IPv6 Deployment Survey

Based on responses during June 2010

RIPE NCC Meeting, Rome 15 November 2010

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The Global IPv6 Deployment Monitoring Survey

- Aim is to establish the best possible comprehensive view of:
  - present IPv6 penetration,
  - perceived bottlenecks, and
  - current future plans of IPv6 deployment
- Best way to establish this is to ask the Internet providers and users, basically: the RIR communities around the world
- By asking annually – shift in mindsets and business plans can be measured

Sponsored by the European Commission

European Action Plan to prevent IPv4 shortages to lead to:

- Slow down of Internet development

- Distortion of the market

- Negative effect on innovation

This presentation is the summary report on 2010 results

For RIPE NCC, it includes a comparison with 2009 survey results

RIPE NCC Respondents

- In 2010, the RIPE NCC community generated 769 respondents. This is 159 more than 2009 (610 respondents).

- Participation is largely comparable to last year for most counts (and is therefore not explicitly presented)
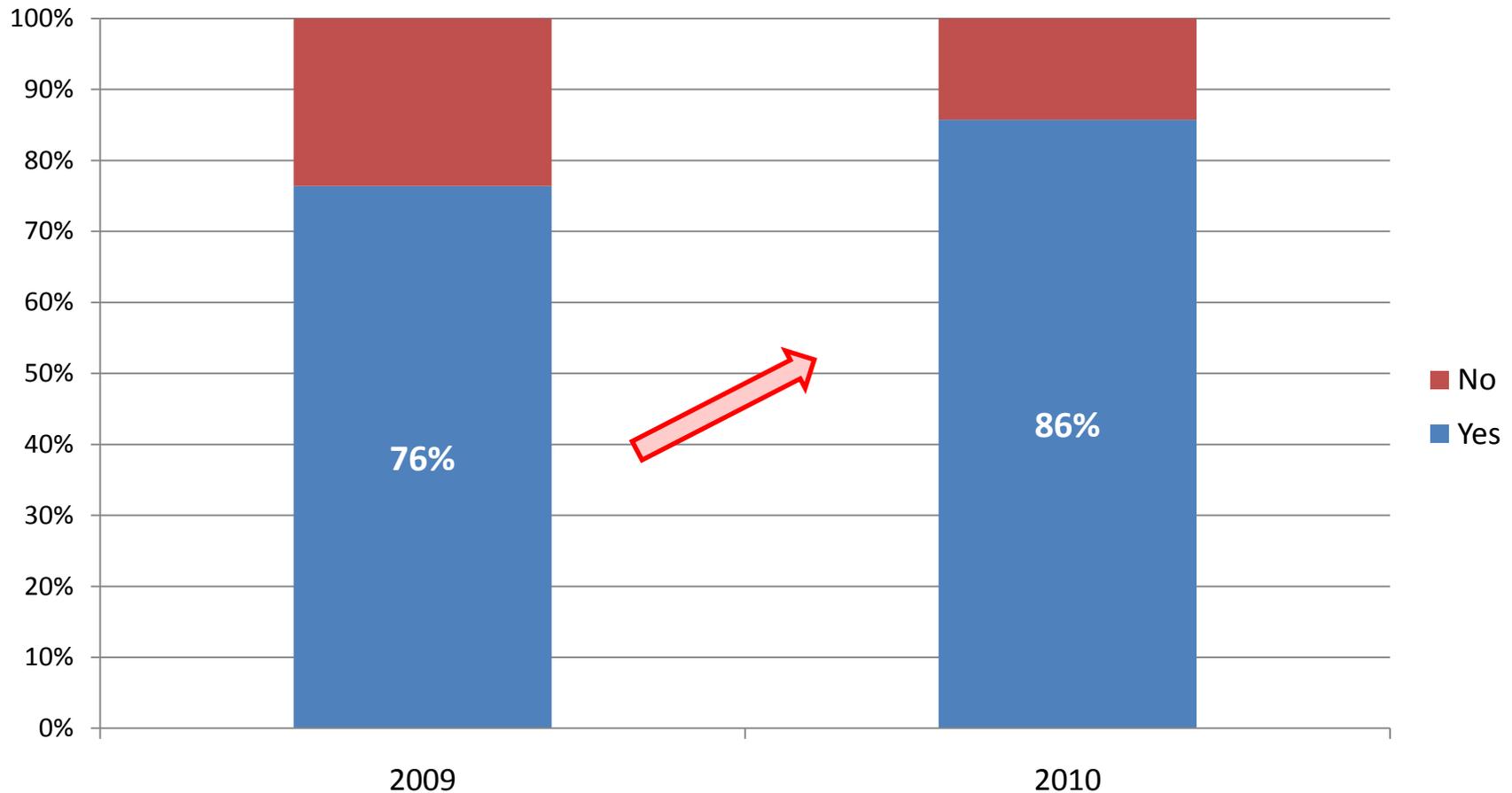
More customers use IPv6 connectivity in 2010 (ISPs only)

■ 2009 ■ 2010

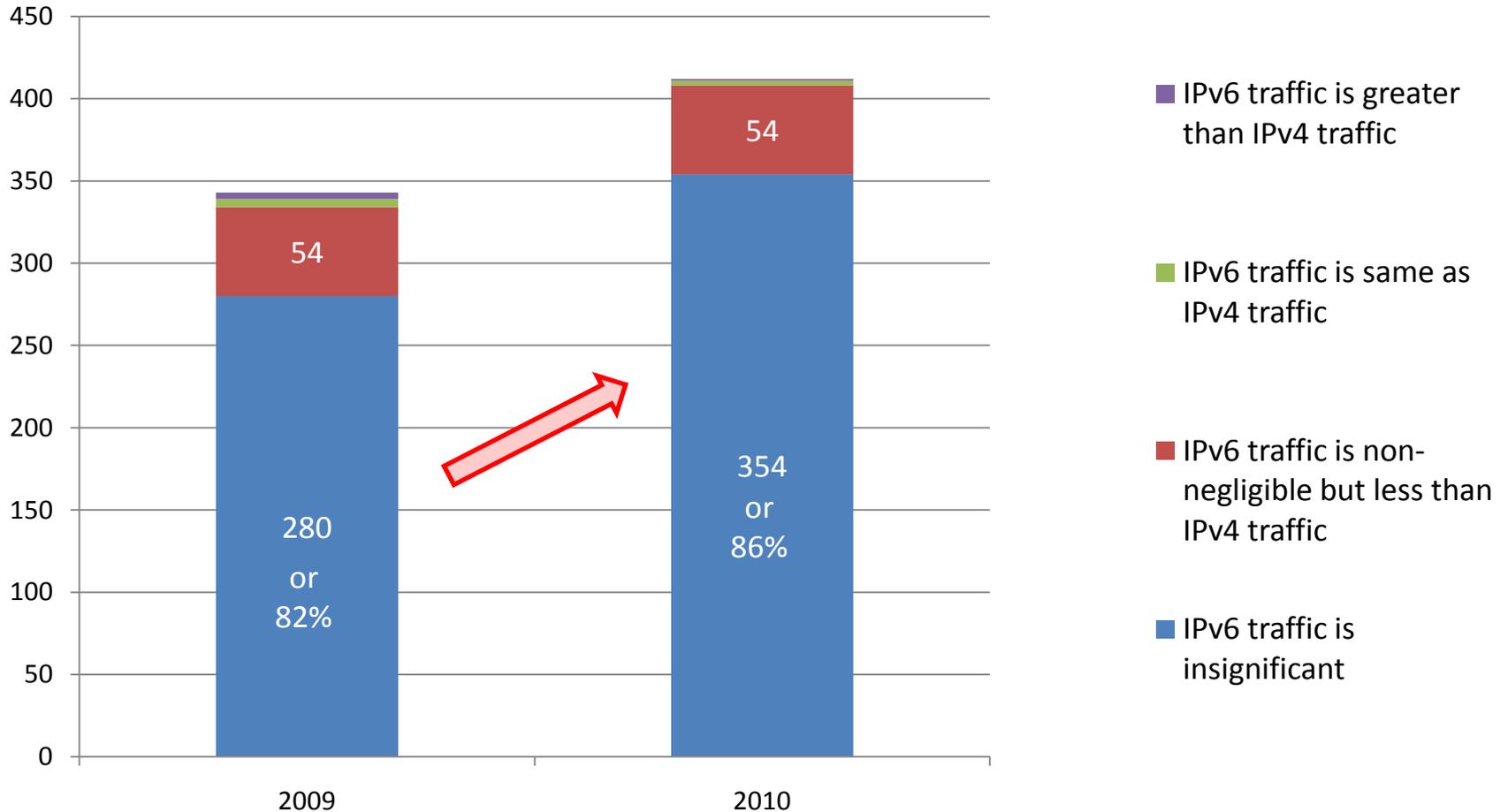|	0%	0% - 0.5%	0.5% - 1.0%	1.0% - 2.0%	More
2009	66%	26%	3%	3%	3%
2010	58%	31%	5%	2%	4%
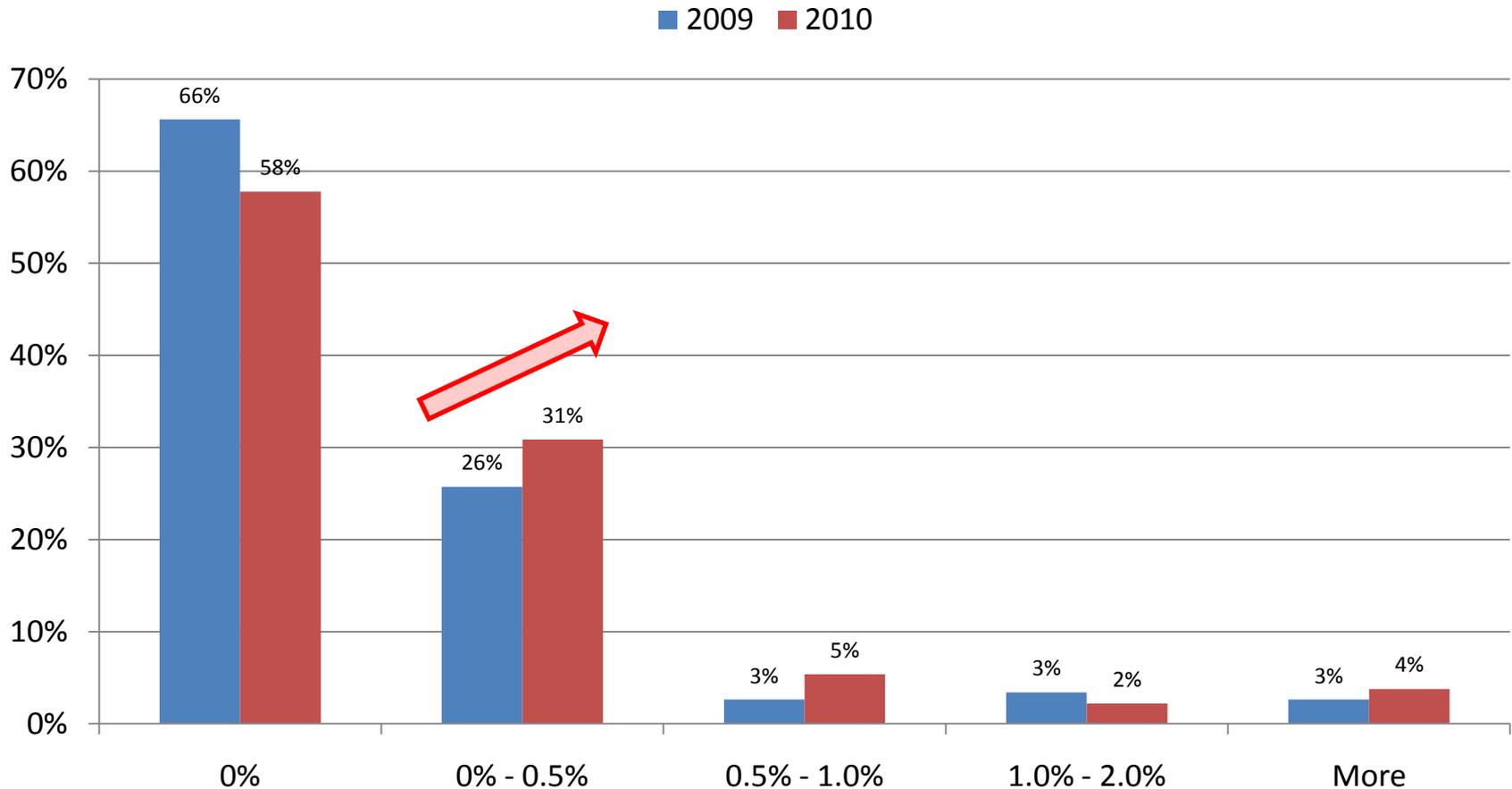
More ISPs consider promoting IPv6 uptake to their customers in 2010
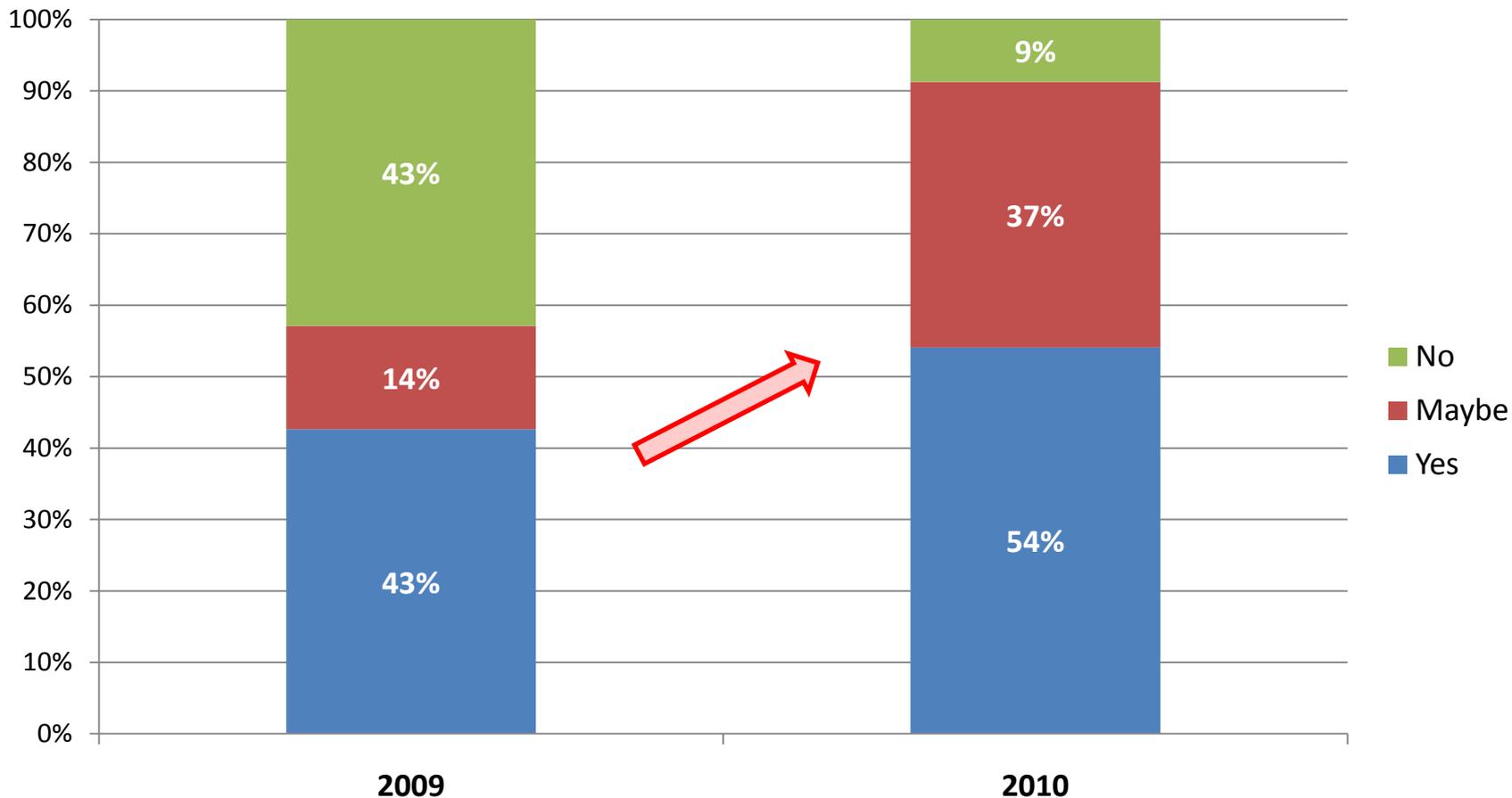
More organization have/considers having an IPv6 allocation and/or assignment

More organizations with IPv6 in production, yet still mostly insignificant

Legend:
- IPv6 traffic is greater than IPv4 traffic
- IPv6 traffic is same as IPv4 traffic
- IPv6 traffic is non-negligible but less than IPv4 traffic
- IPv6 traffic is insignificant

2009: 280 or 82%, 54
2010: 354 or 86%, 54

More have IPv6 implementation (plans)

GNKS/TNO Global IPv6 Deployment Monitoring Survey – RIPE NCC 2009/2010 - contact: info@gnksconsult.com
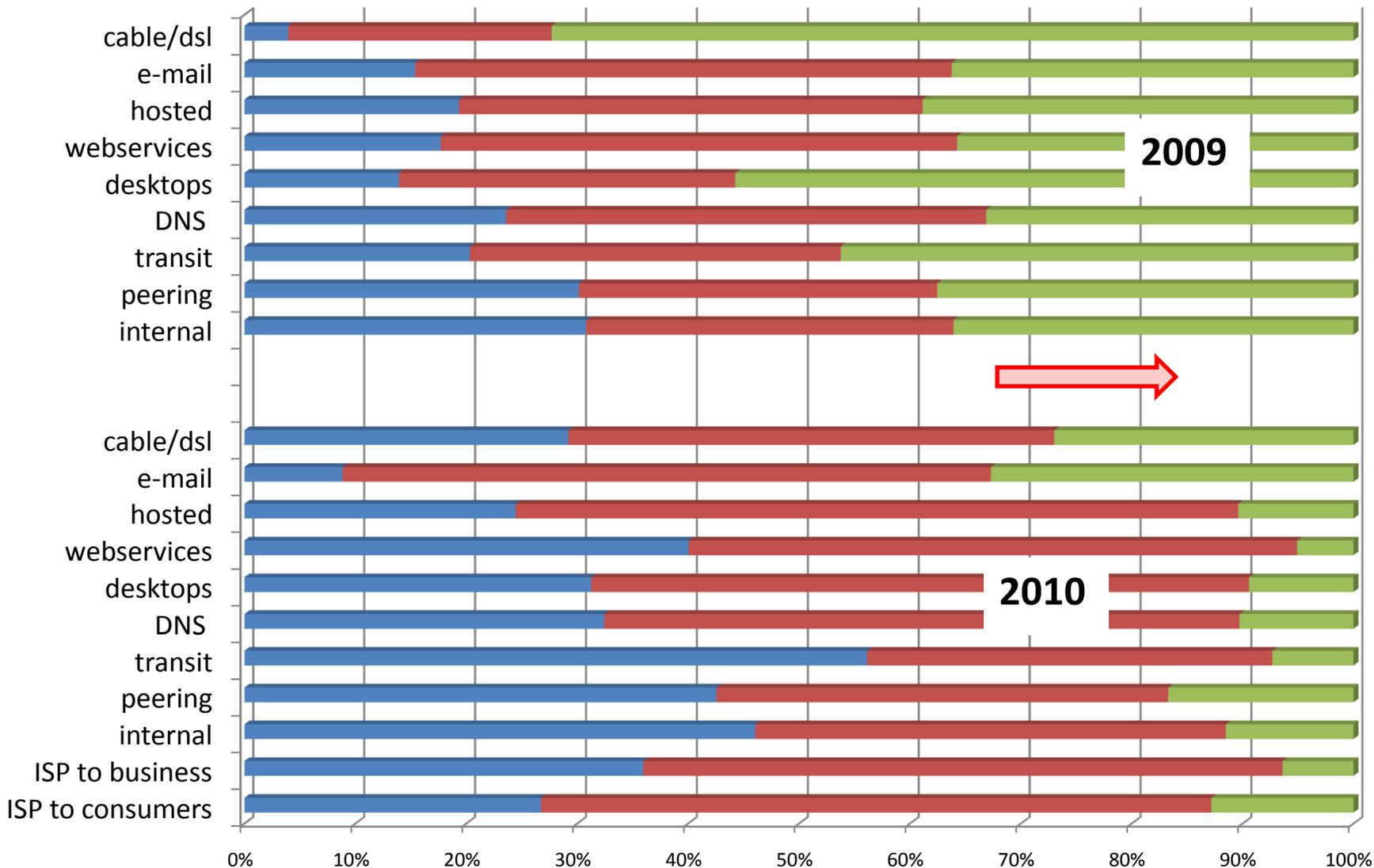
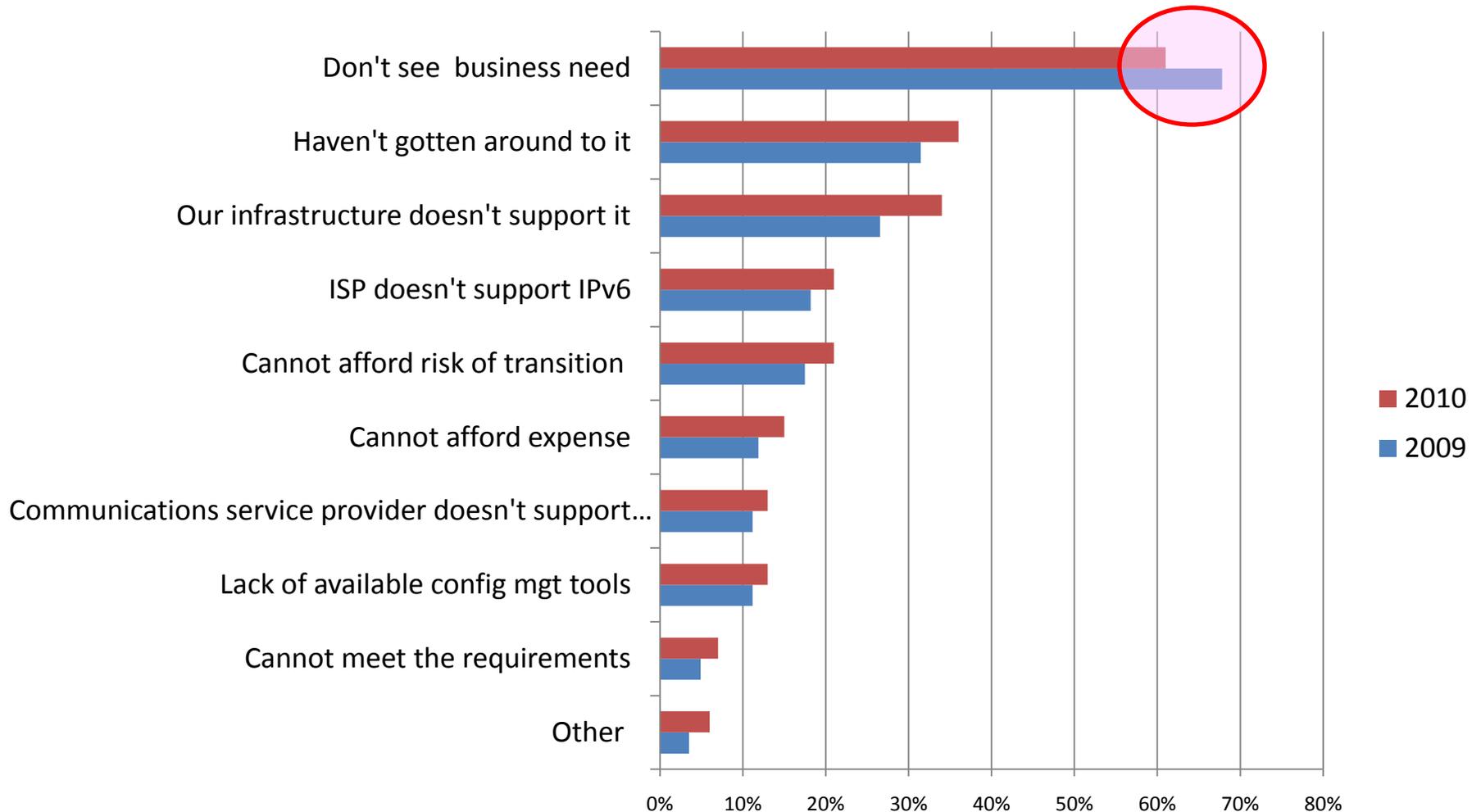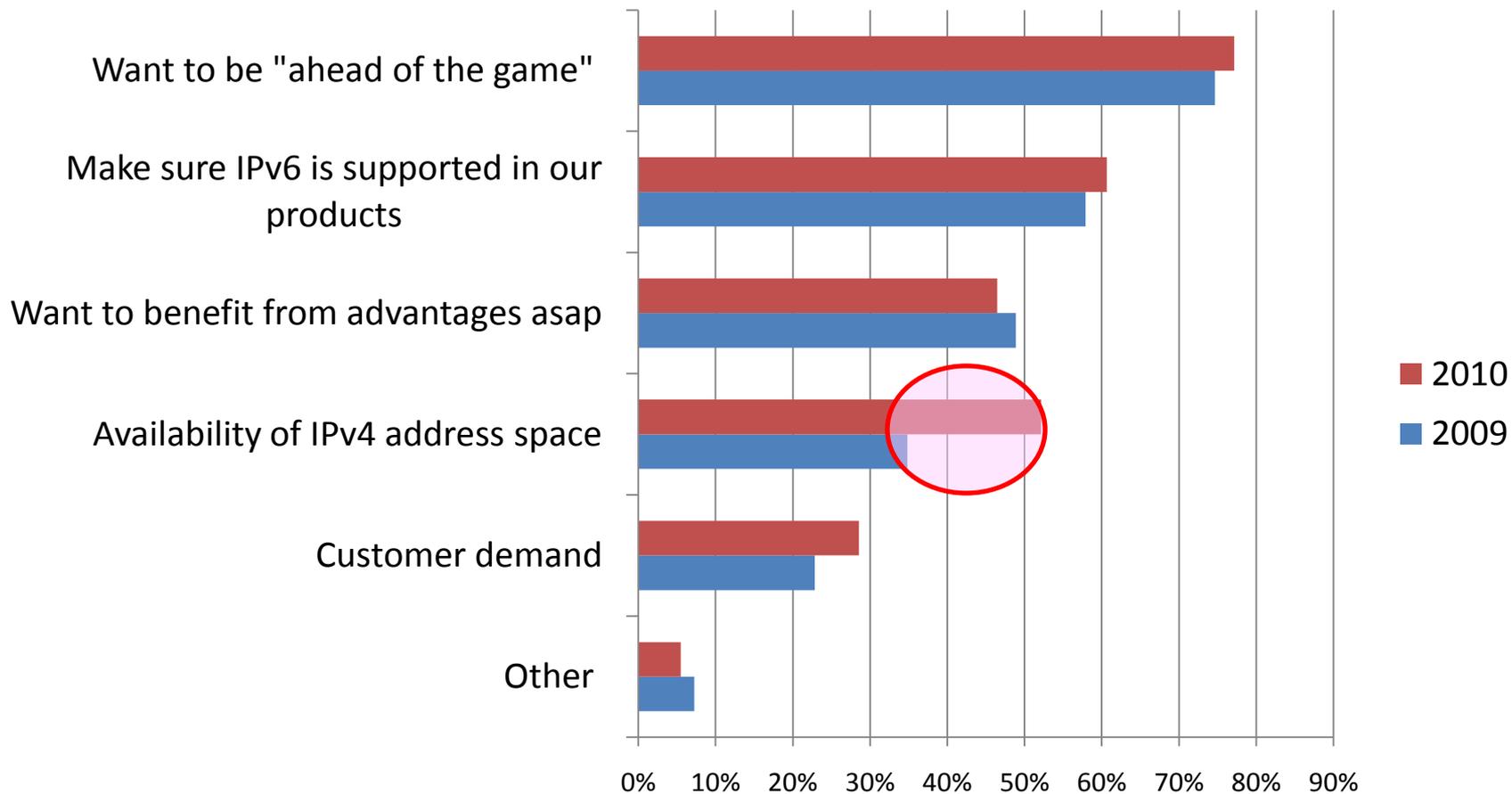# Attitude, perception and experience with IPv6

GNKS/TNO surveys in collaboration with RIPE NCC 2009 and 2010

Why doesn't your organization consider having an IPv6 allocation cq assignment?

Chart legend:
- 2010
- 2009

Categories (top to bottom):
- Don't see business need
- Haven't gotten around to it
- Our infrastructure doesn't support it
- ISP doesn't support IPv6
- Cannot afford risk of transition
- Cannot afford expense
- Communications service provider doesn't support…
- Lack of available config mgt tools
- Cannot meet the requirements
- Other

X-axis: 0% 10% 20% 30% 40% 50% 60% 70% 80%

Main motivations to consider having IPv6 allocation cq assignment

The biggest hurdles, compared

Those who implement or plan to implement

Those who are not ready to go for IPv6

Legend: 2010, 2009
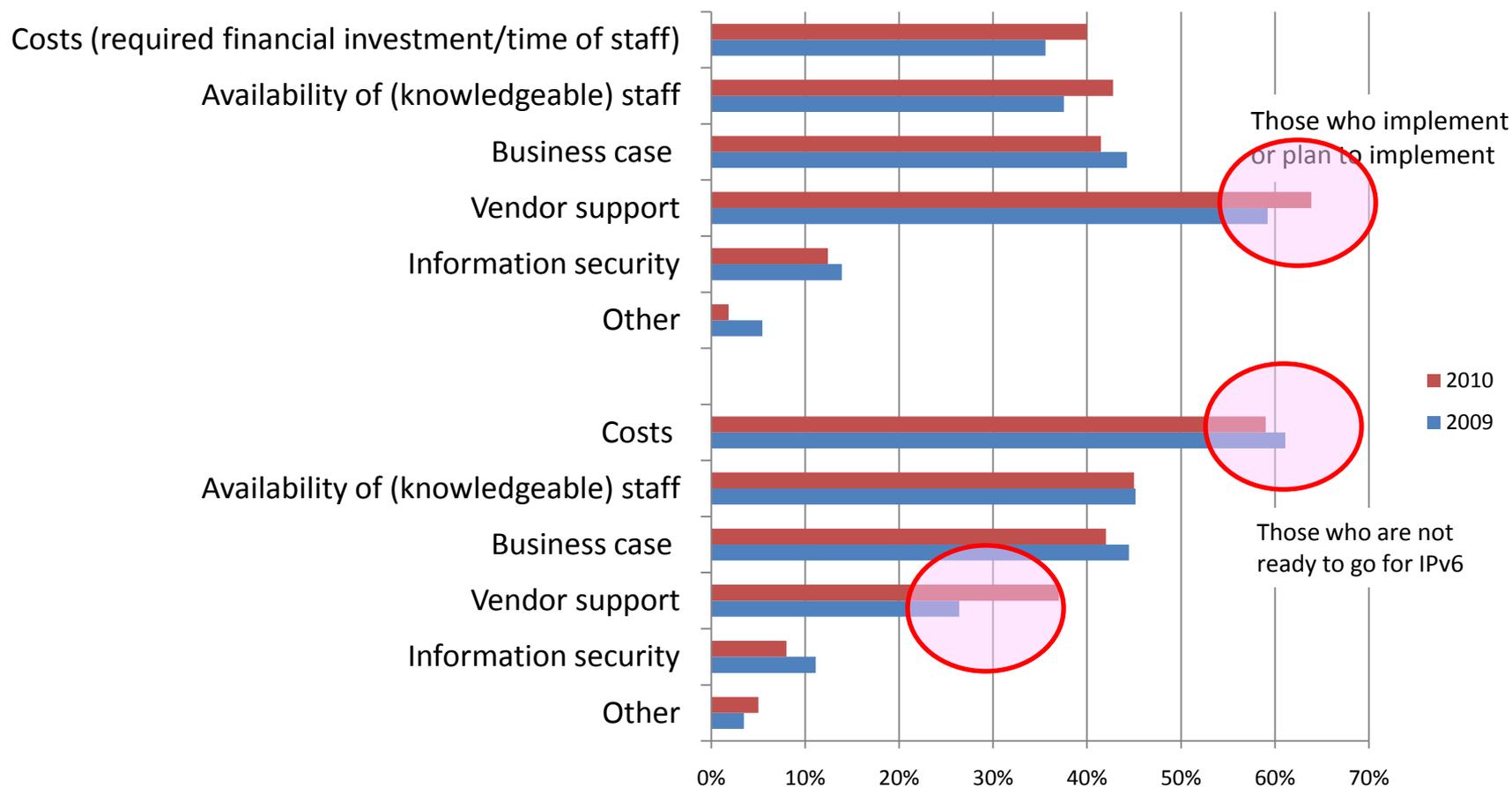
Interviews confirm vendor as major bottleneck in practice

- Vendors need operational testing to mature their products
  - still, product-specific bugs are regularly encountered
- IPv6 capability of RG's, Load Balancers, in-house built applications, DSLAM's (IPoE), mobile terminals, …
- Need more BCP´s for selecting migration techniques (e.g. CGN and v4-v6 translation)
- Business focus mainly on internet services: no priority for triple play over IPv6
- For some services/products/content/networks organizations depend on other departments or companies
- Large part of installed base is IPv4 legacy → replacement
- Lack of content available over IPv6

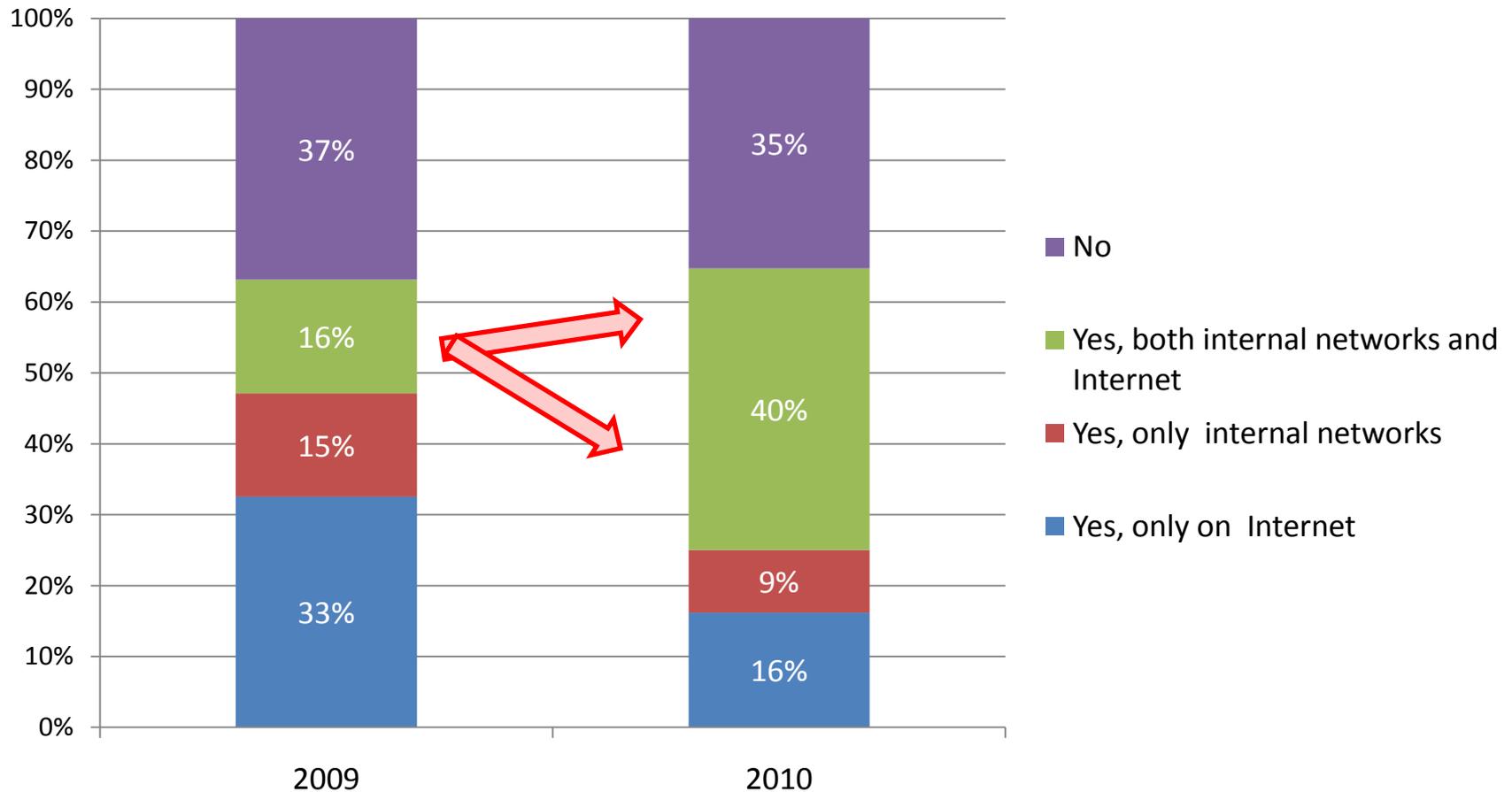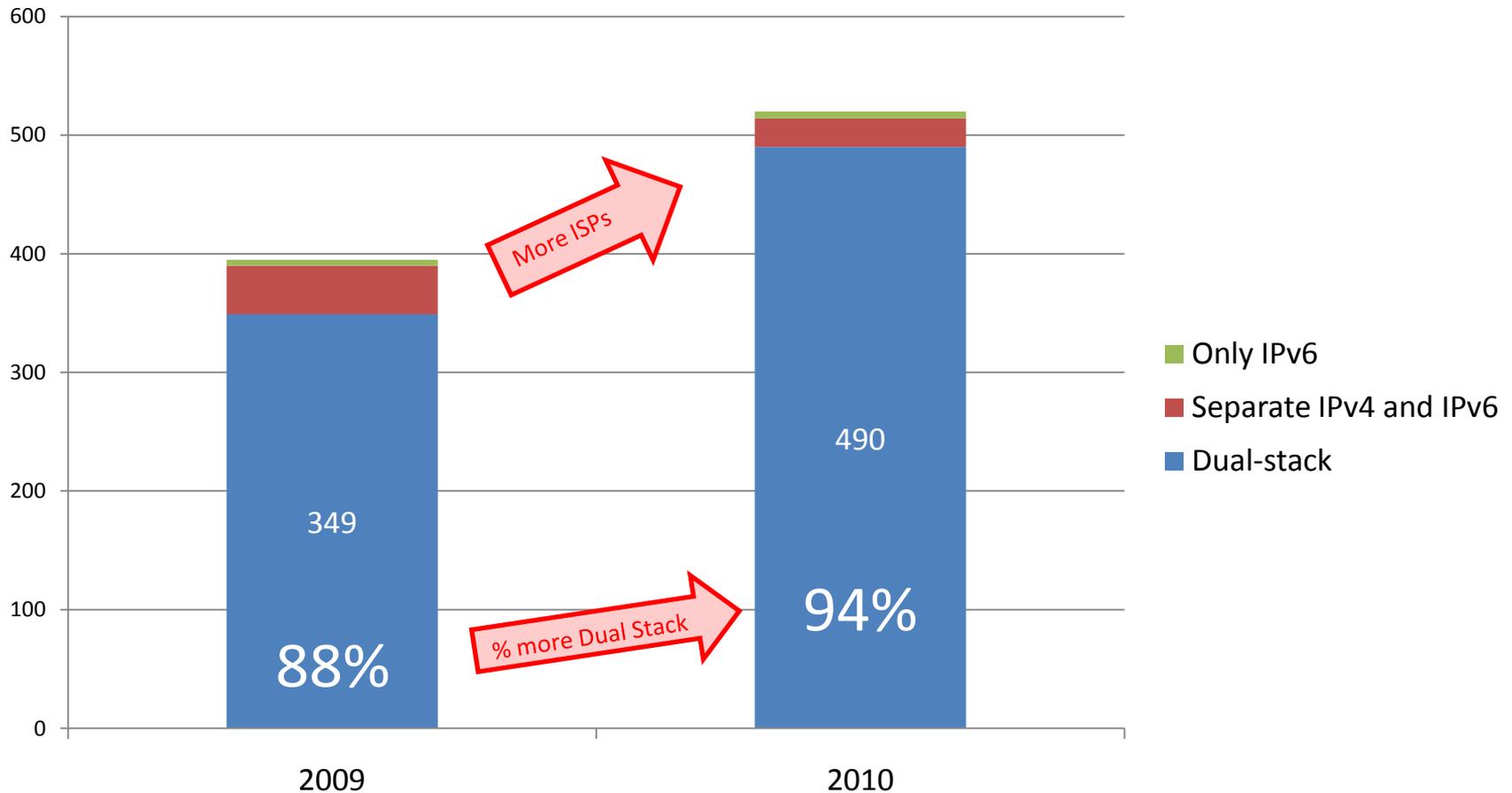# The biggest problems with IPv6 in production?
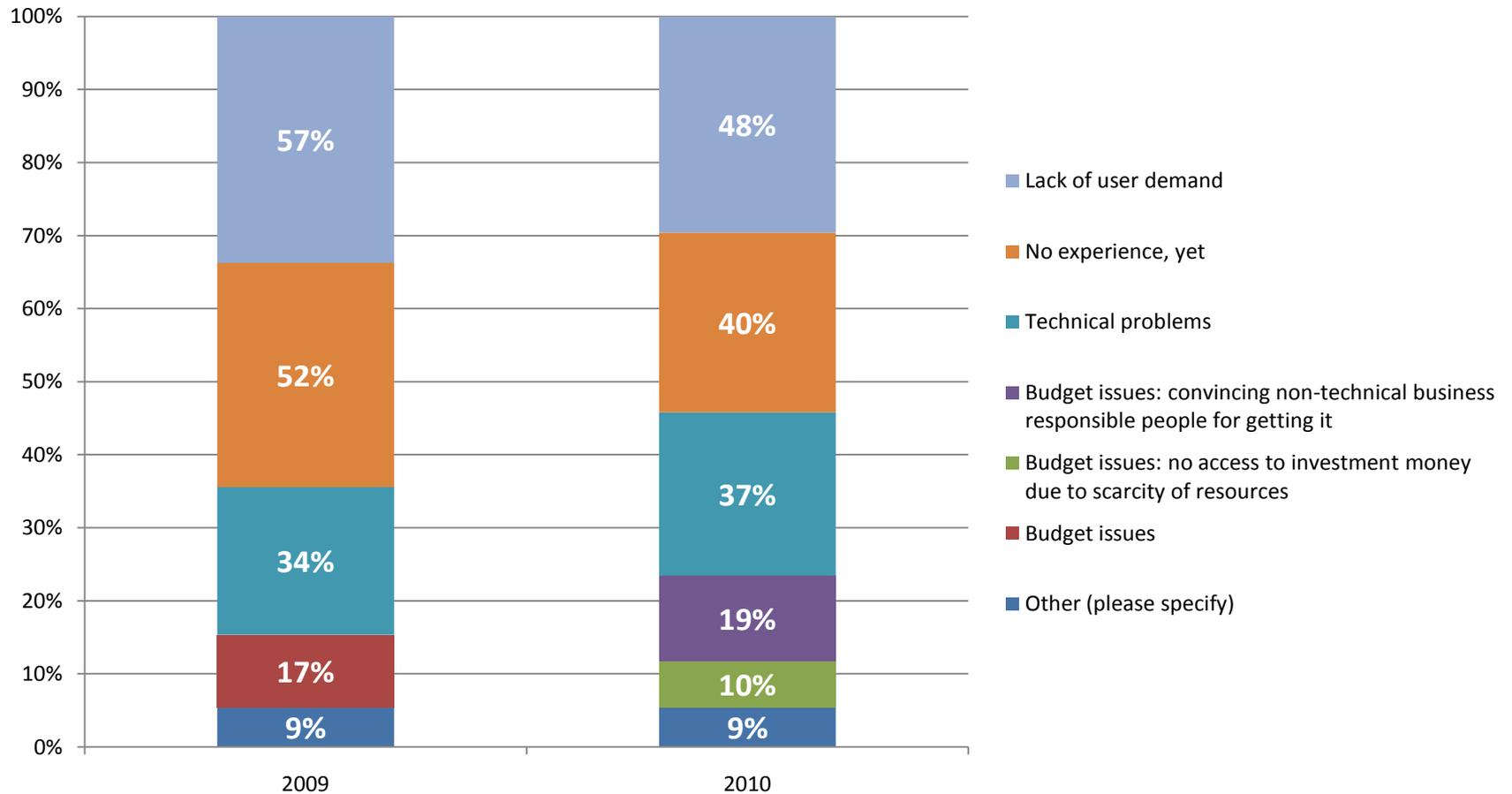
Implementation of IPv6

GNKS/TNO surveys in collaboration with RIPE NCC 2009 and 2010

Does your organization have an IPv6 presence ?

Q18. Please indicate whether your organization's IPv6 setup uses:

Legend:
- Only IPv6 (green)
- Separate IPv4 and IPv6 (red)
- Dual-stack (blue)

2009: 349, 88%
2010: 490, 94%

More ISPs

% more Dual Stack

Q19. Describe the nature of your organization's IPv6 production services.

Legend:
- Other (please specify)
- Address Translation (like NAT)
- Automatic tunneling
- Tunneled IPv6 (excluding automatic tunneling)
- Native IPv6

Chart data:
- 2009: 239 (78%)
- 2010: 385 (83%)

More ISPs

% more native
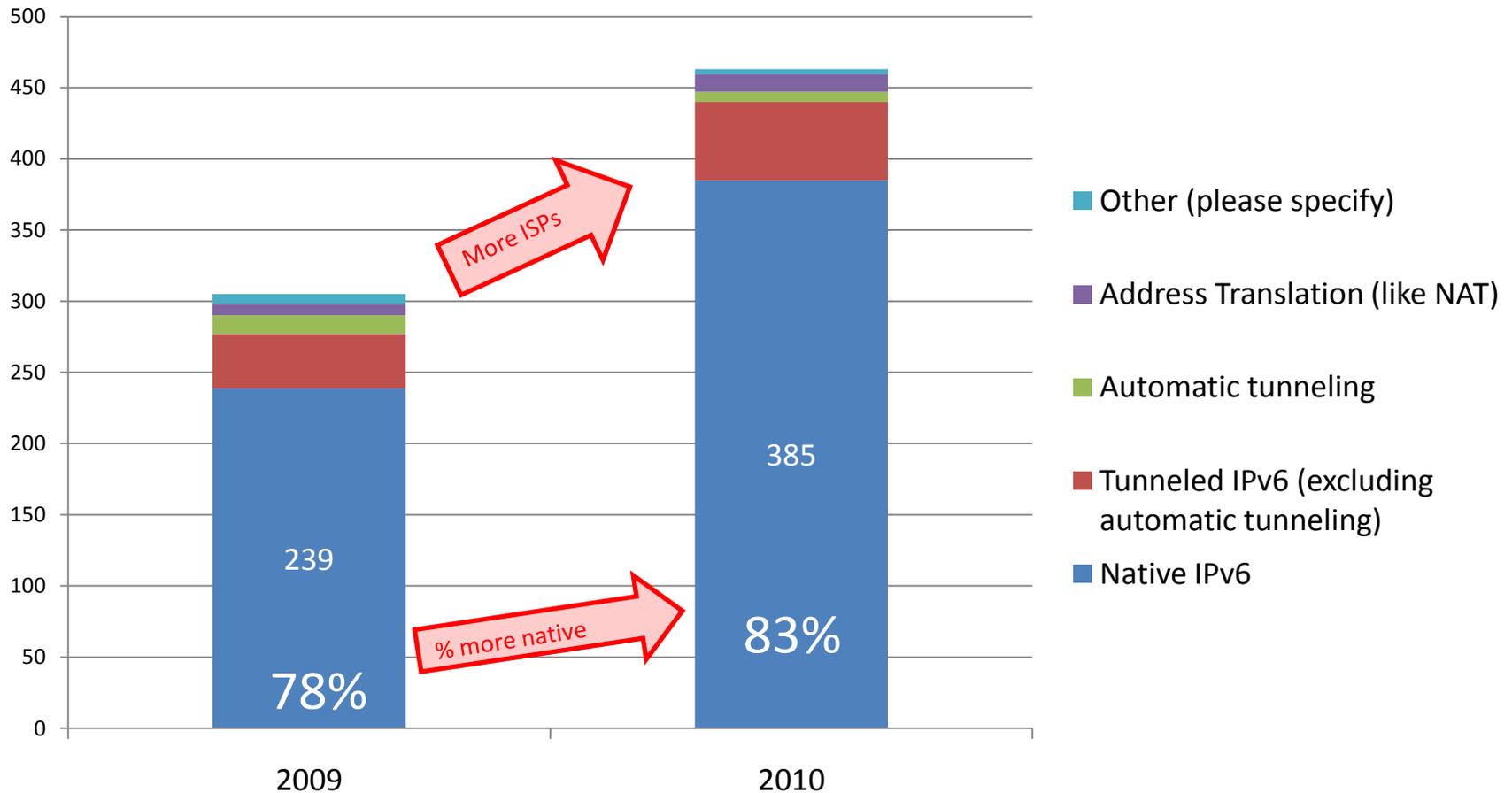
Use measurements

TNO measurements supported by
RIPE NCC 2010

IPv6 deployment for the EU

Weighted IPv6 deployment for all sites in the European Union (Fraction U)
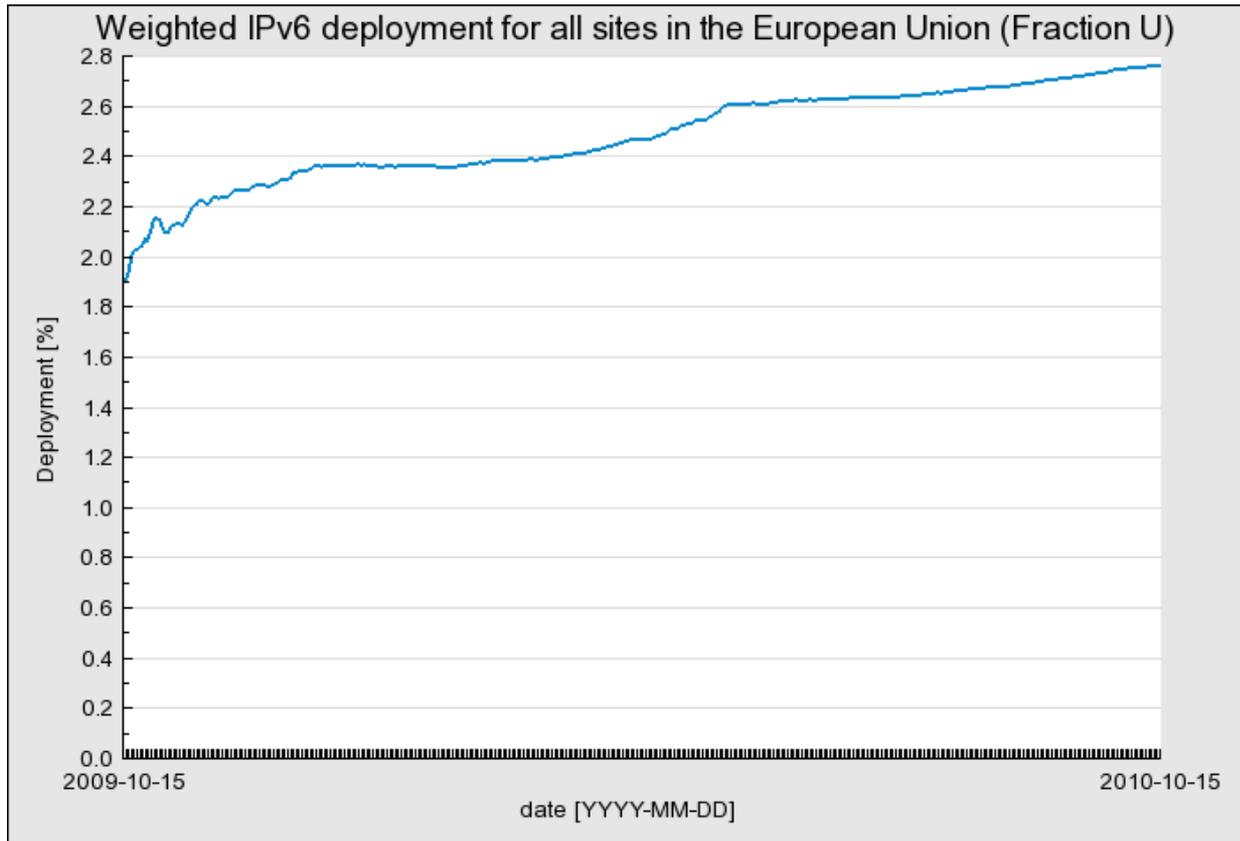
- Weighted results using internet penetration per country
- 0.6% increase in IPv6 deployment
- Intermediate data set also analyzed with RIPE's tools

IPv6 deployment monitoring

Number of websites of ALEXA top 500 per country reachable on IPv6 (total of 13500 websites analyzed)

IPv6 deployment in Europe (% IPv6 websites)
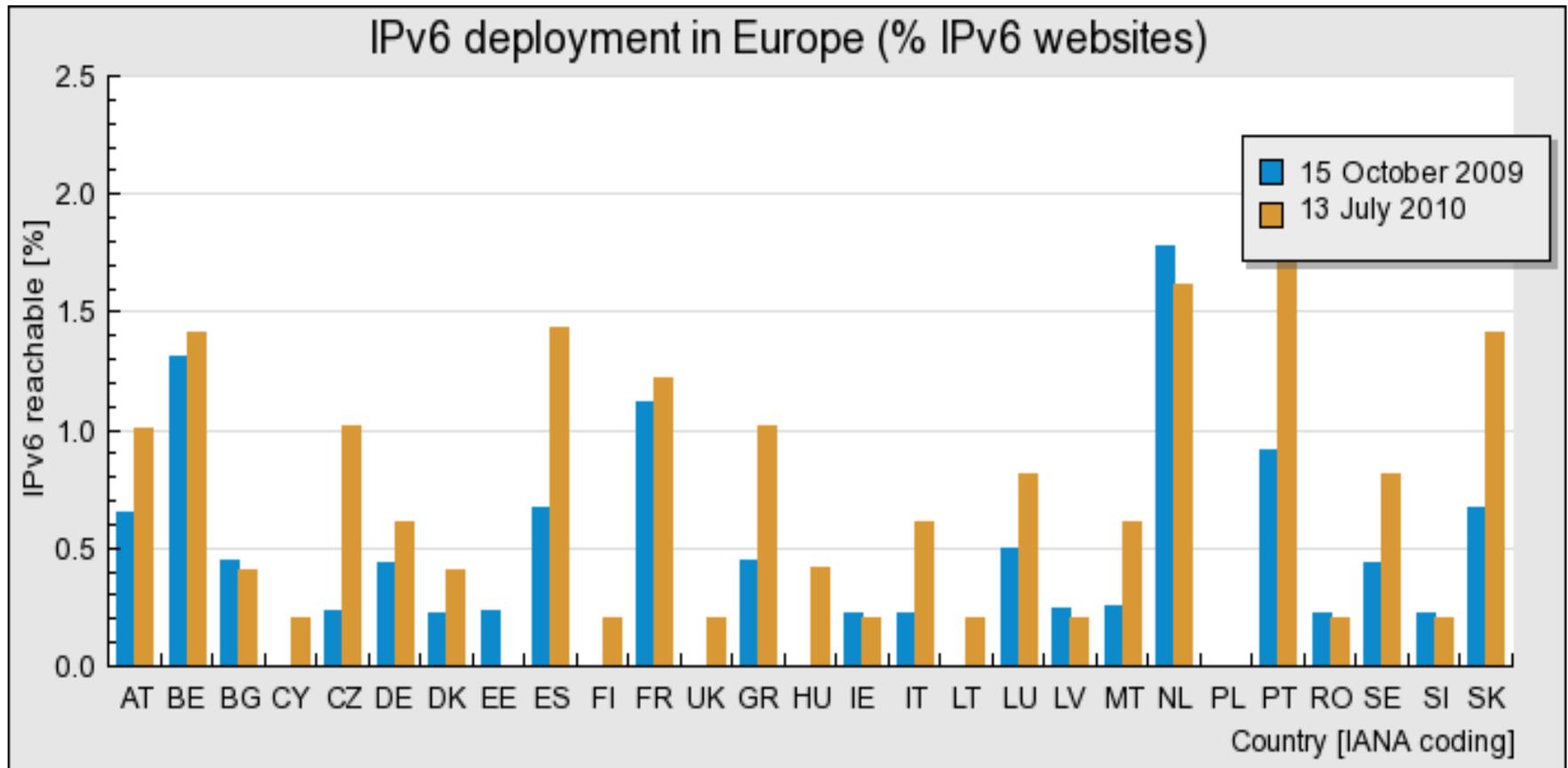
Headline conclusions

GNKS/TNO surveys in collaboration with RIPE NCC 2009 and 2010

v1

IPv6 experience has grown

More ISPs take IPv6 seriously in 2010

IPv6 or not

- For those who are still waiting before acting, lack of business need went down as reason from 68% in 2009 to 61% in 2010

- For those who started to act, future shortage of IPv4 addresses has become a much more important driver (35% in 2009 to 52% in 2010)

- Lack of vendor support is considered more of a hurdle in 2010 than in 2009

- The problems related to getting the budget has grown (17% to 29%). Lack of experience with IPv6 has become clearly less important (52% to 40%)

Setup of IPv6

Even more …

- … on both internal and external networks
  - 16% in 2009 to 40% in 2010
- … dual stack
  - 88% in 2009 to 94% in 2010
- … native
  - 78% in 2009 to 84% in 2010

Overall Conclusion:

1 - in the RIPE NCC region, experience with IPv6 has grown a lot over the last year, yet real use has not grown that much, yet.

2 - Vendors, gear up! ISPs are ready to go and need good equipment.

We thank all respondents for their contributions !

- Globally, 69% indicated their willingness to collaborate to further follow up questions
- Globally, 95% indicated their willingness to respond again, next year

IPv6
http://www.ipv6monitoring.eu/

European Commission: next steps…

- Gather with interested stakeholders to follow up the piloting of IPv6 in relevant EU programmes. The objective will be to encourage and support the deployment of IPv6 in Member States, through activities that might include:

  - Show cases

  - Training

  - Exchange of best practices

  - Applications and services

  - …

http://ec.europa.eu/information_society/policy/ipv6/index_en.htm

IPv6 | Europa - Information Society

Page   Tools

Europe's Information Society
Thematic Portal

Important legal notice

en

European Commission > Information Society

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Action Plan

Events

POLICY :: IPv6

IPv6 has reached DG INFSO!

On Monday 26th April, DGINFSO has aunched an IPv6 trial in Beaulieu 25.

Native IPv6 WIFI access will be possible from BU25 S1, as well as access to the DGINFSO web pages of EUROPA for IPv6 users from all over the world!

Please click here for IPv6 connection

IPv6: Enabling the Information Society

All languages have syntactic rules. Those rules govern the structure of sentences and

Highlights

- Workshop on IPv6: Upgrade for Europe. **Presentations available.**
- **Study Monitoring IPv6**
- **Study IPv6 Curricula**
- **Study on IPv6 security models**

News

- **ICT 2010: Deadline extended - call for exhibition proposals** (29/03/10)
- **Call for Proposals for Networking sessions at ICT 2010** (17/03/10)
- **Radio spectrum: public consultation on future policy; 22-23 March Summit** (04/03/10)

All news...

Funding

- No funding opportunities available for the moment.

Next Events

- **Promoting Western Balkan research excellence in the fields of eHealth and Network & Service Infrastructures** (Skopje, F.Y.R of Macedonia, 10 May 2010)

Done

Local intranet

100%

« IPv6 The way forward » conference 14 December in Ghent

The 14 December 2010 in Ghent Belgium (30 minutes from Brussels airport by train).

http://ipv6-ghent.fi-week.eu

http://www.ipv6monitoring.eu/

Questions regarding the survey and
this summary presentation:

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