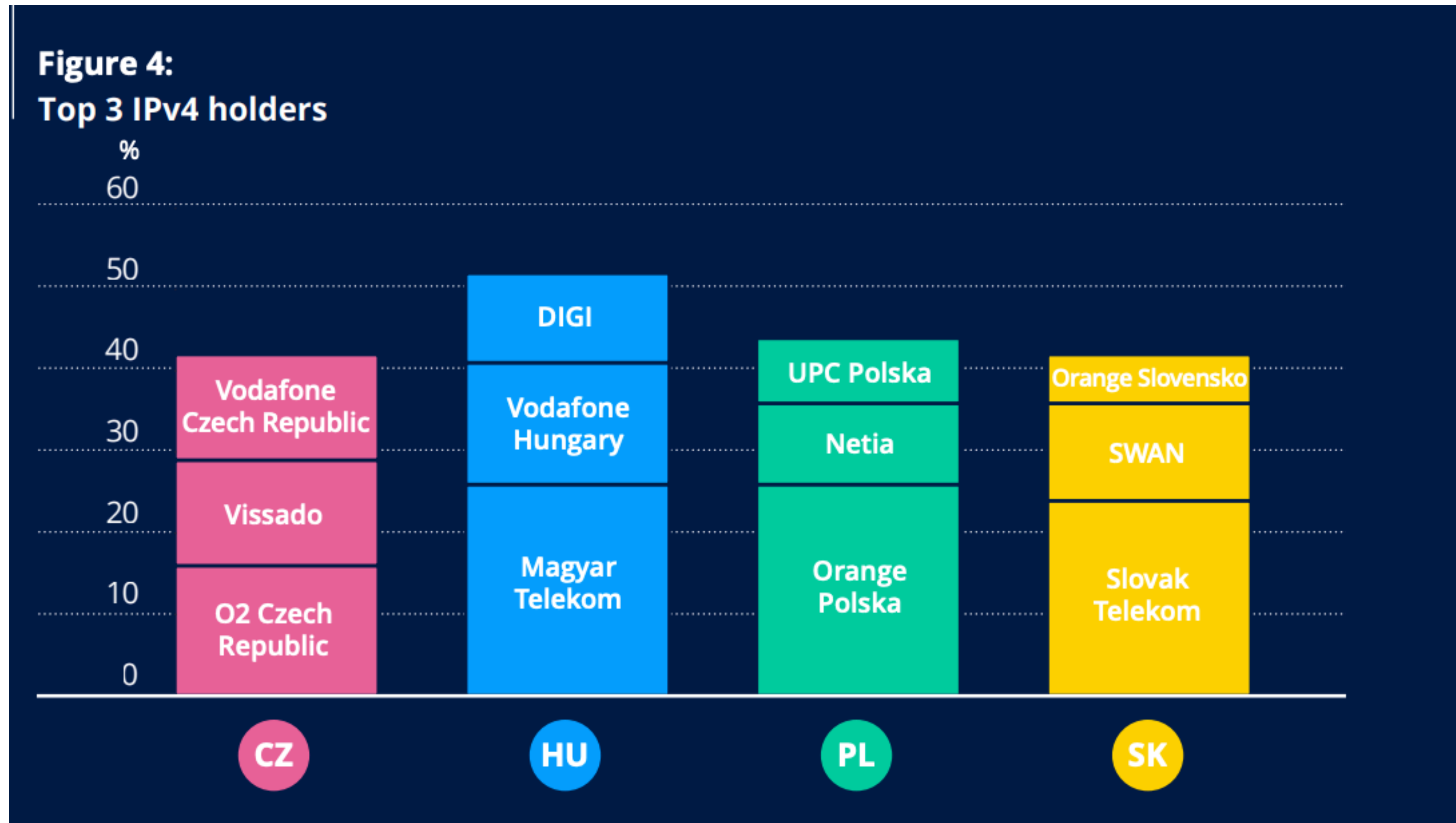
IPv4 Holding in Poland (1)

Figure 3:
IPv4 holdings

CZ	9,564,544
HU	5,961,728
PL	20,928,776
SK	2,729,984

IPv4 Holding in Poland (2)

Figure 4:
Top 3 IPv4 holders
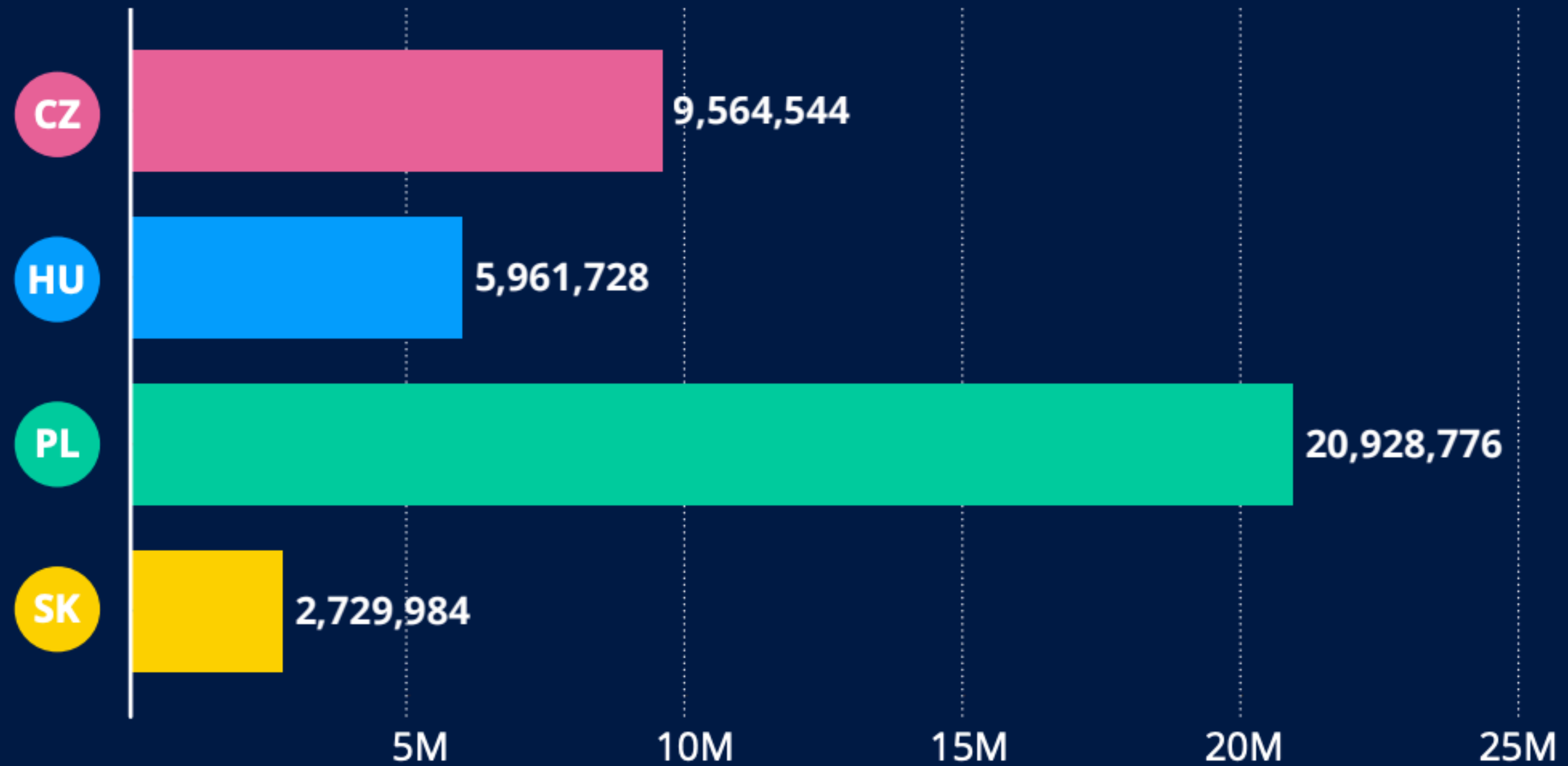
If You Need More IPv4 Addresses

- IPv4 allocations:
    - Can be transferred between LIRs
    - 24-month holding period after a transfer
- IPv4 Provider Independent (PI) Assignments:
    - Can be between LIRs and End Users
- Based on the current RIPE Resource Transfer Policy
- Inter-RIR transfers are now possible

Transfers: Check in Advance!

- Completed transfers published on our website:

https://www.ripe.net/manage-ips-and-asns/resource-transfers-and-mergers/transfers/ipv4/ipv4-transfer-statistics

- RIPE NCC Transfer History RIPEstat

  - Transfer widget: https://stat.ripe.net/widget/ripe-transfer-history

  - Registration check (prefix): https://stat.ripe.net/app/use-cases/prefix/registration-check/

  - Registration check (single IP) https://stat.ripe.net/app/use-cases/ip/registration-check/

Be Aware of the Risks

- "Buying" or "renting" of IPv4 - check what this means

- RIPE Policies must be applicable

- Protect yourself!

  - Verify contacts of transferring party

  - Verify if transferring company is active

  - Verify if transferring party is the legitimate holder

  - Verify if resources are eligible for transfer (IPv4 Transfer Statistics)

- We are here to help and to provide guidance

- Contact us via lir-help@ripe.net

IPv4 Transfers

Figure 5:
IPv4 transfers within, into and out of Central Europe between October 2012 and April 2023
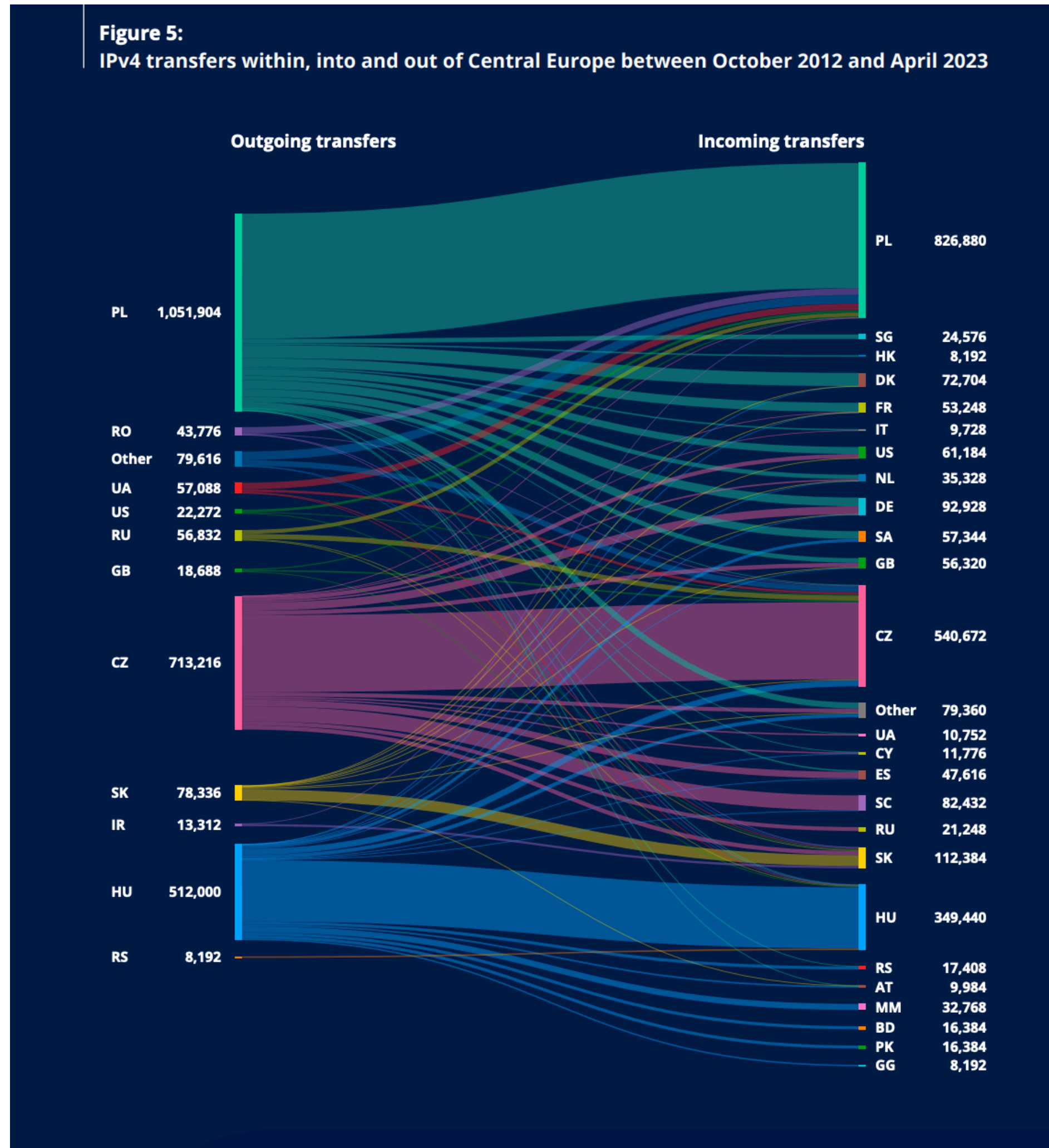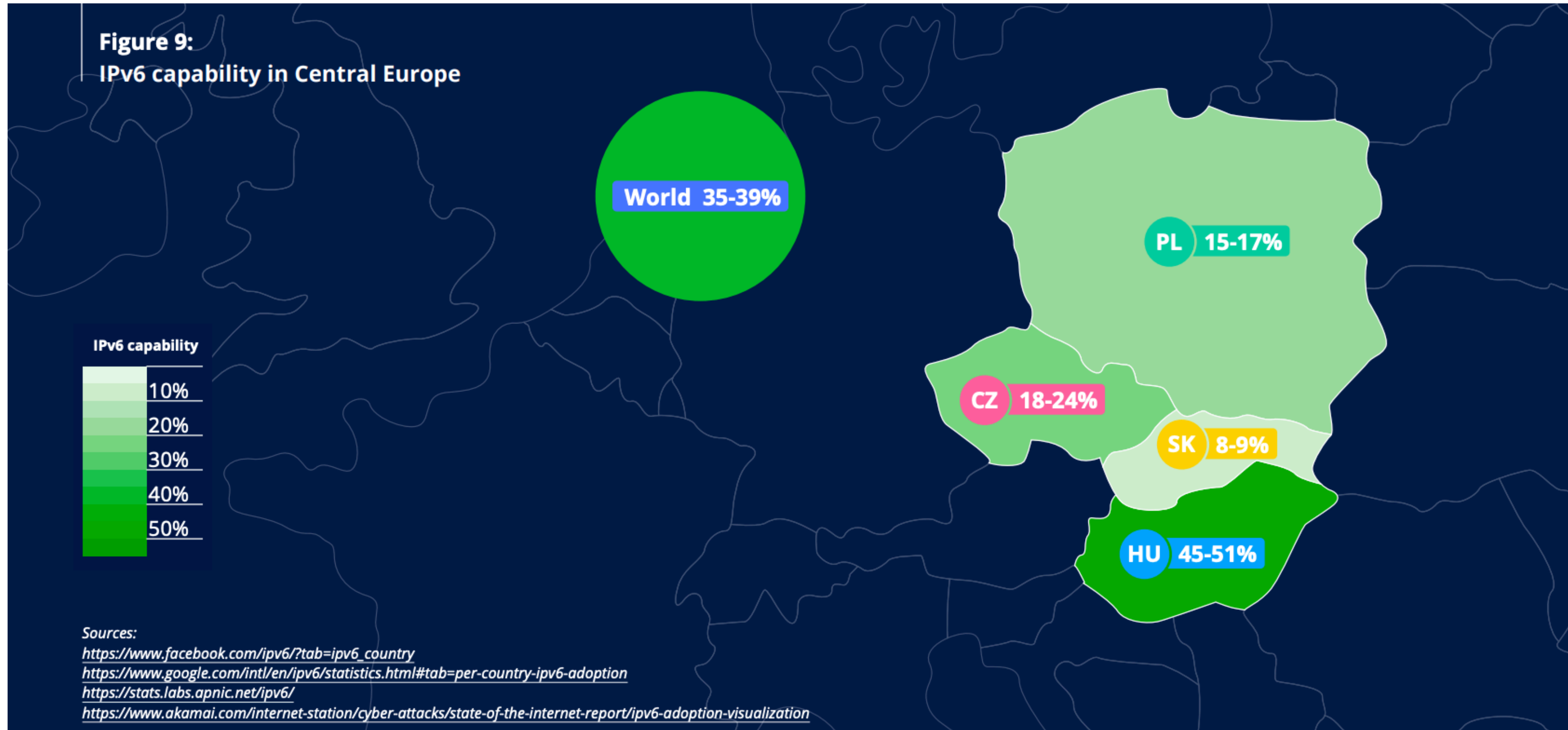
On to IPv6 - Members

- Members can receive their first IPv6 allocation if:

    - You confirm you have a plan for making assignments within two years

- Allocation size

    - The minimum allocation size is /32

    - Can be extended up to /29 without additional justification

    - You must provide technical documentation if you request an allocation that is larger than /29 or a subsequent allocation

- Address space from allocations can be further assigned to third parties (your customers)
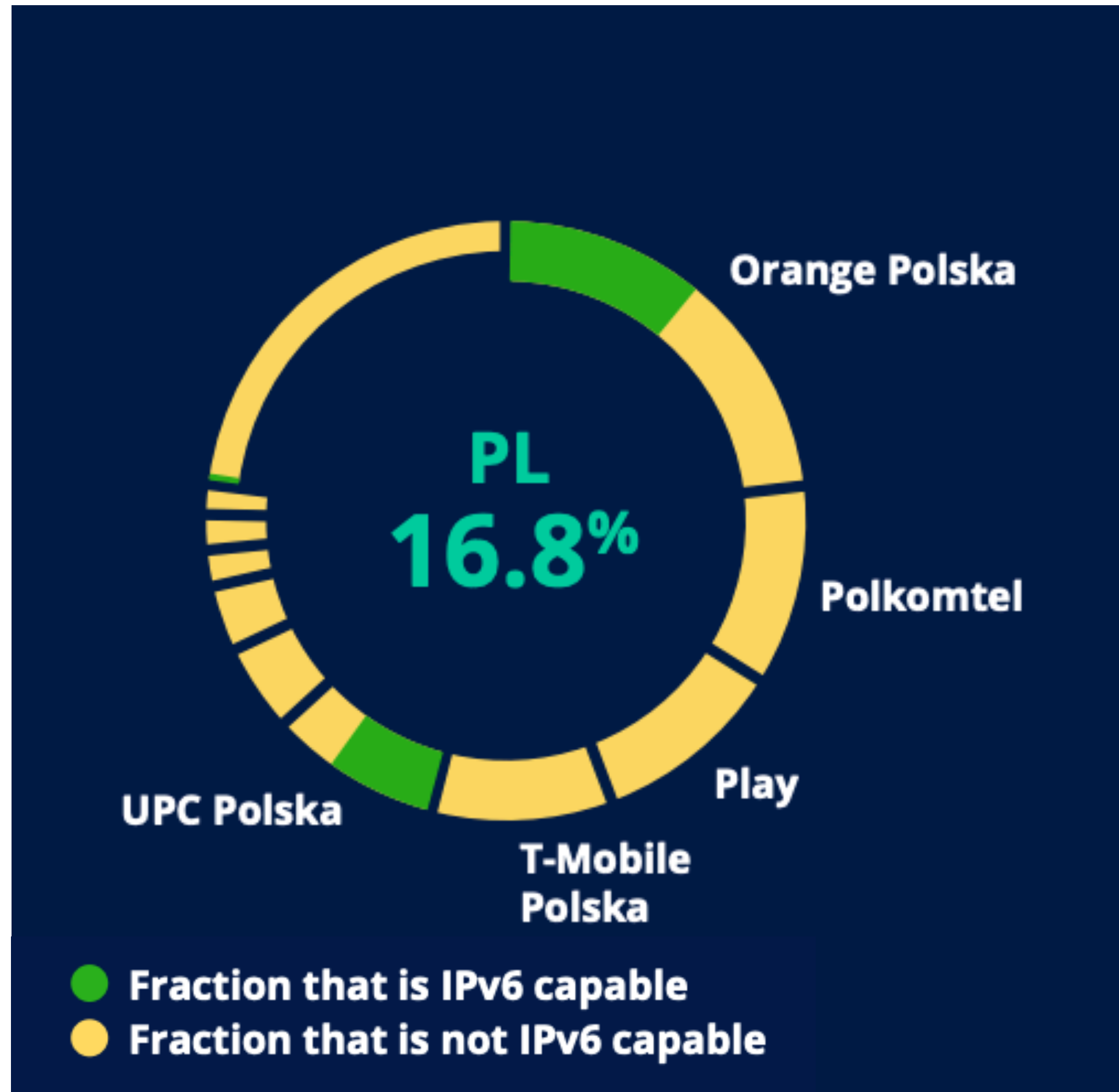
On to IPv6 - Non-Members

- Non-members can request an IPv6 Provider Independent (PI) assignment for their own infrastructure

  - The minimum size of the assignment is /48

  - You must provide technical documentation if you request an assignment that is larger than /48

  - The PI assignment cannot be further sub-assigned to other organisations

IPv6 Capability in Poland

Figure 9:
IPv6 capability in Central Europe

World 35-39%

PL 15-17%

CZ 18-24%

SK 8-9%

HU 45-51%

IPv6 capability
10%
20%
30%
40%
50%

Sources:
https://www.facebook.com/ipv6/?tab=ipv6_country
https://www.google.com/intl/en/ipv6/statistics.html#tab=per-country-ipv6-adoption
https://stats.labs.apnic.net/ipv6/
https://www.akamai.com/internet-station/cyber-attacks/state-of-the-internet-report/ipv6-adoption-visualization

IPv6 Capability by Network

PL
16.8%

Orange Polska

Polkomtel

Play

T-Mobile Polska

UPC Polska

- Fraction that is IPv6 capable
- Fraction that is not IPv6 capable

Do You Want to Know More?

- Talk to me at the meeting

- Use our free learning opportunities: https://learning.ripe.net/w/upcoming/

- Read the RIPE NCC Internet Country Report

- Come to RIPE 88 in Krakow

RIPE NCC
Internet Country Report: Central Europe

June 2023

Join us at

RIPE 88

Kraków, Poland
20 – 24 May 2024

Questions ?