GNKS Consult

# IPv6 Deployment Survey

Based on responses from the global Regional Internet Registry (RIR) community during June 2012

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Maarten Botterman
maarten@gnksconsult.com

# Setting the scene

- The Internet has become a fundamental infrastructure, worldwide, for economic and social activity, and its usage continues to grow exponentially:
    - More users
    - New applications (eg mobile, Internet of Things etc.)

- The transition from IPv4 to IPv6 is the only sustainable option in the long run.
- A smooth transition requires understanding the challenges and a timely start.

# Global IPv6 Deployment Monitoring Survey

- Aim is to establish the best possible comprehensive view of present IPv6 penetration and 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
- ARIN carried out such a survey with its members in March 2008, a starting point for the currently proposed survey
- RIPE NCC and APNIC carried out this same survey in 2009. In 2010, 2011 and 2012, all RIRs participated to the survey making it truly global:
  - Survey was prepared and carried out by GNKS in close collaboration with RIPE AFRINIC, APNIC, ARIN, LACNIC and RIPE NCC
  - Survey was kept short and focused on essentials. Changes to the survey were kept to a minimum and are taken into account in the analysis
  - Privacy is guaranteed
- Every year, the last question is whether the survey should take place again next year. In 2009, 2010, 2011 and 2012 more than 90% of the respondents said “yes”

# Summary report on 2012 results

1 – respondents' profile

2 – experience and assumptions

3 - planning

# Section 1 – Respondents' profile

- 1443 people responded to the survey. This is 13% less than in 2011. When considering the difference in responses between 2012 and 2011, the following differences are noticable:
  - Less ISPs amongst the respondents (39% in 2012 and 53% in 2011)
  - Relatively many respondents from the top 3 countries
  - Other factors (e.g. regions, size, profit status, remain comparable)

# Q1 - Response to questionnaire

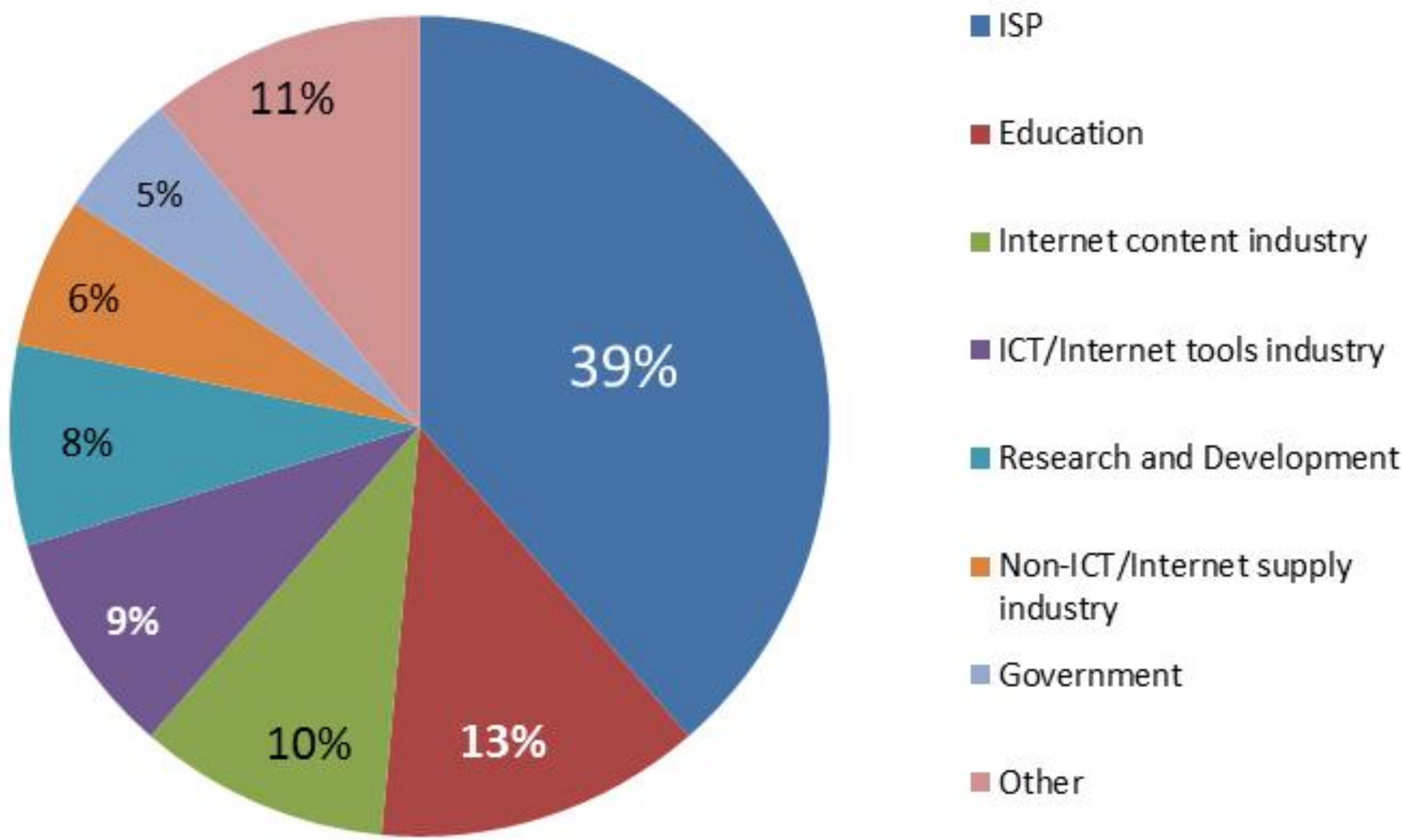
- 1443 respondents from 105 countries/economies
  - 15 countries > 29 respondents = 953
  - 22 countries 7< x < 30 respondents = 306
  - 29 countries 3< x < 8 respondents = 110
  - 16 countries with 2 or 3 respondents = 36
  - 38 countries with 1 respondent = 38
- Top 10 respondent countries 2011

| 1. Germany | 341 | 6. United Kingdom | 35 |
|---|---|---|---|
| 2. USA | 306 | 7. Australia | 33 |
| 3. Taiwan | 104 | 8. Canada* | 32 |
| 4. Netherlands | 37 | 9. Russia | 30 |
| 5. Switzerland* | 35 | 10. France | 27 |

* New in Top 10

source: GNKS 2012

# Q2 - Respondent categories



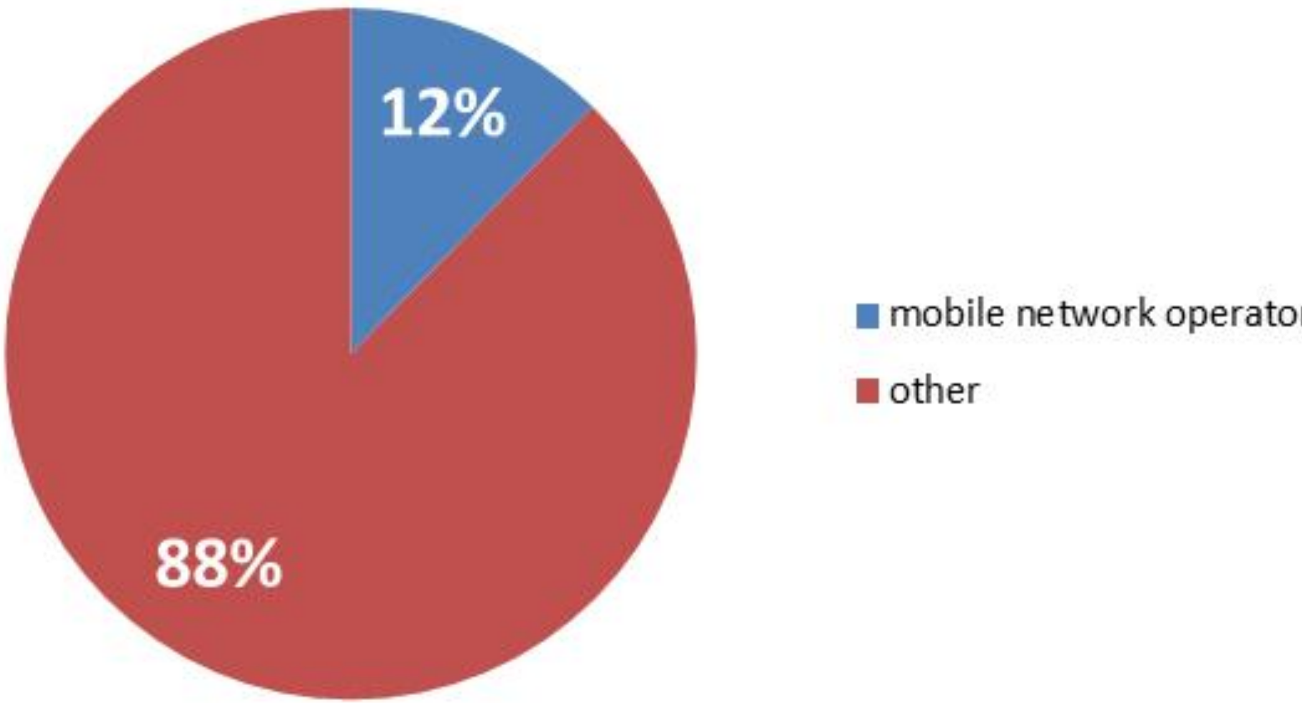

n=1443

*less ISPs as compared to 2011 (53%), further similar to 2011



source: GNKS 2012

# Q3 – Are you a mobile network operator ?

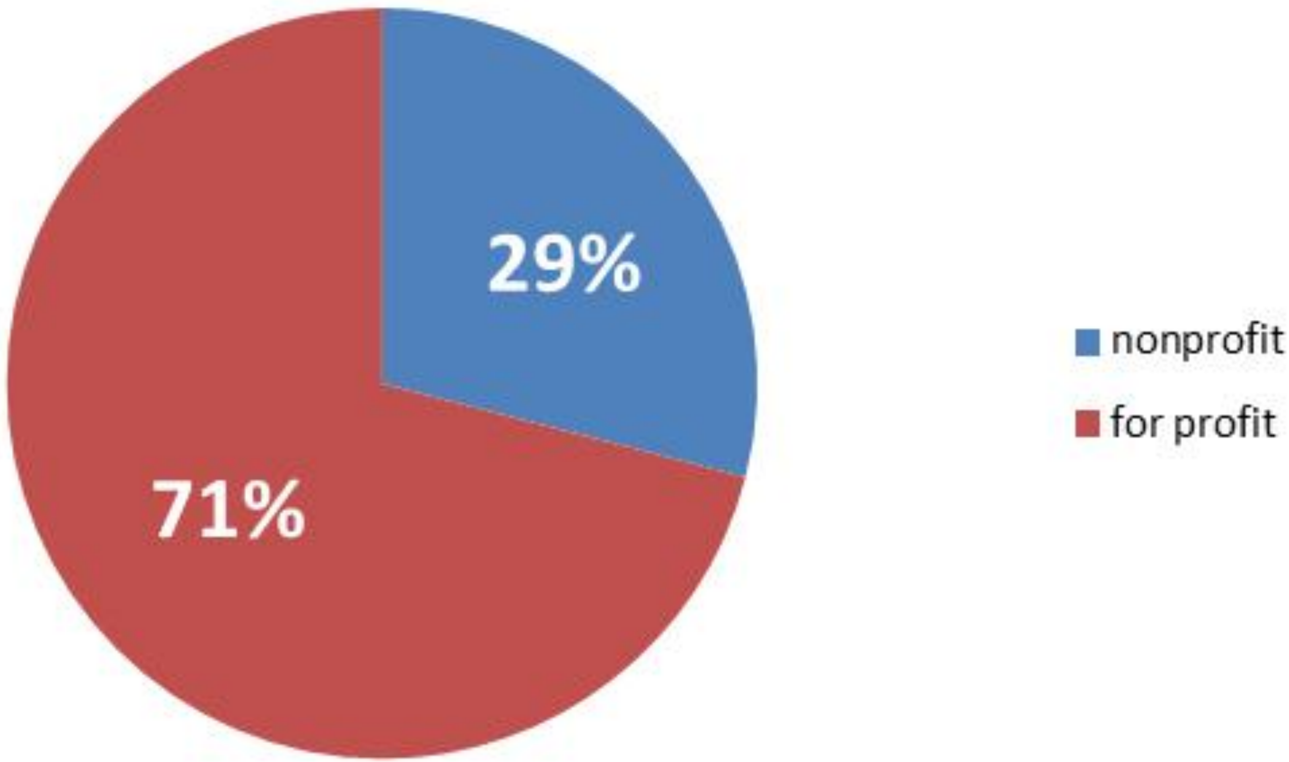



n=1443

*new question in 2012 hence no comparable data

source: GNKS 2012

# Q4 – Financial status

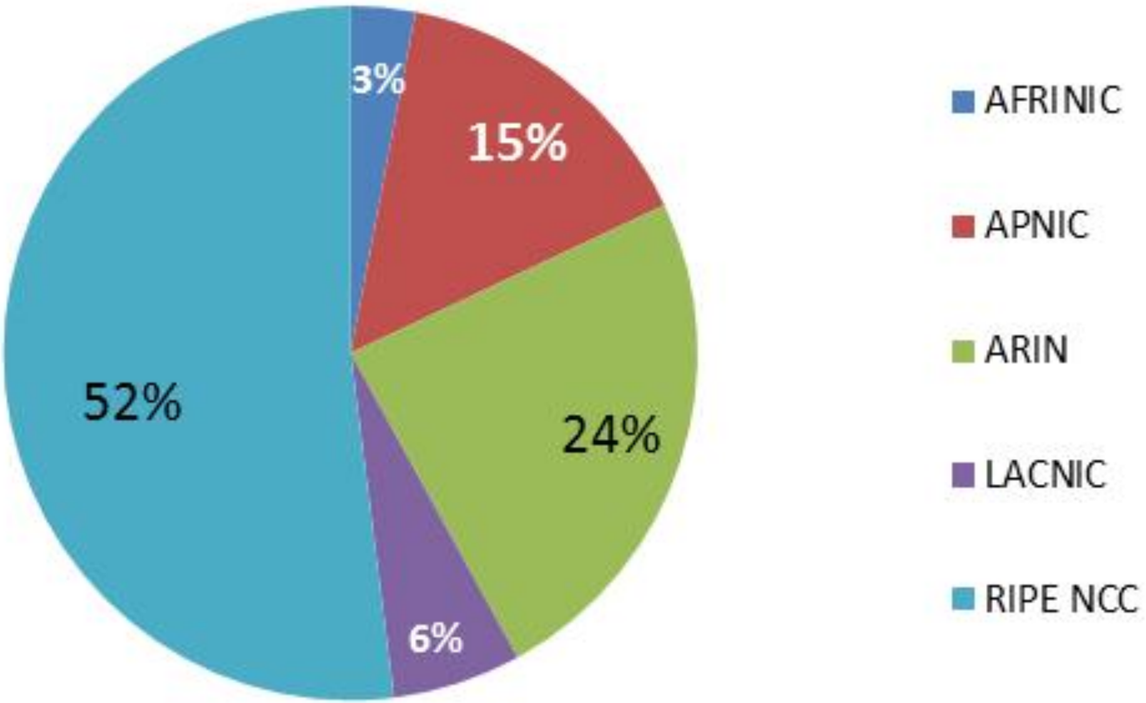



n=1443

*slightly more non profit respondents (29% vs. 24% in 2011)

source: GNKS 2012

# Q5 – To which RIR ?




n=1443

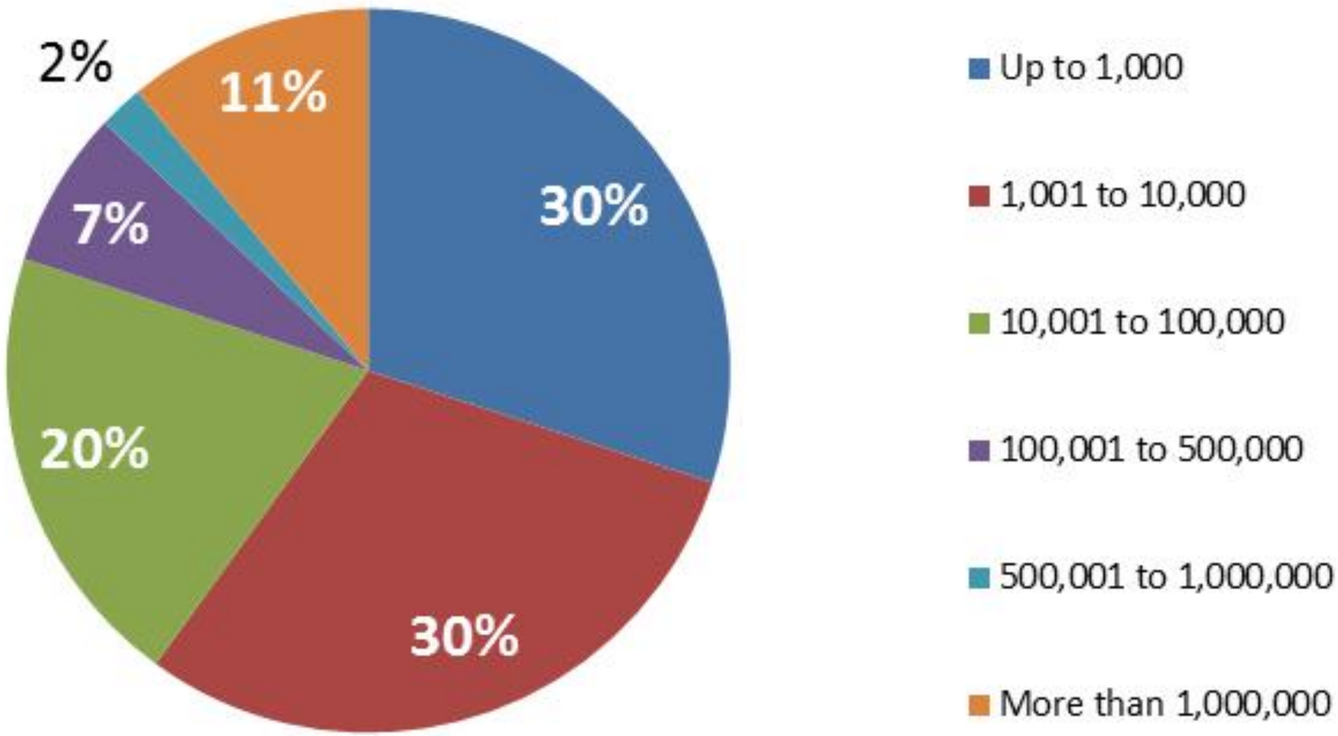
Q6 - Has your organization signed a Registration Services Agreement with your RIR?

2012 40% says “Yes”. 25% “No”, 35% does not know.

2011 54% says “Yes”, 16% “No”, 29% does not know.

source: GNKS 2012

# Q7 – How large is your customer base?

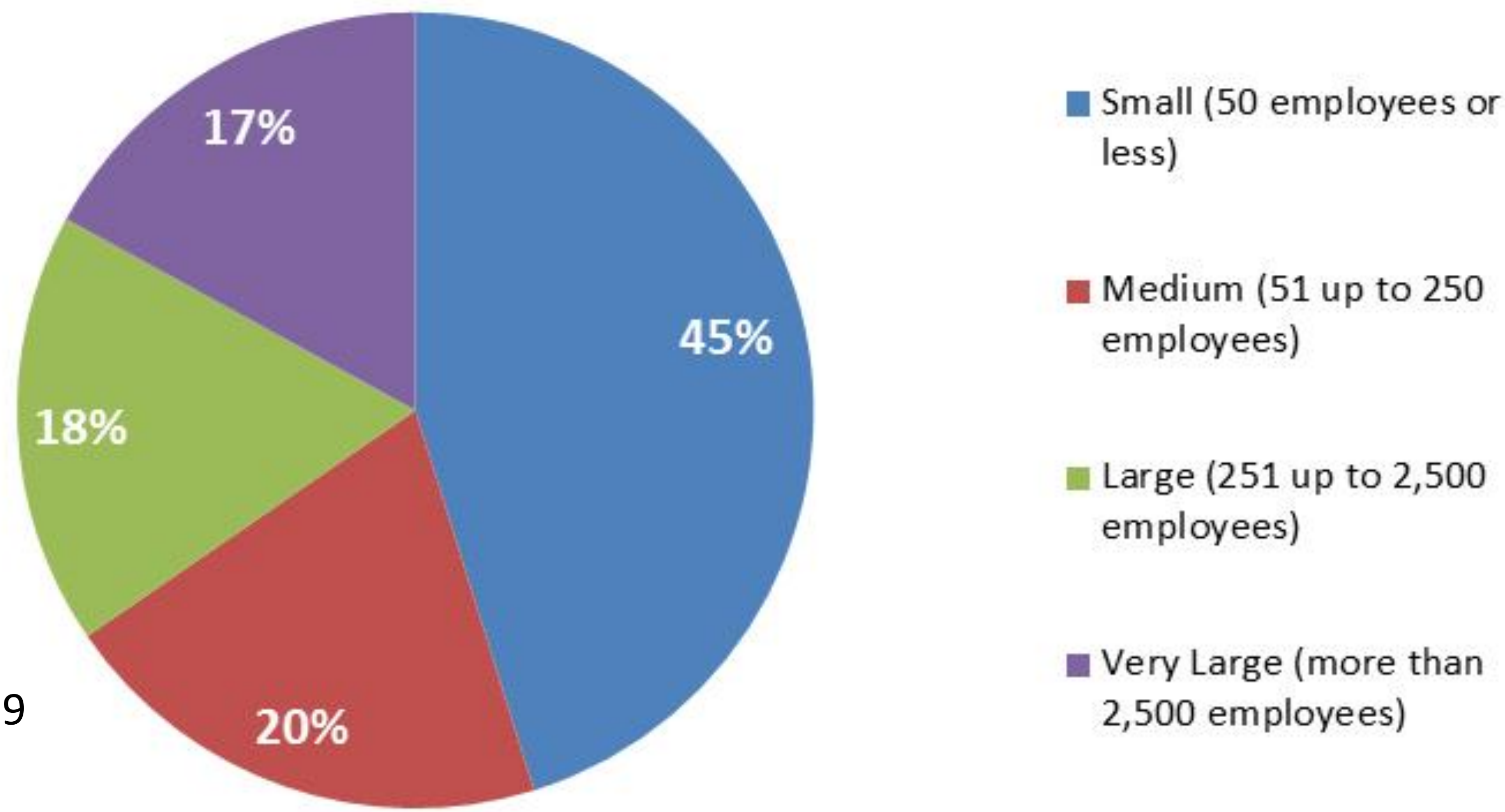



n=537

ISPs only - *No significant changes as compared to 2011

source: GNKS 2012

# Q10 – Size of your organization




n=1399

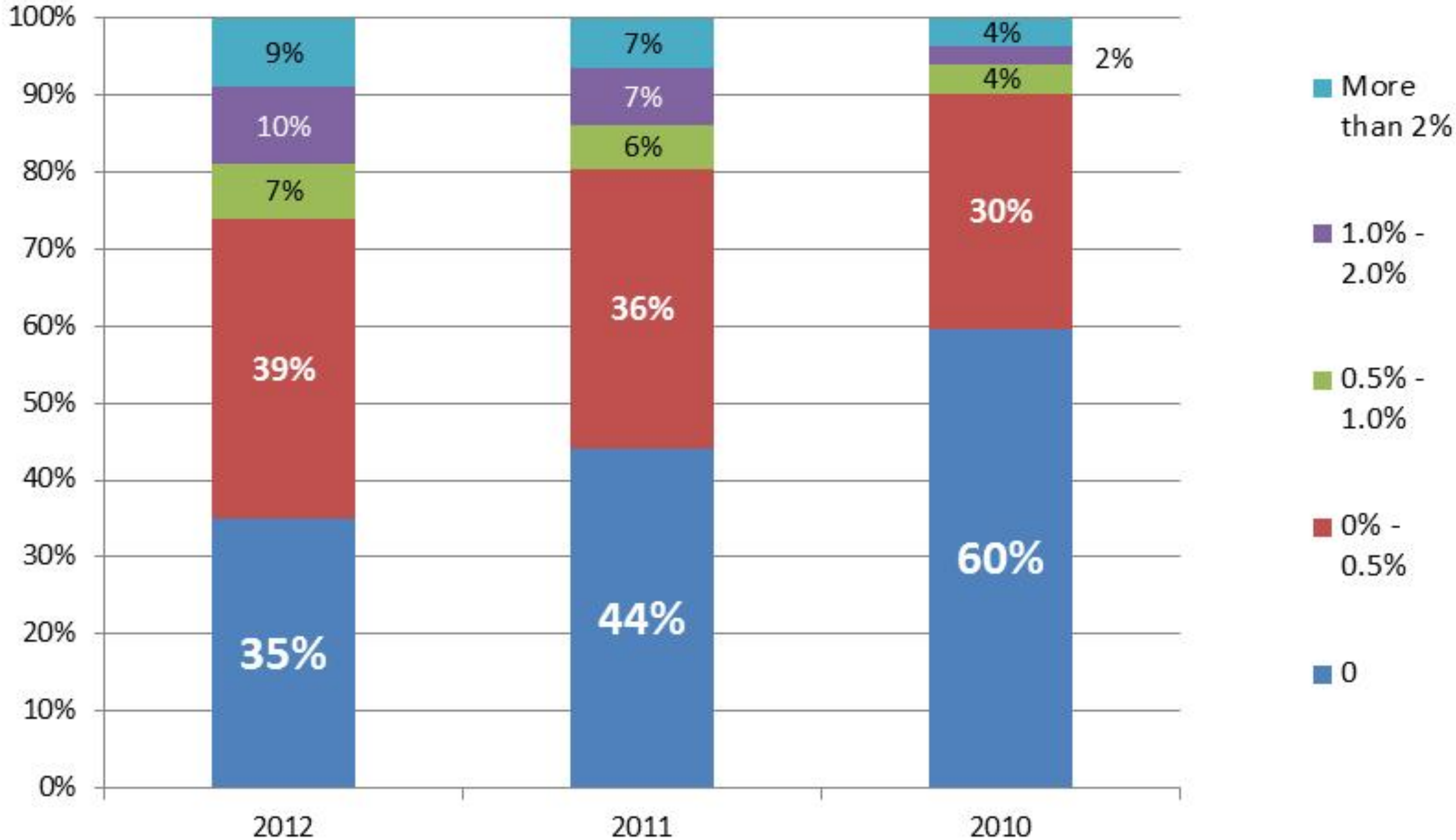
*No significant changes as compared to 2011

source: GNKS 2012

# Section 2 – experience and assumptions

- More ISPs have customers using IPv6 connectivity (65% vs. 56% in 2011)
- More IPv6 presence, experience with IPv6, and more uptake, gradually
- From those that interconnect with IXs, 50% peer with all IXs, and 29% at least with one
- Of all respondents,15% plan to or use LSN … of those, 80% uses LSN next to using IPv6 (and not instead of)

# Q8 - What percentage of your customer base uses IPv6 connectivity?

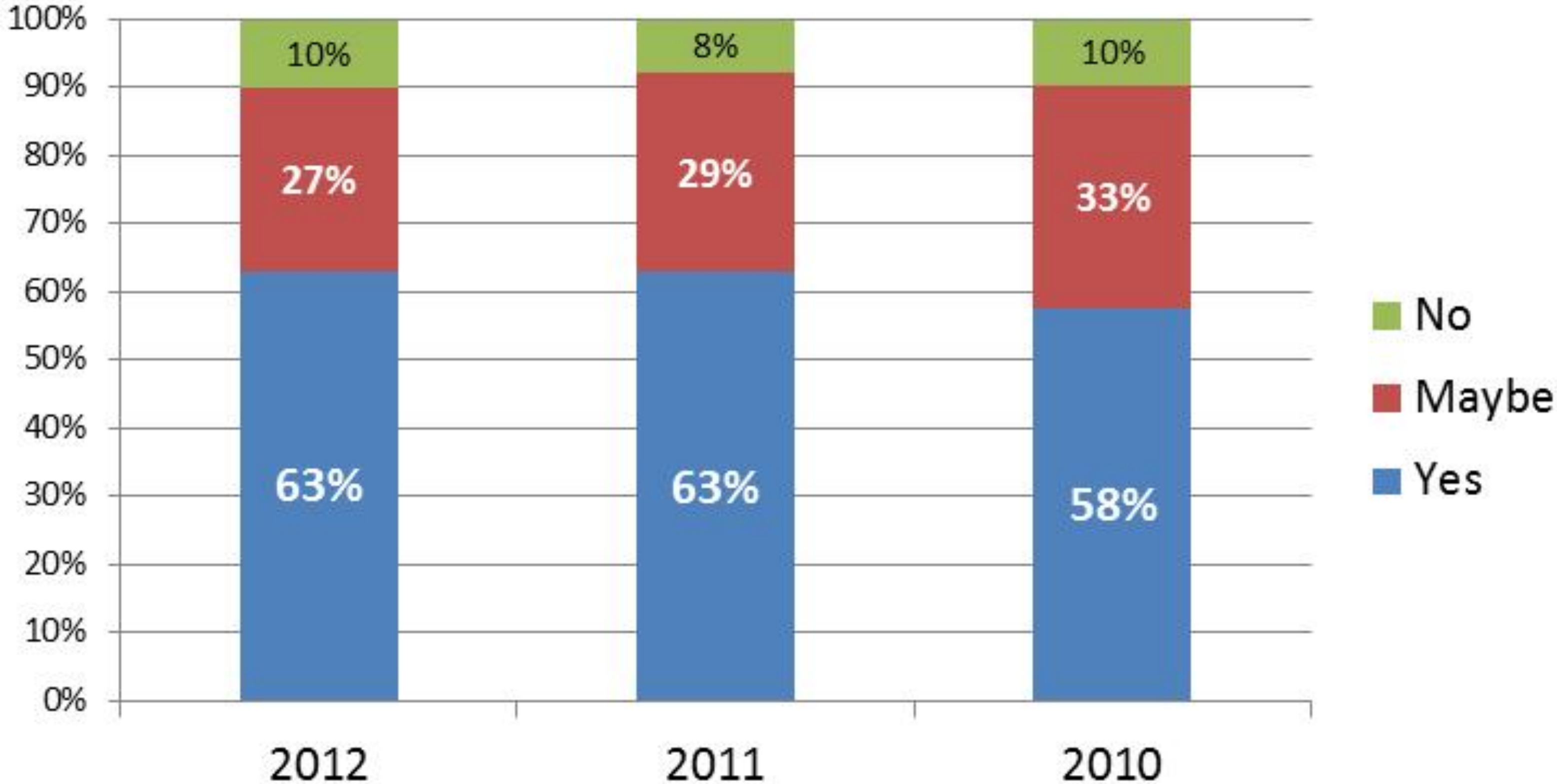



n=531

ISPs only

source: GNKS 2012

# Q9 - Do you consider promoting IPv6 uptake to your customers?

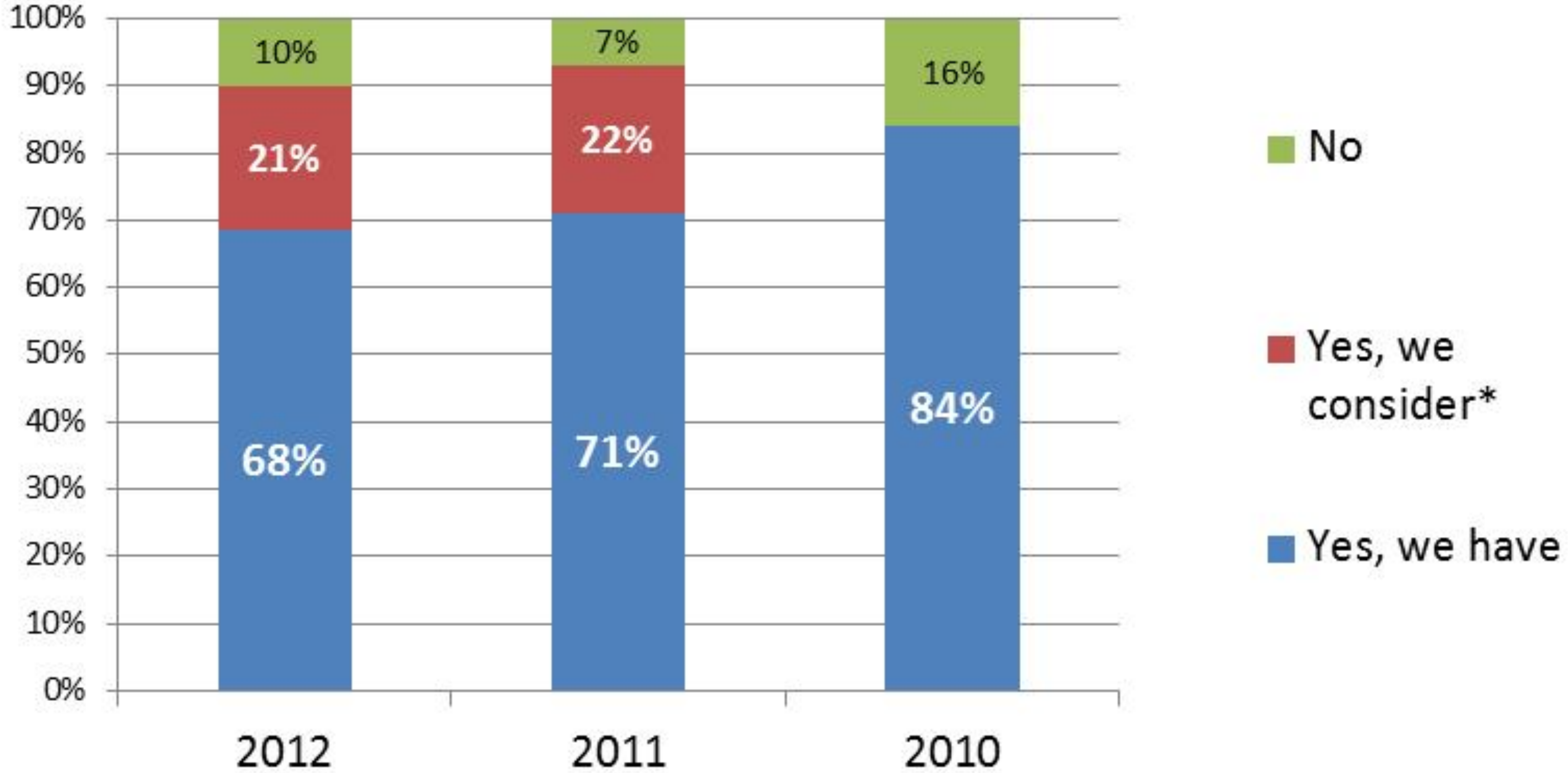



n=531

ISPs only

source: GNKS 2012

# Q11 - Does your organization have, or consider having an IPv6 allocation and/or assignment?

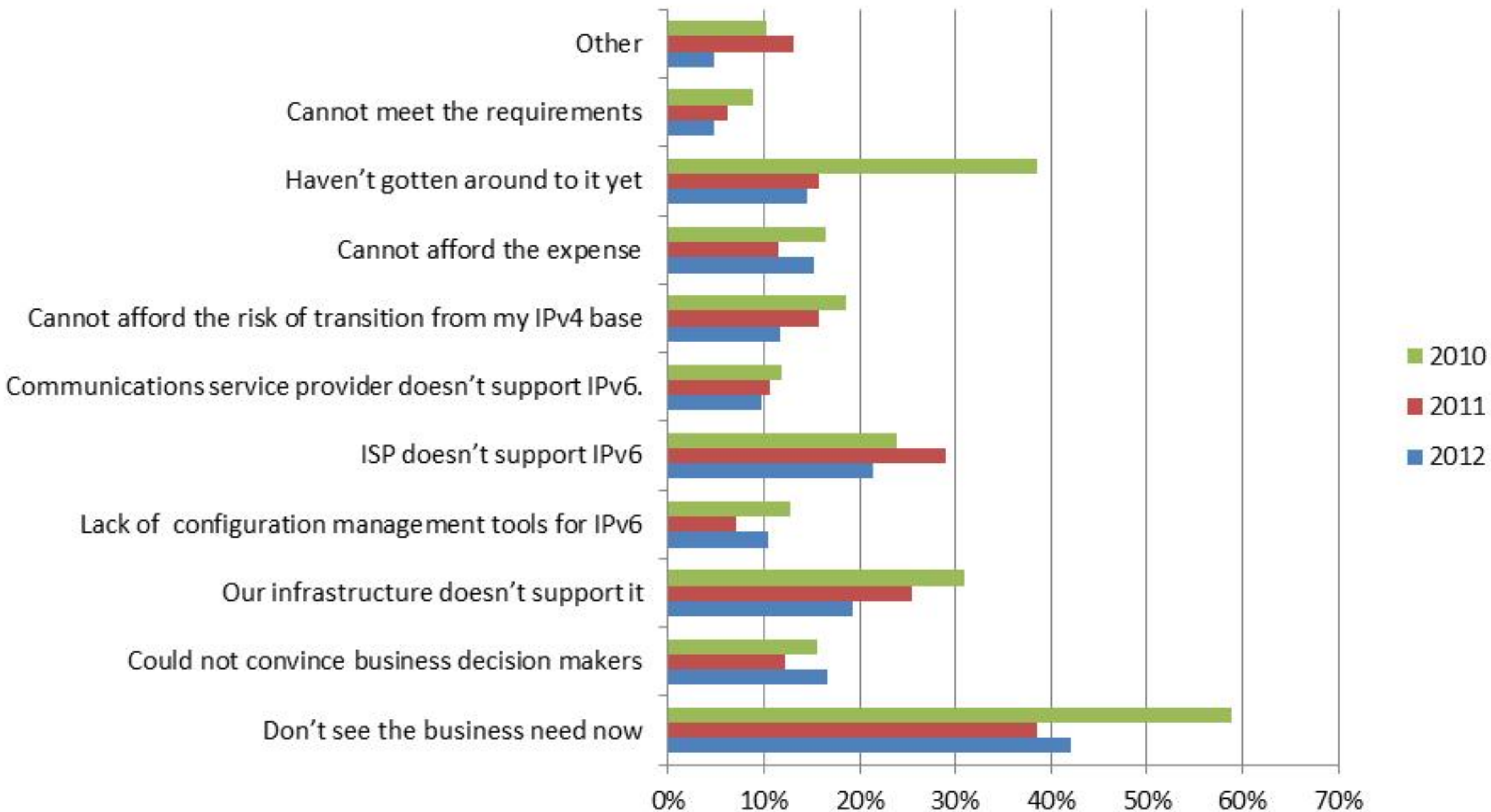



n=1399

*"consider" was not a separate option in survey 2010 but combined in "Yes"

source: GNKS 2012

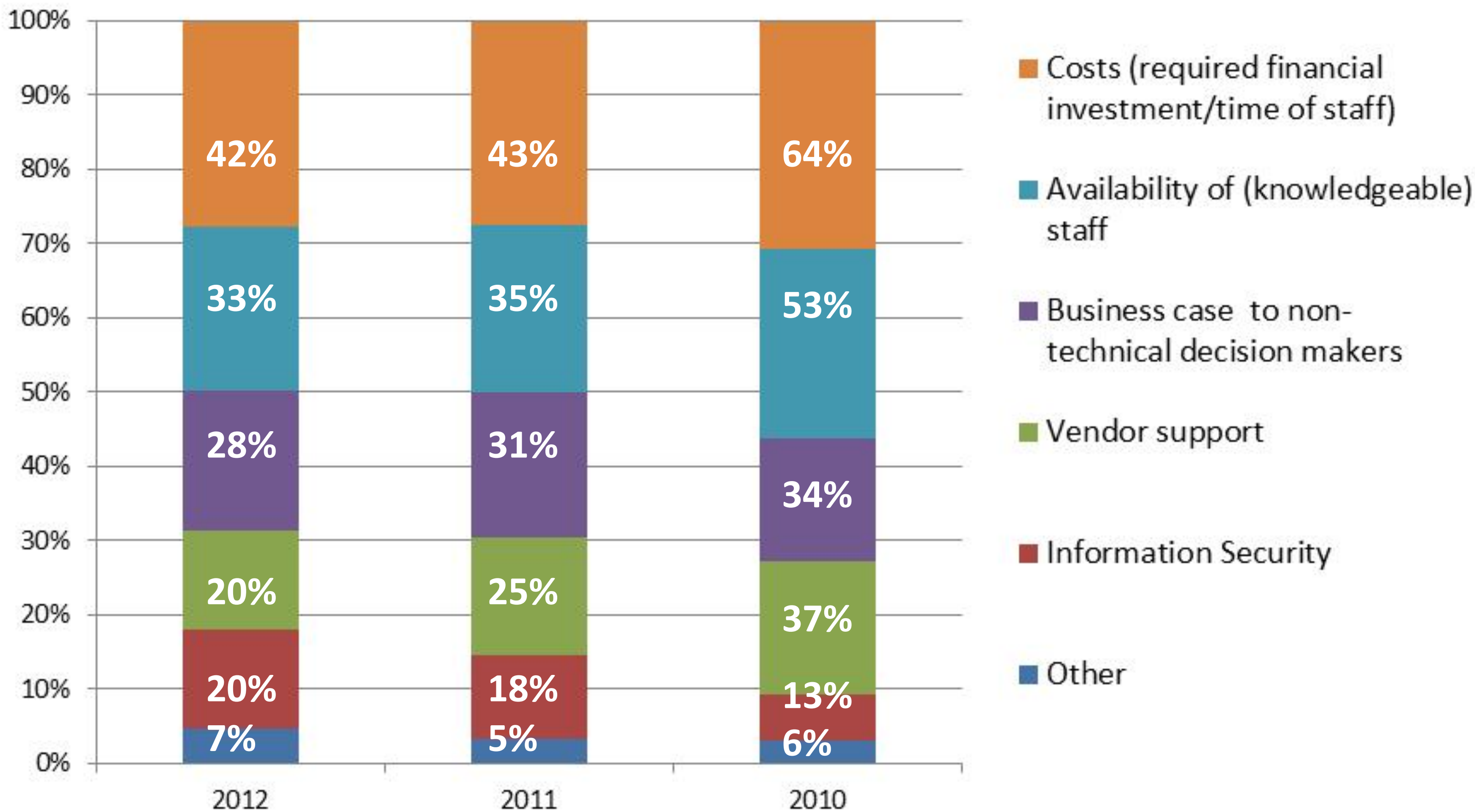
# Q12 - Why doesn't your organization consider having an IPv6 allocation/assignment?




n=145

source: GNKS 2012

# Q13 - What you expect to be the biggest hurdle(s) to your organization if you were to deploy IPv6?

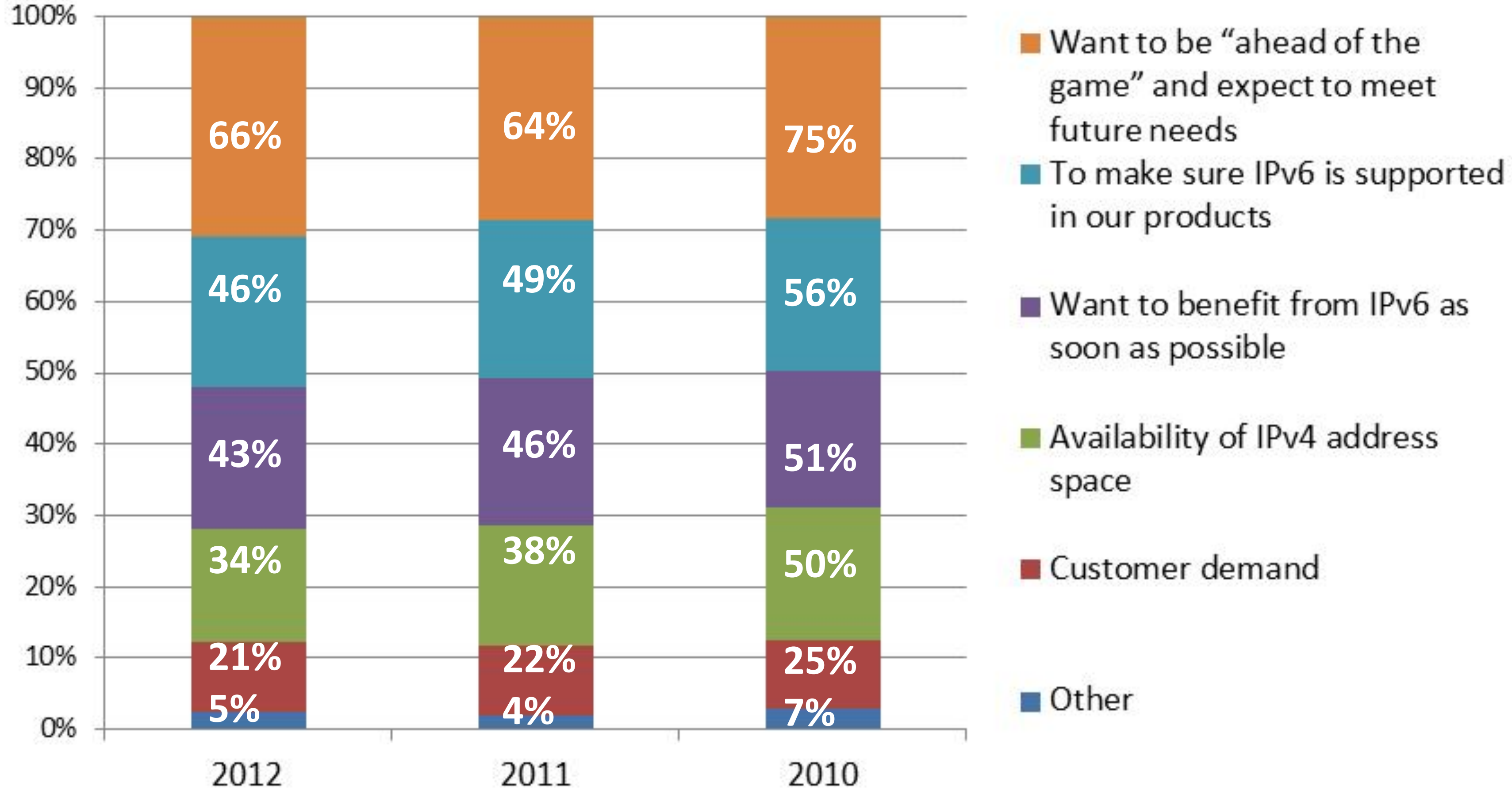



n=144

source: GNKS 2012

Please note these are responses from the 10% indicated to not consider having an IPv6 allocation.

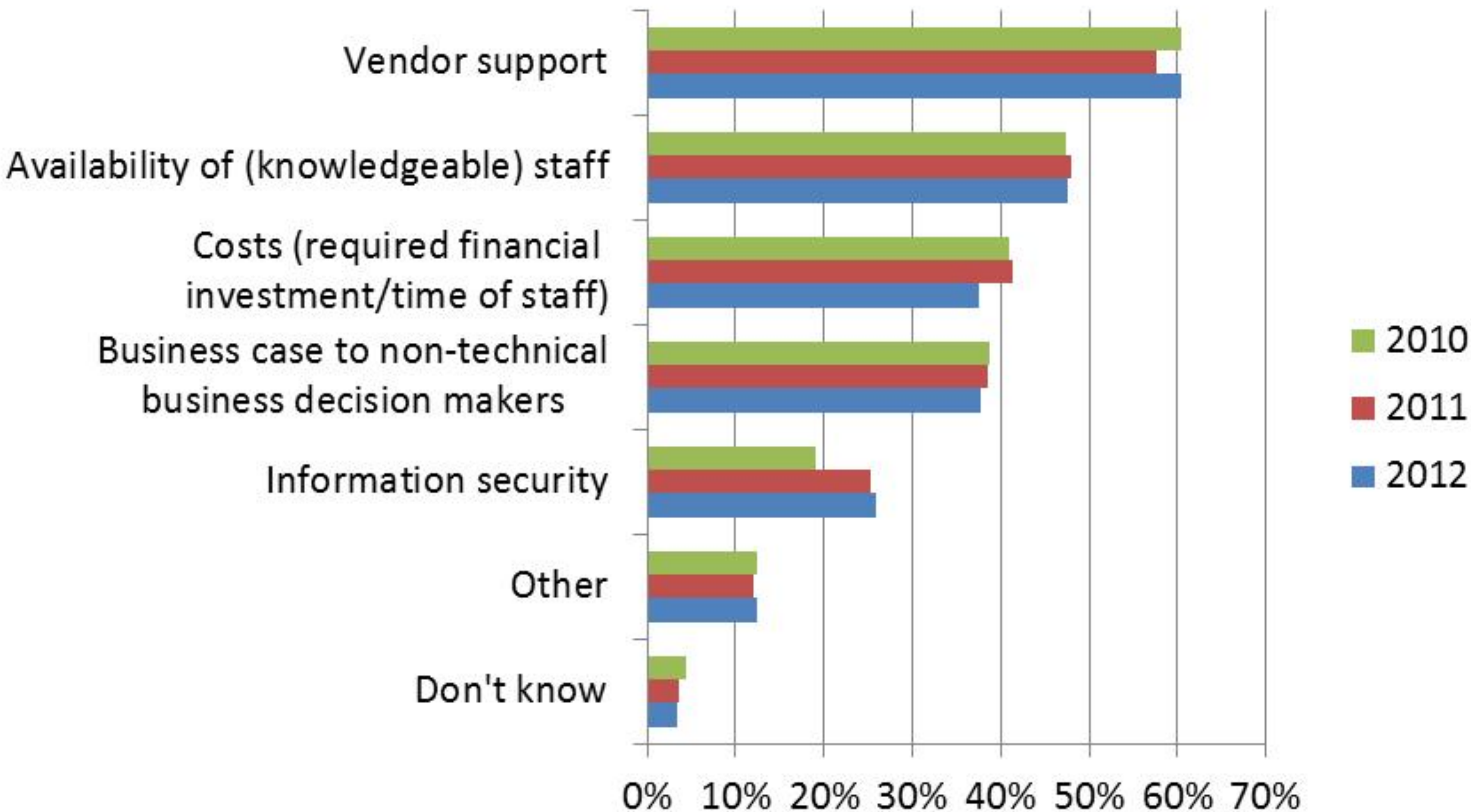
# Q14 - What motivated your organization to consider having an IPv6 allocation/assignment?




n=1299

source: GNKS 2012

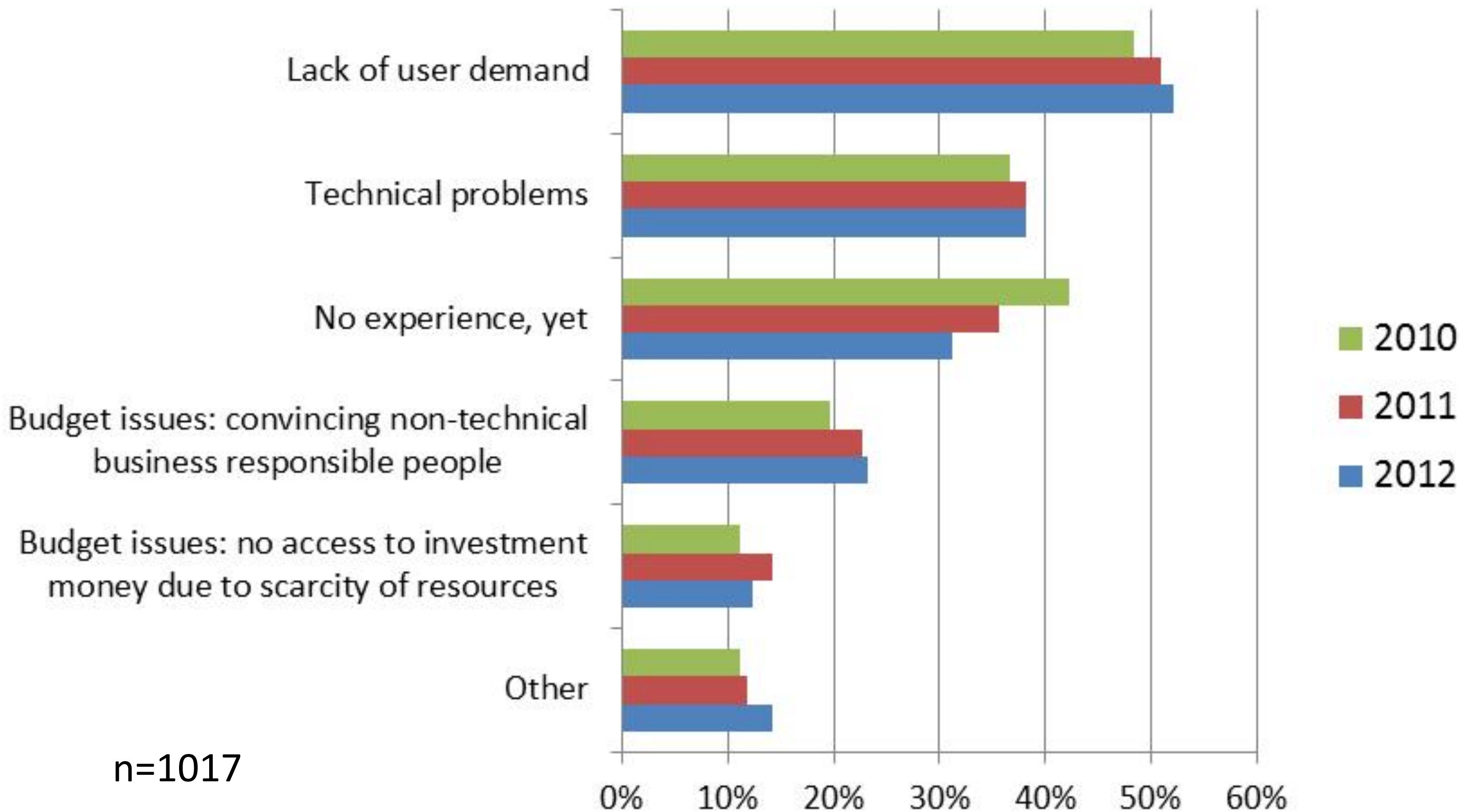
# Q17 - What are likely to be the biggest hurdle(s) when deploying IPv6?




n=1025

source: GNKS 2012

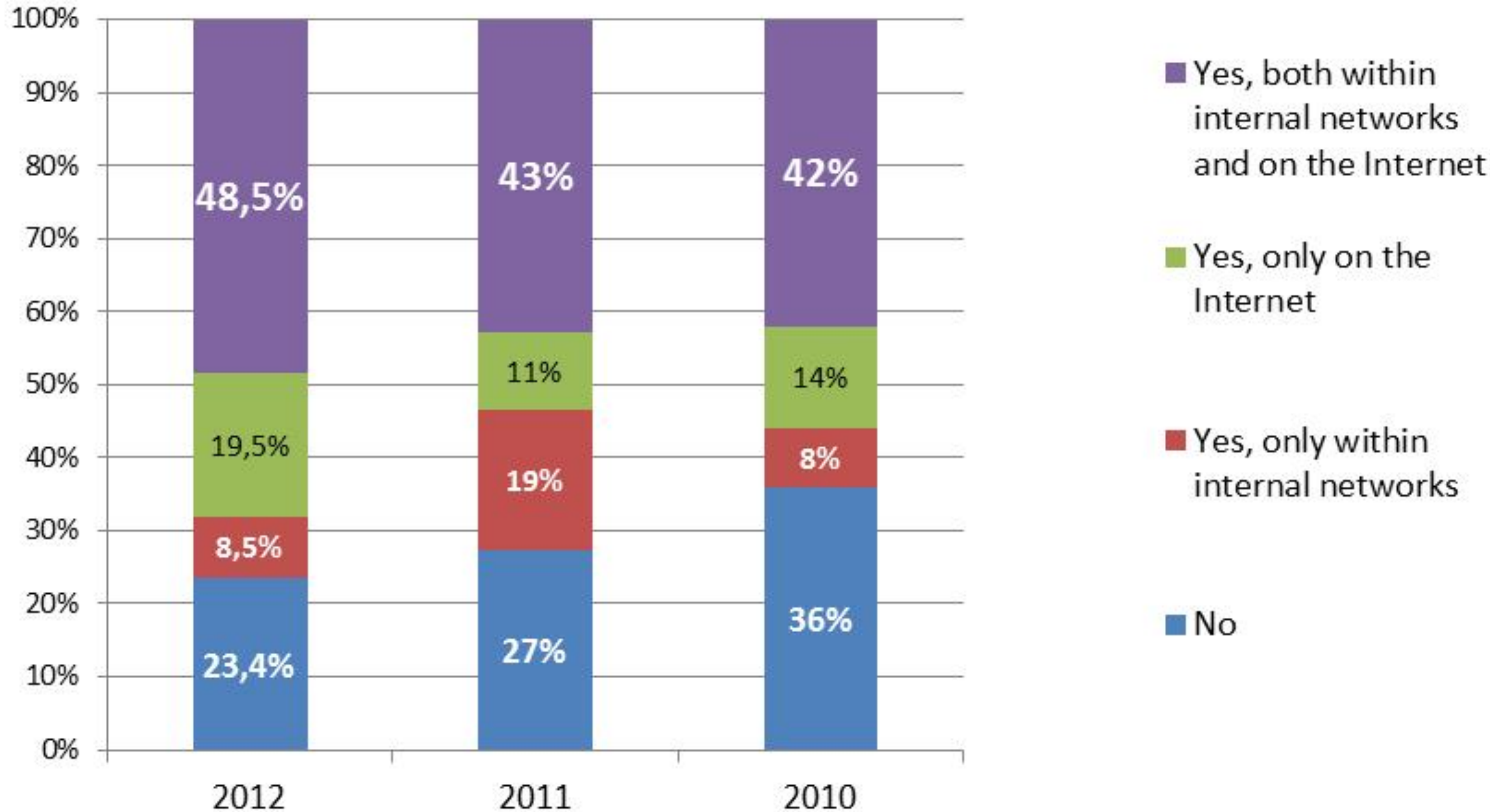
# Q18 - What are the biggest problems with IPv6 in production?




n=1017

source: GNKS 2012

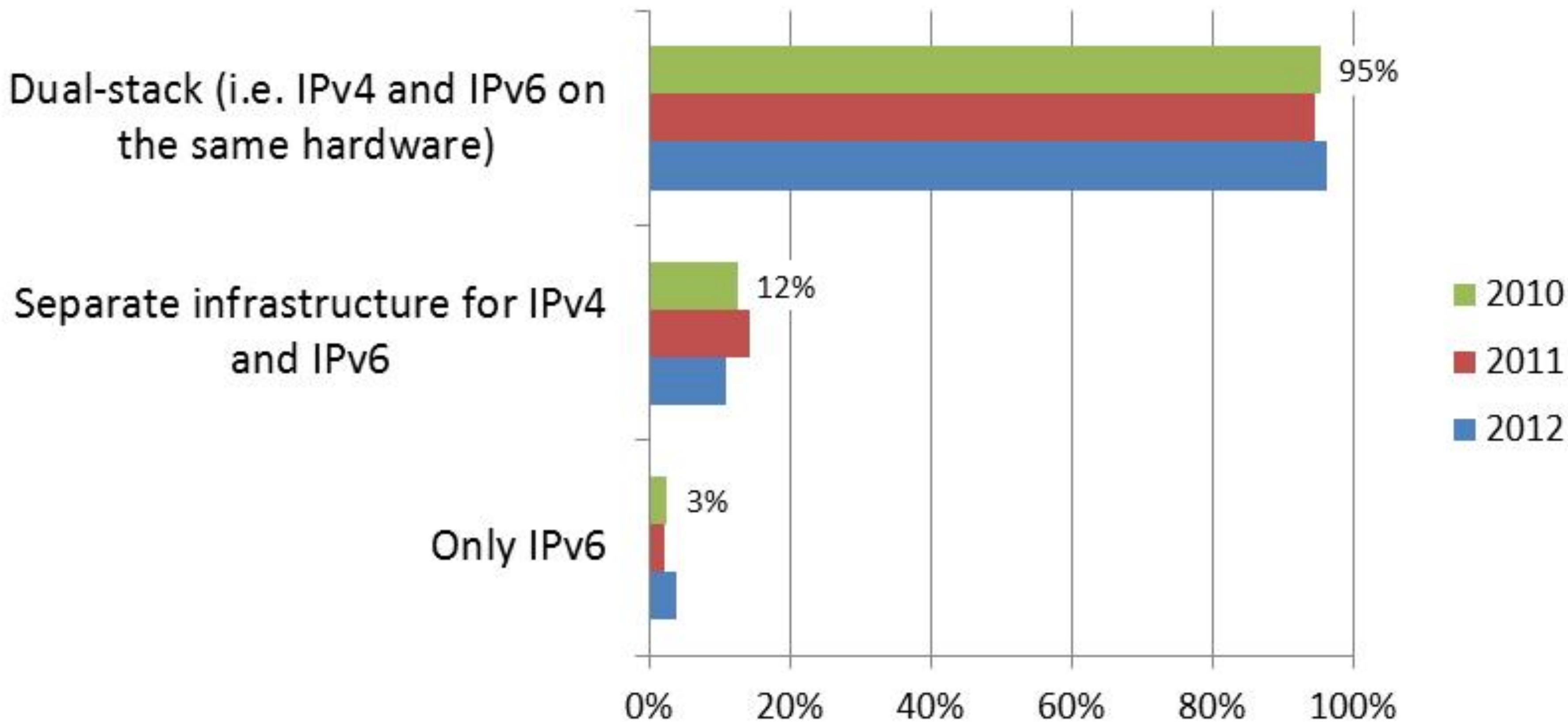
# Q16 - Does your organization have an IPv6 presence ?




n=1045

source: GNKS 2012

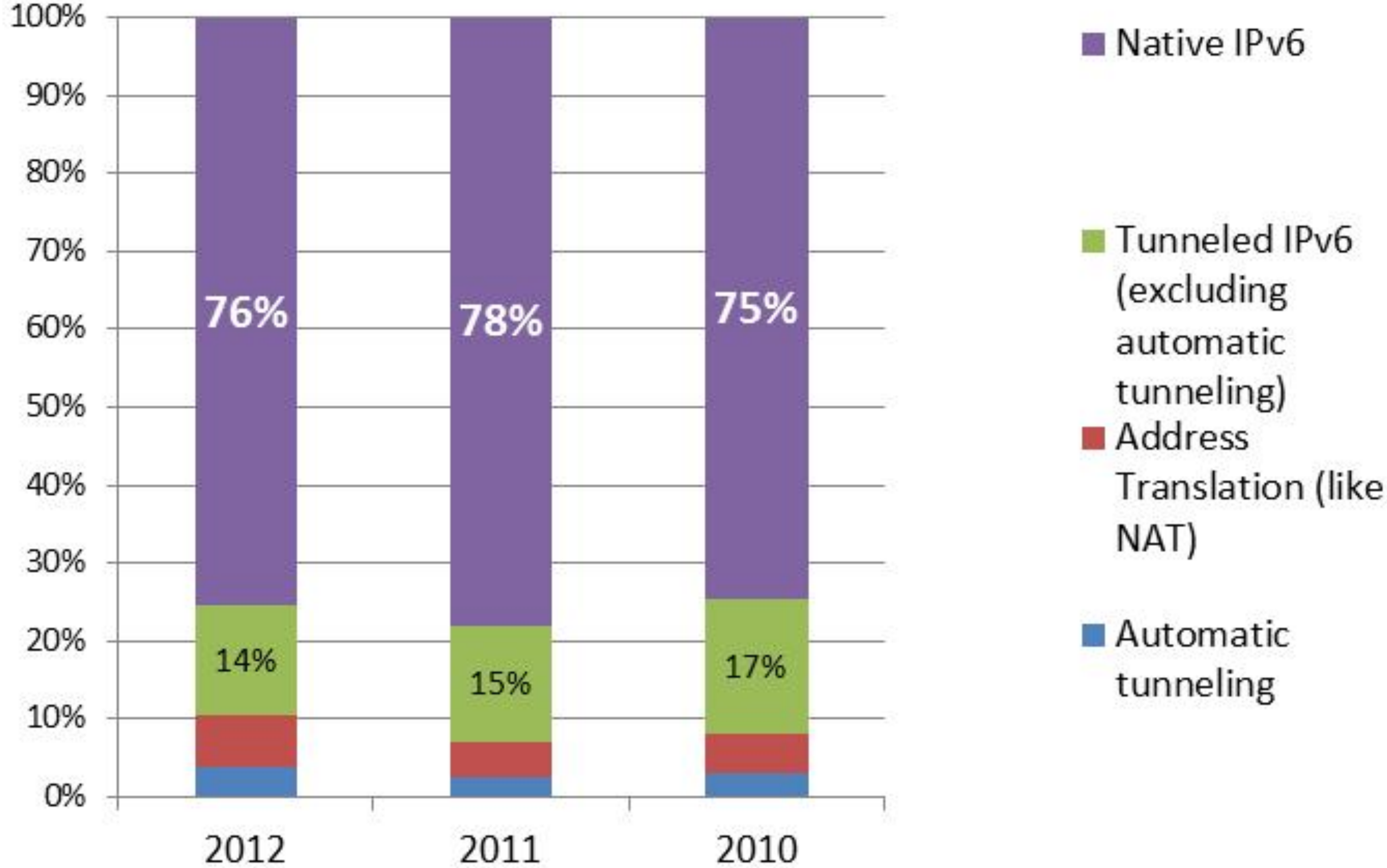
# Q19 - your organization's IPv6 setup




n=978

source: GNKS 2012

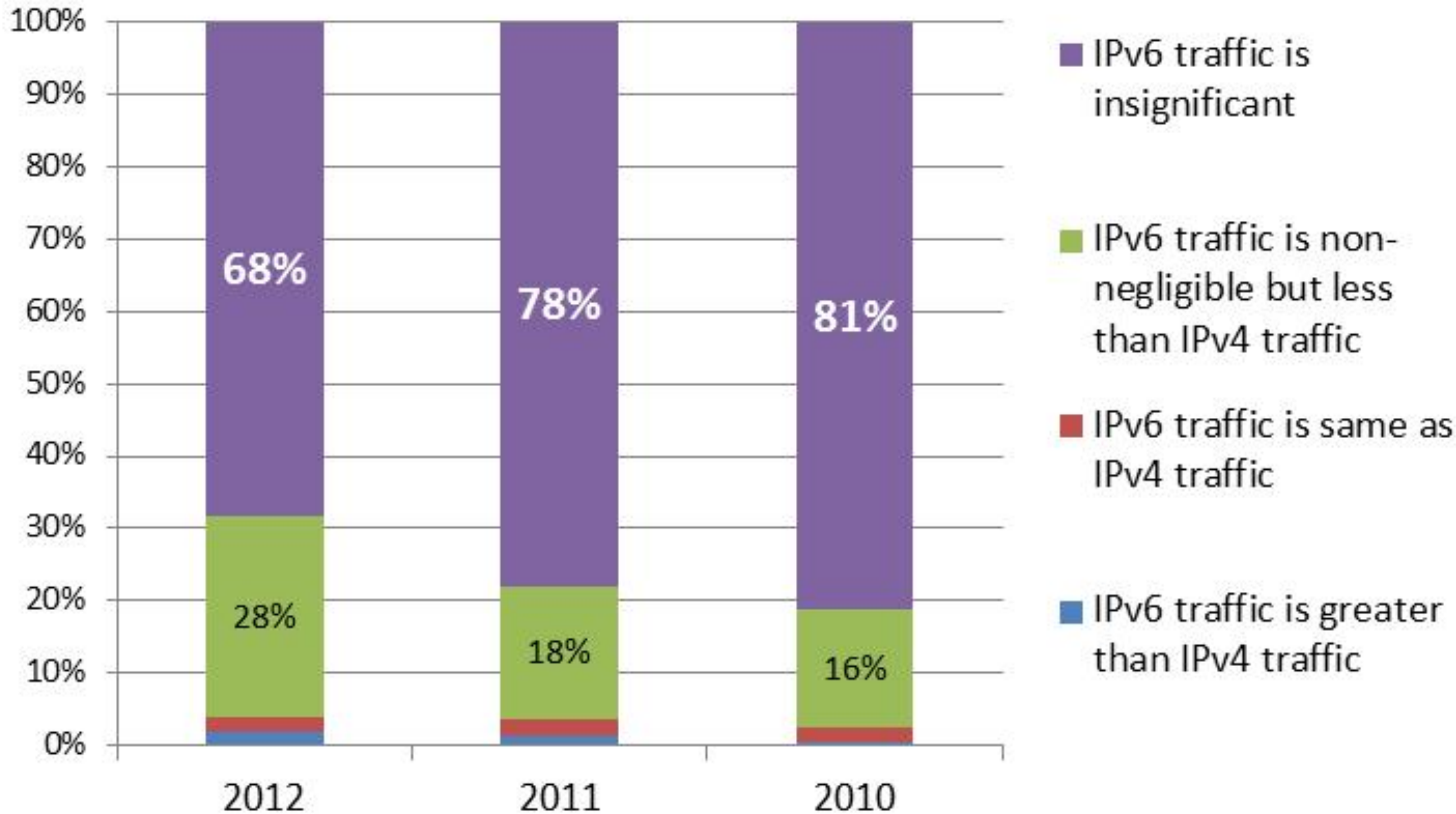
# Q20 - nature of your organization's IPv6 production services




n=919

source: GNKS 2012

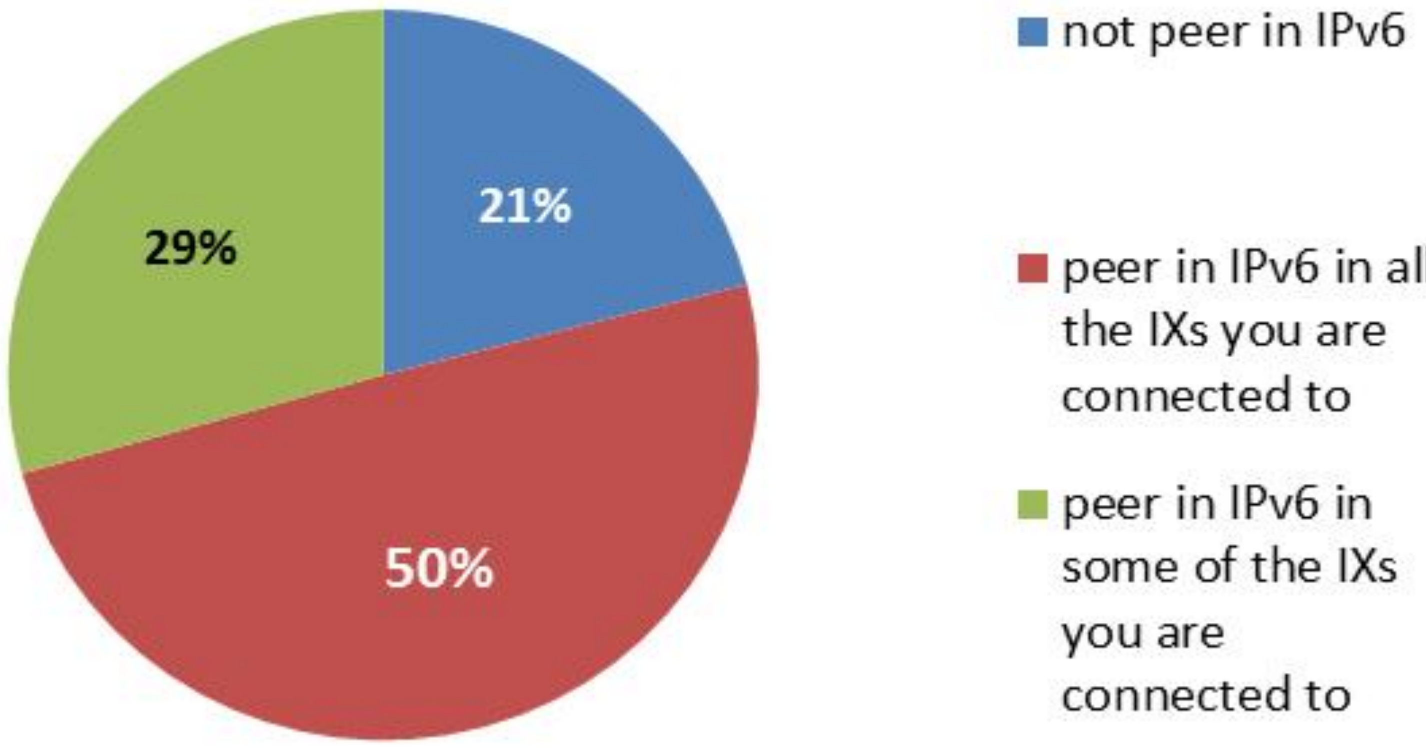
# Q21 - If your organization has IPv6 in production, how does the amount of IPv6 traffic compare to your IPv4 traffic?




n=919

source: GNKS 2012

# Q24 - If your organization is connected to one or several Internet Exchanges (IXs), do you:

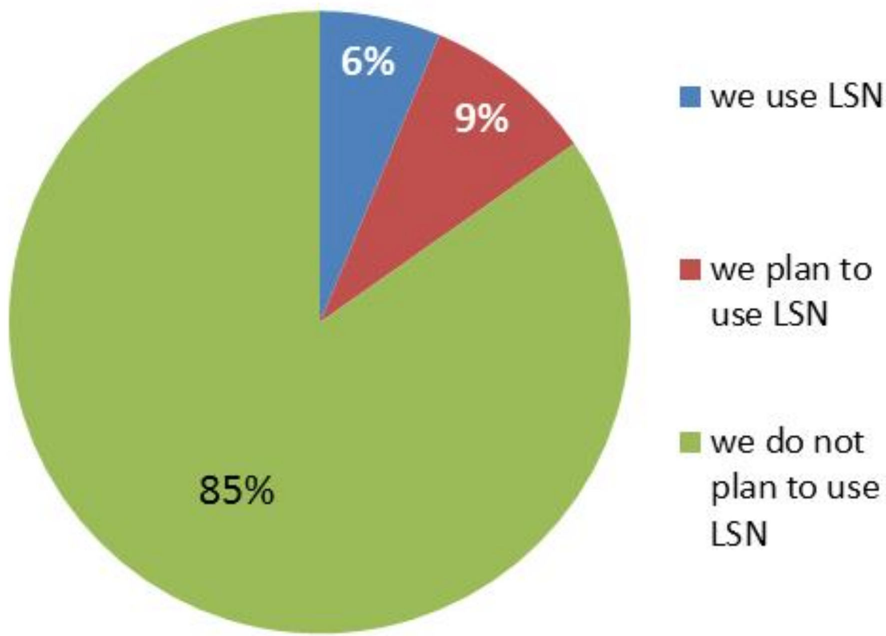


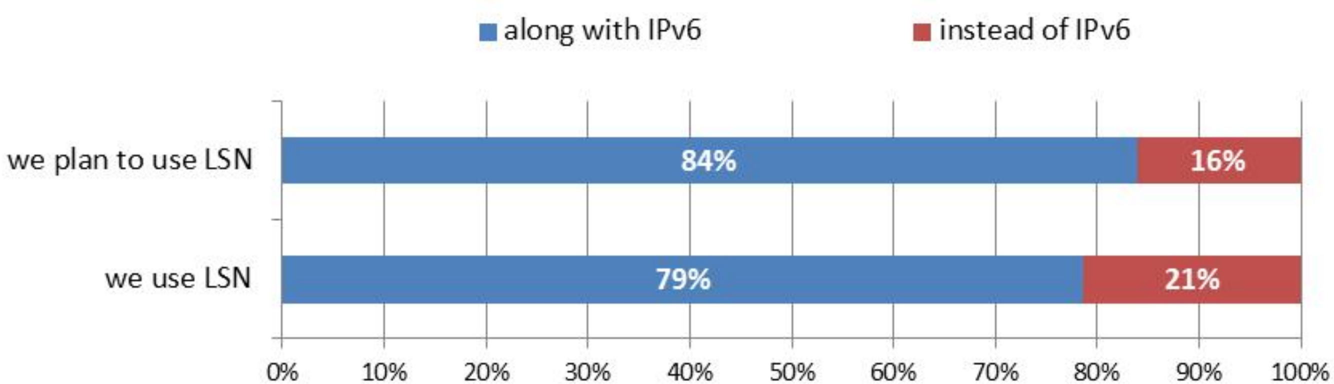

n=552

source: GNKS 2012

These answers are given by the 55% of the 1104 respondents, who indicated to connect to IXs.

# Q25 - On Large Scale NAT (LSN aka CGN (Carrier Grade NAT):




n=969

source: GNKS 2012

# Section 3 - planning

- preparedness for IPv6 among ISPs has continued to grow. Preparedness means here that ISPs are implementing IPv6 capability, planning for the deployment, and preparing for the increasing demand that they expect to come from their customers soon.
- deployment has improved since July 2011

# Q23 - Which best describes your organization's IPv6 implementation (plans)?


source: GNKS 2012

# We thank all respondents for their contributions !

91% of the respondents to the question "Would you be interested to participate again to this survey in a years' time" said:

**"Yes"**

For more information: maarten@gnksconsult.com

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