IPv6 Deployment Survey

Based on responses from the global RIR community during July 2011

-

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 (e.g. mobile, RFID 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 and in 2011, all RIRs participated in the survey making it truly global:
  - Survey was prepared and carried out by GNKS in close collaboration with RIPE NCC, APNIC, ARIN, AfriNIC and LACNIC
  - Survey was kept short and focused on essentials
  - Privacy was guaranteed
- Every year, the question is whether the survey should take place again next year. In 2009, 2010 and 2011 more than 90% said “yes”

Summary report on 2011 results

1 – respondents profile

2 – experience and assumptions

3 - planning

Section 1 – Respondents profile

- With more than 1600 respondents from all over the world, there was a similar response in 2011 as in 2010, across the board
- 53% of the respondents were ISPs, 74% of all respondents were from the commercial sector

Q1 - Response to questionnaire

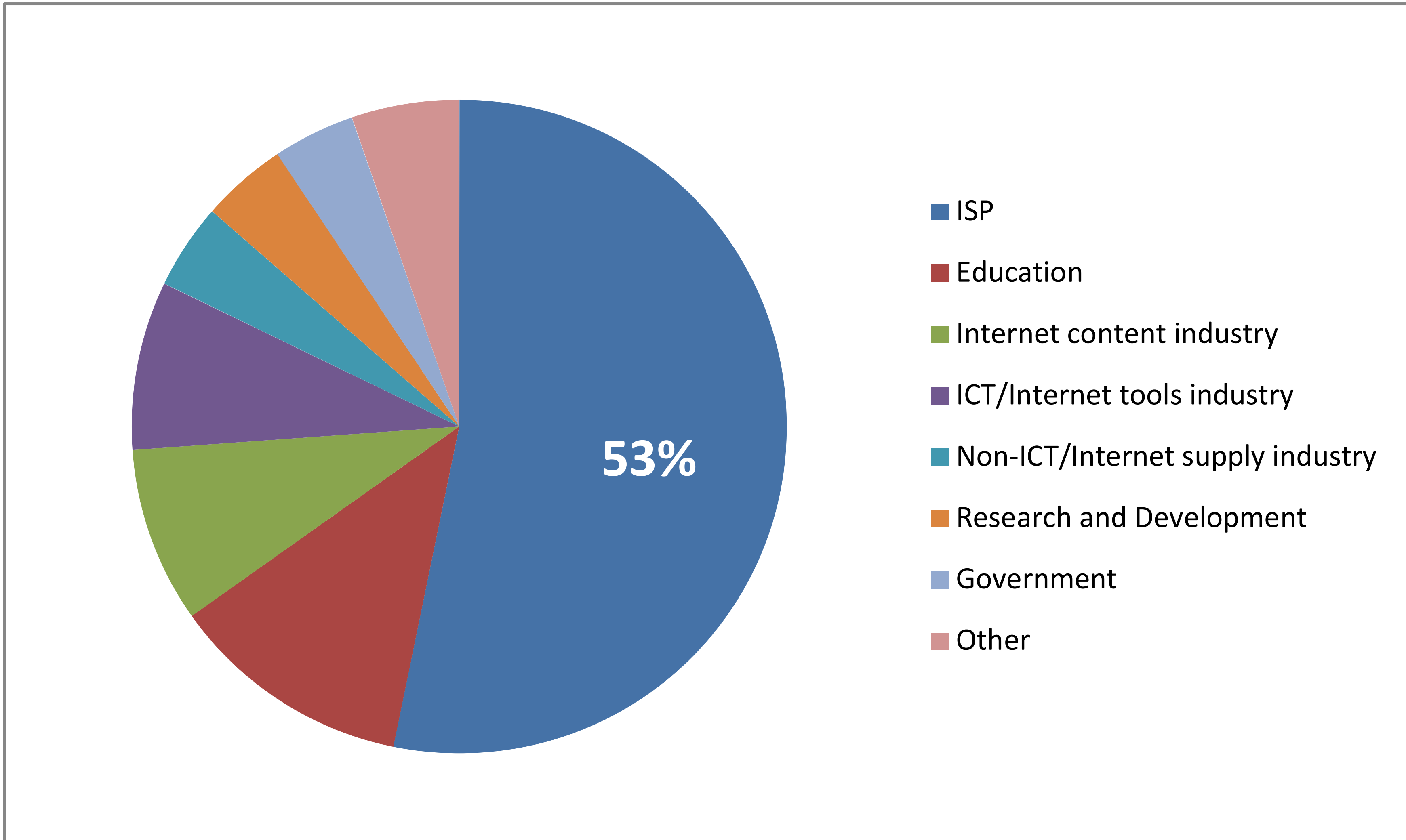
- 1656 respondents from 135 countries/economies
  - 15 countries > 29 respondents = 1029
  - 22 countries 7< x < 30 respondents = 356
  - 29 countries 3< x < 8 respondents = 154
  - 37 countries with 2 or 3 respondents = 85
  - 32 countries with 1 respondent = 32
- Top 10 respondent countries 2011

1. USA	321	6. Netherlands	60
2. UK	81	7. Russia	56
3. Germany	79	8. France	46
4. Australia	76	9. New Zealand	44
5. Taiwan*	61	10. Italy*	42

* New in Top 10

source: GNKS 2011

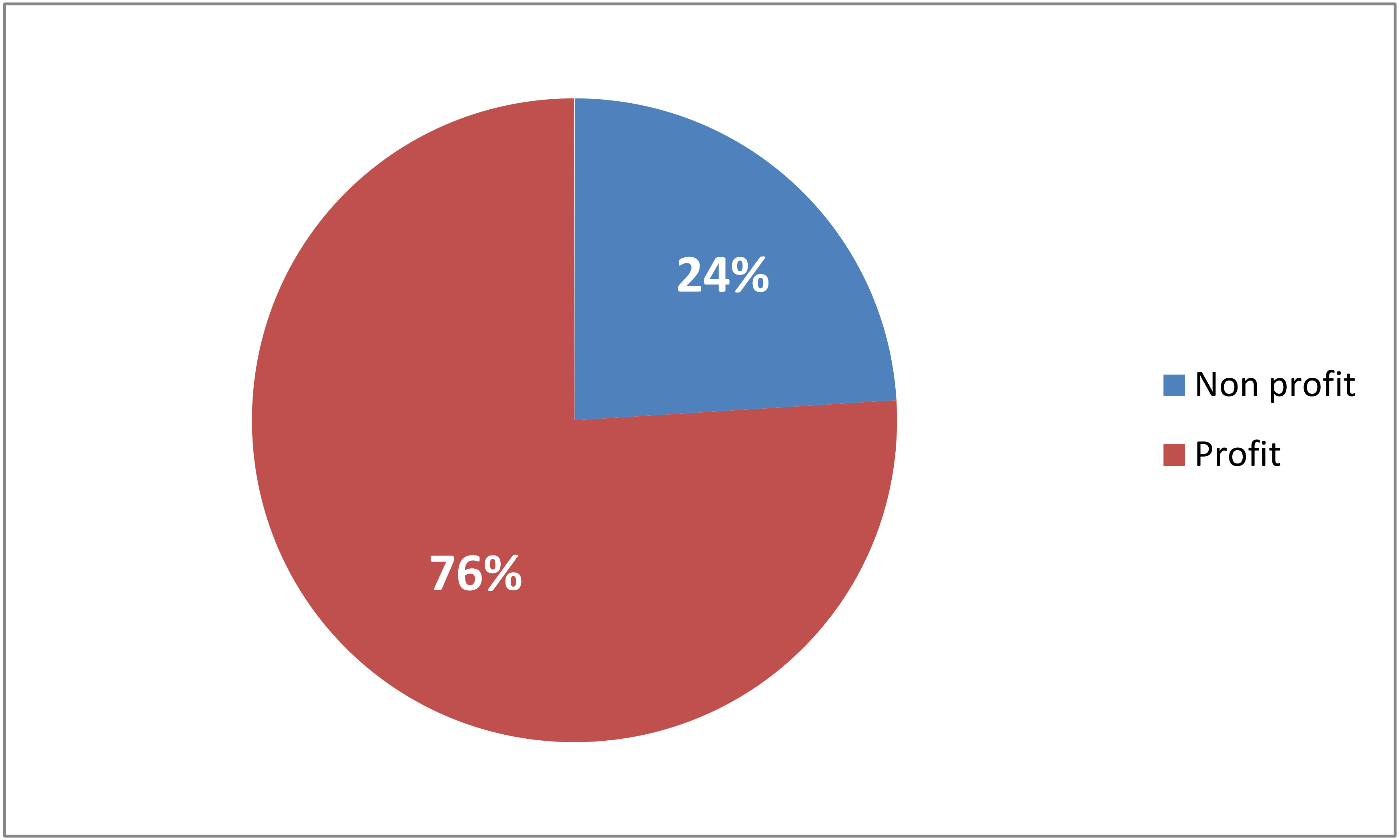
Q2 - Respondent categories



*slightly less ISPs as compared to 2010 (58%), further similar to 2010

source: GNKS 2011

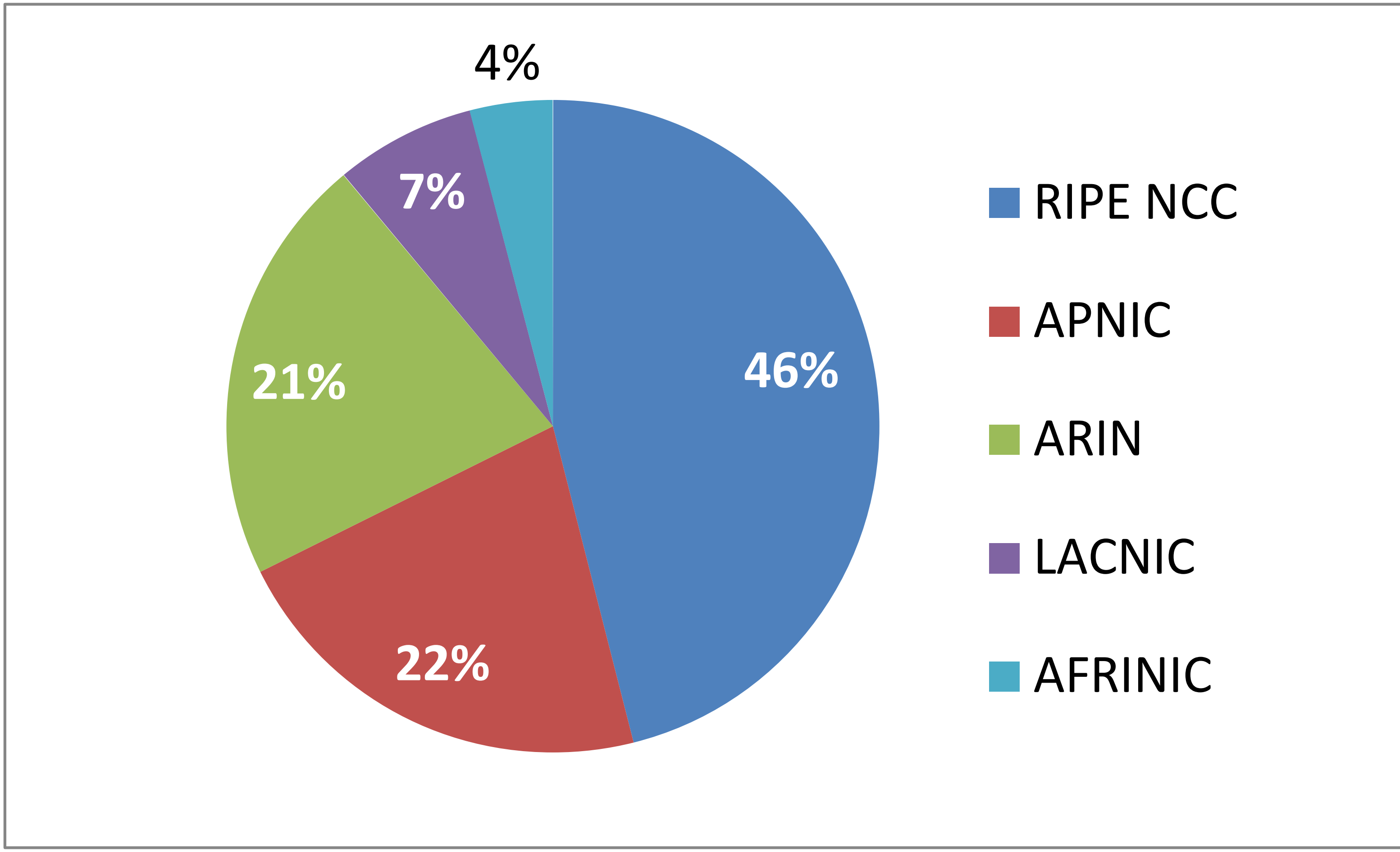
Q3 – Financial status



*No significant changes as compared to 2010

source: GNKS 2011

Q4 – To which RIR …

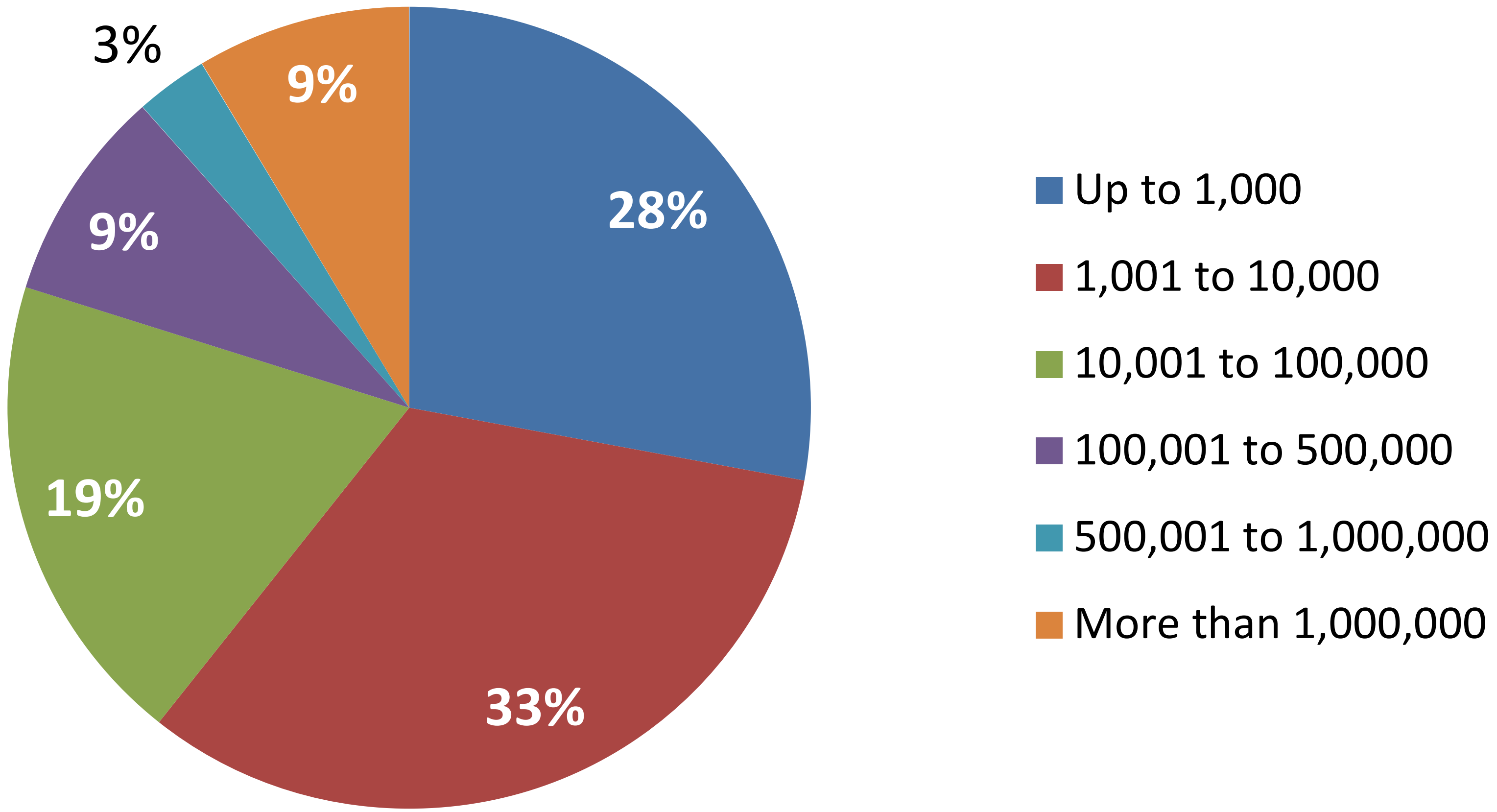


Q5 - Has your organization signed a Registration Services Agreement with your RIR? 54% says “Yes”, 16% “No”, 29% does not know.

*No significant changes as compared to 2010

source: GNKS 2011

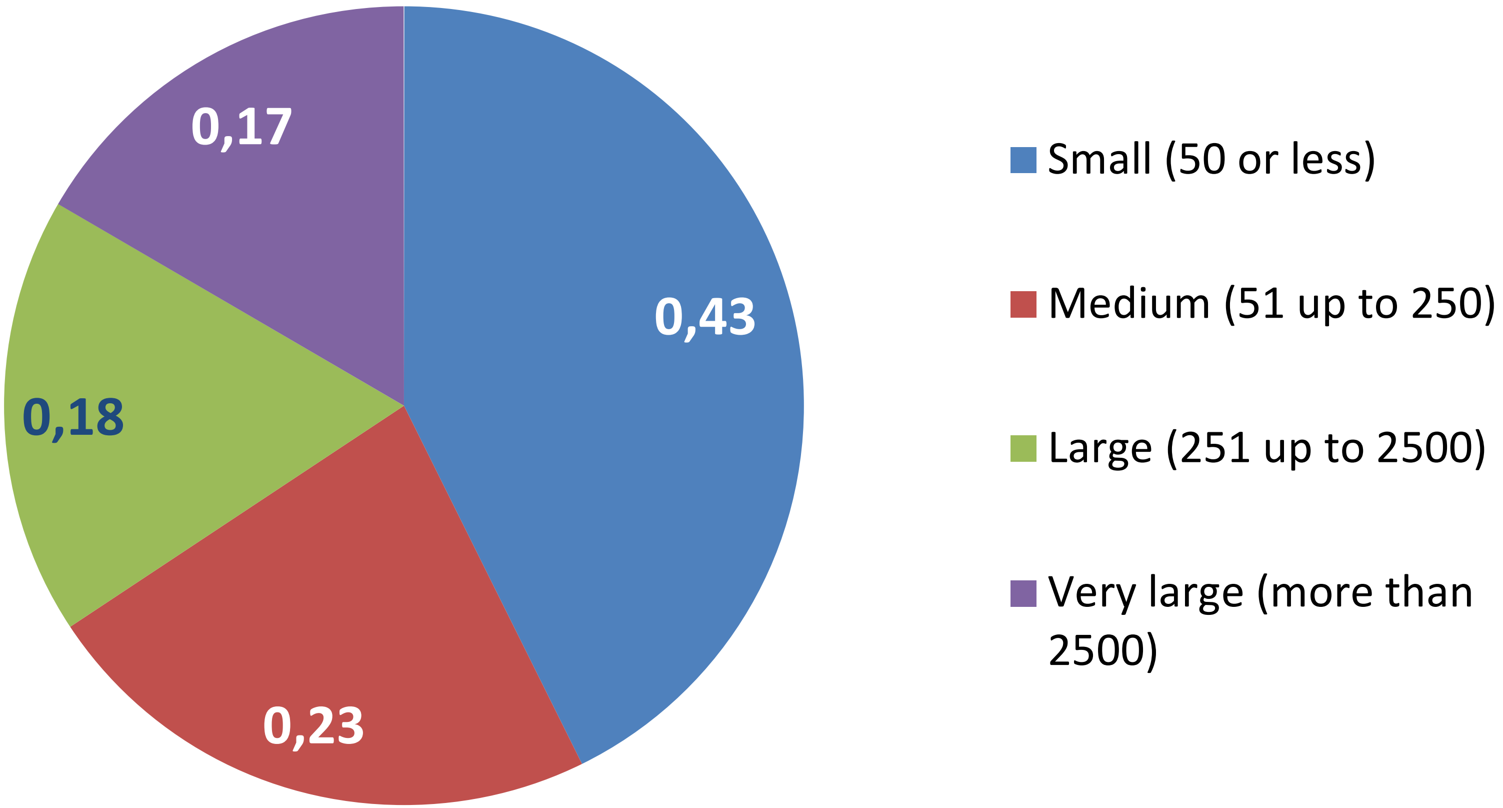
Q6 – How large is your customer base



ISPs only - *No significant changes as compared to 2010

source: GNKS 2011

Q9 - What is the size of your organization (employees)?



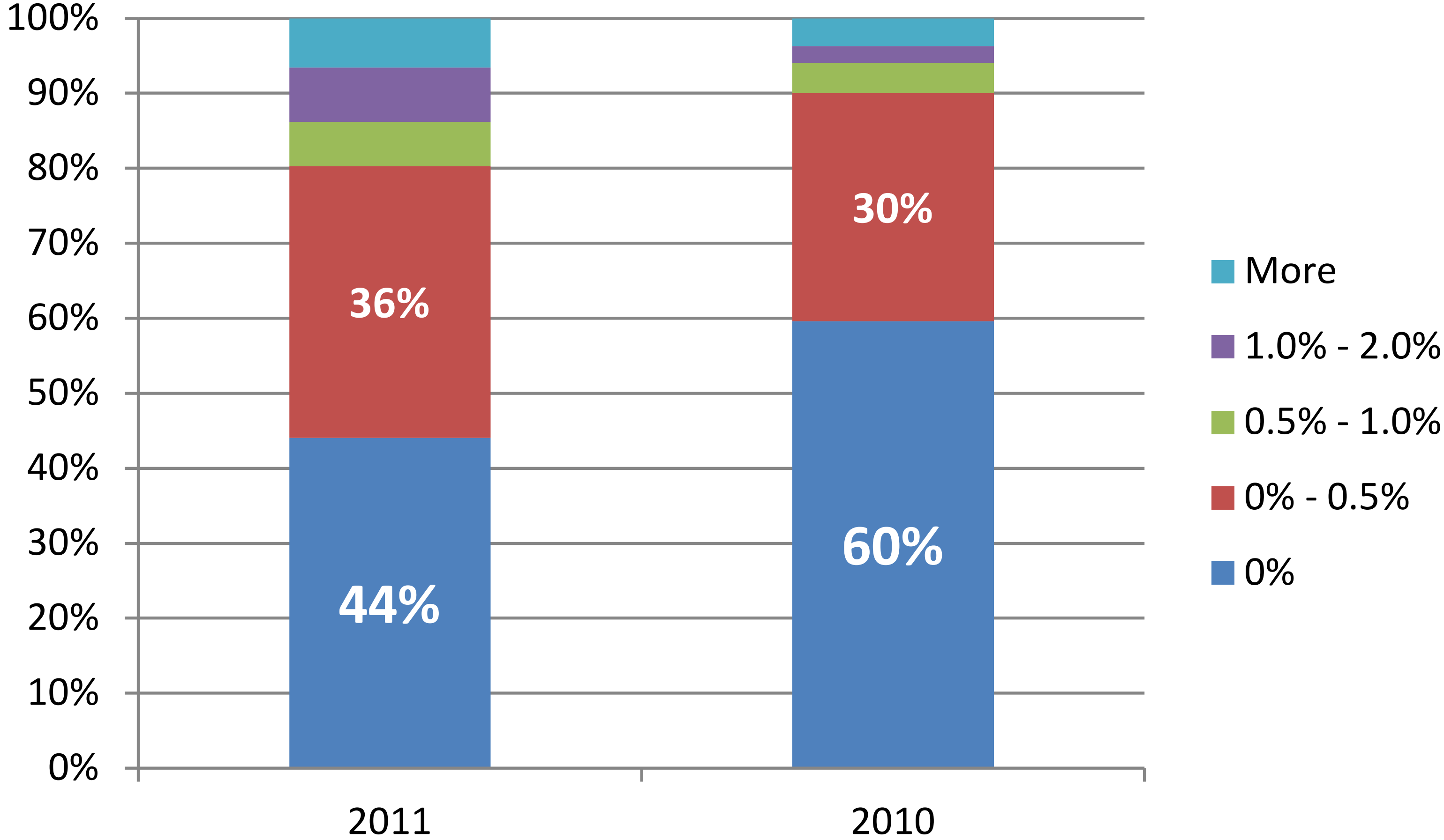
*No significant changes as compared to 2010

source: GNKS 2011

Section 2 – experience and assumptions

- More ISPs are confronted with customers wanting to use IPv6 (56%), and only 7% have not considered deploying IPv6 (yet)
- Overall, less respondents indicate reasons to *not* consider IPv6 deployment, and hurdles seem to get less high – except for information security issues
- By July 2011, 27% of all ISPs were still to deploy IPv6
- Deployed IPv6 was overwhelmingly native, and dual-stack

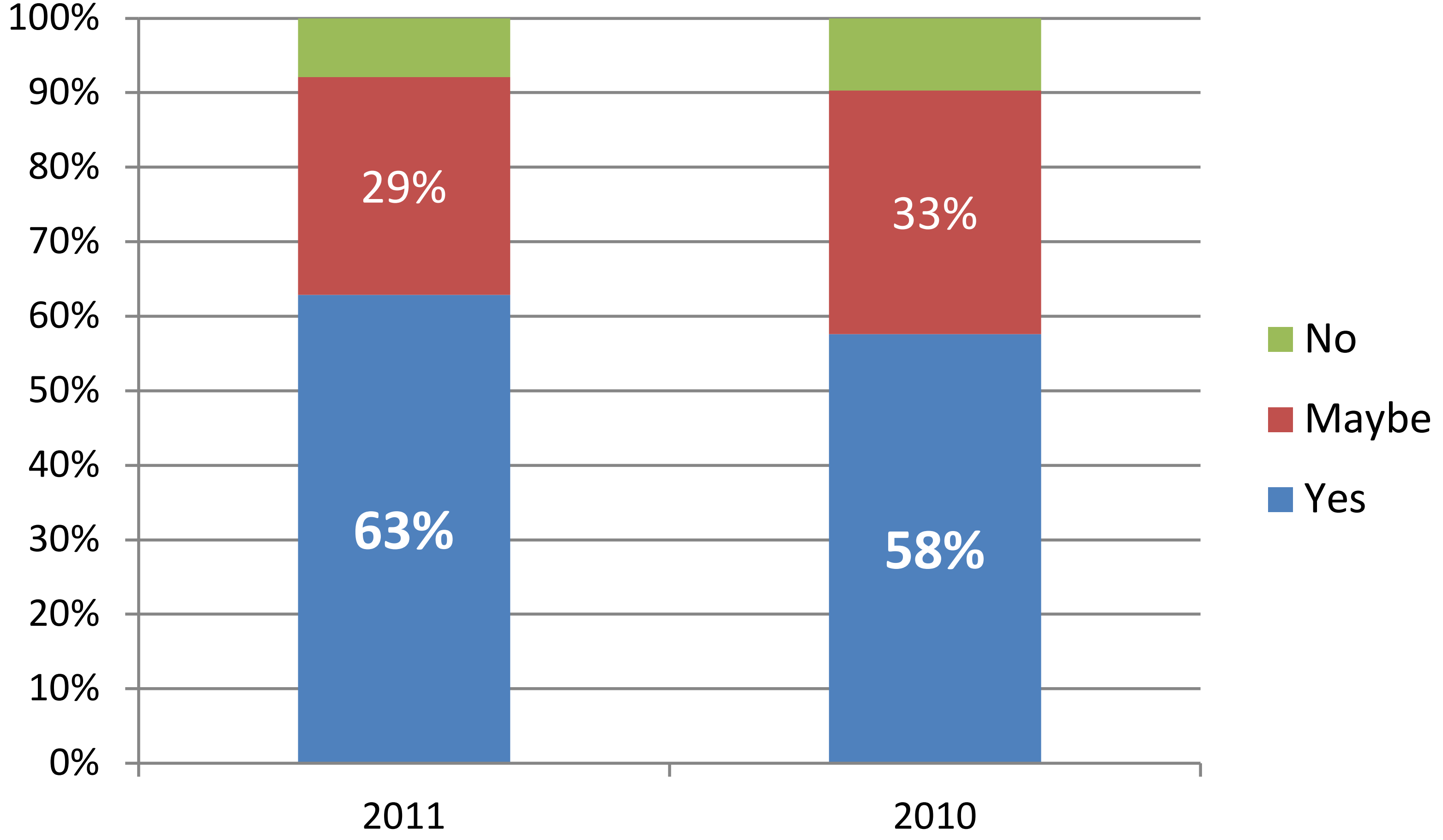
Q7 - What percentage of your customer base uses IPv6 connectivity?



source: GNKS 2011

ISPs only

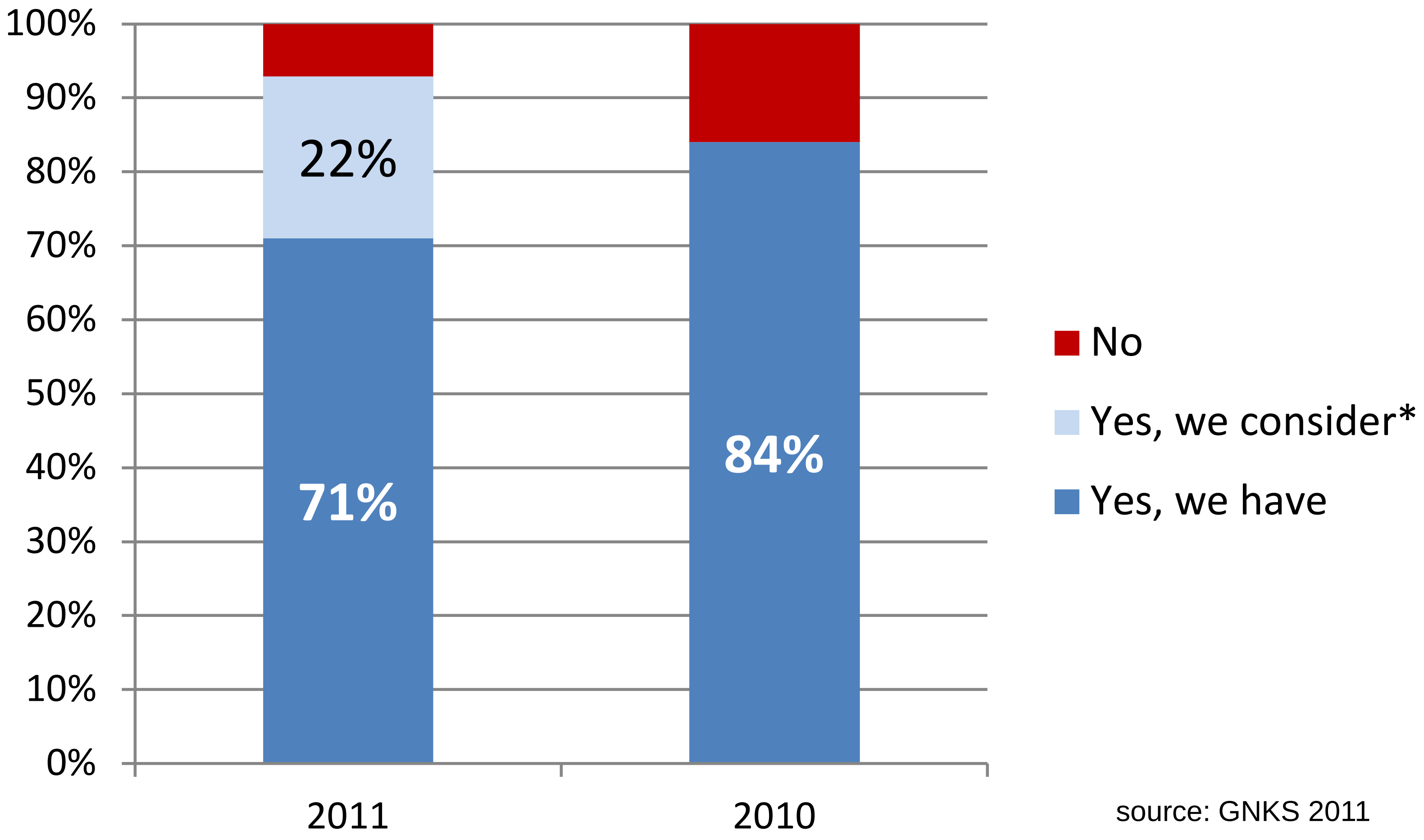
Q8 - Do you consider promoting IPv6 uptake to your customers?



source: GNKS 2011

ISPs only

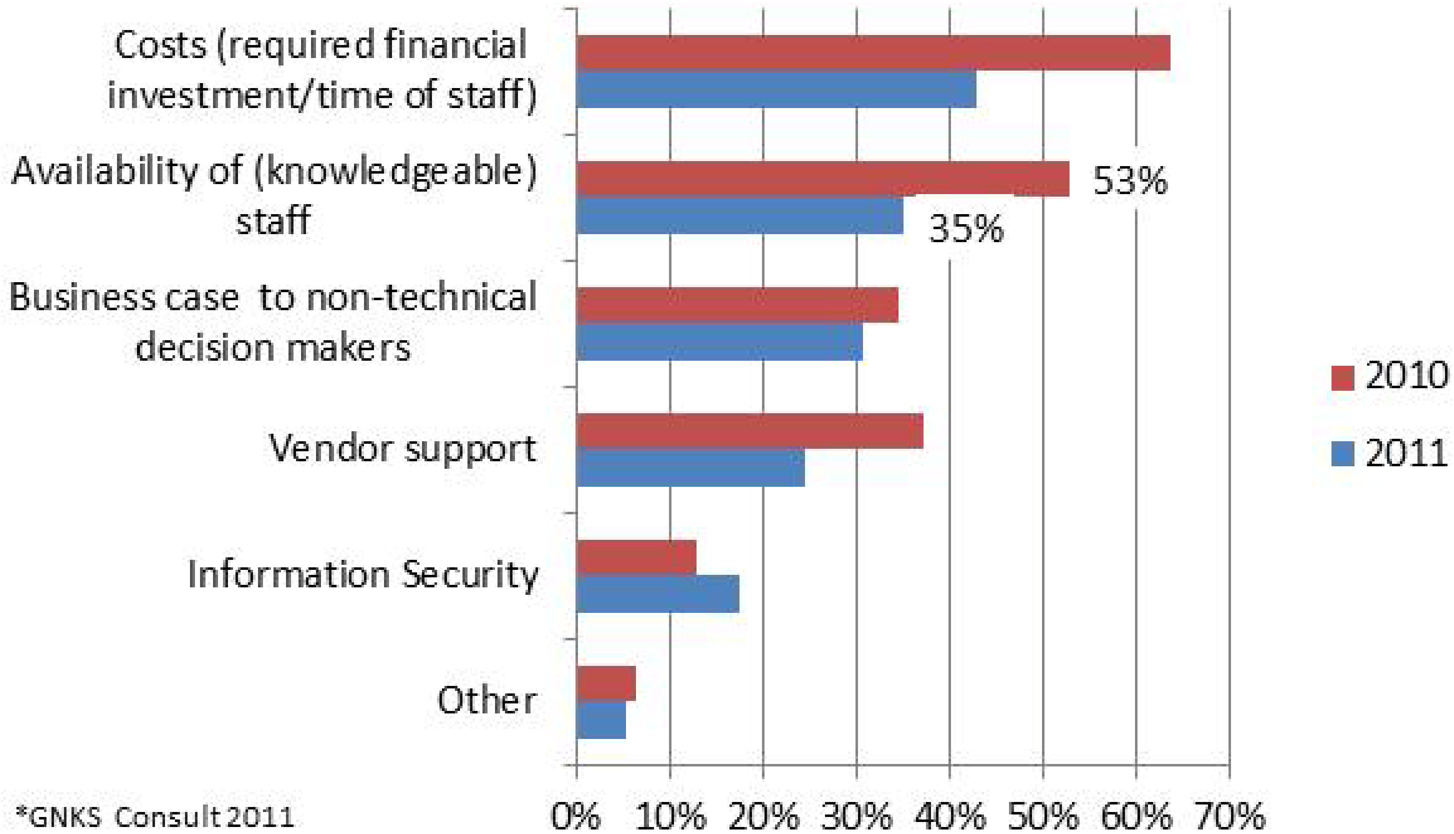
Q10 - Does your organization have, or consider having an IPv6 allocation and/or assignment?



source: GNKS 2011

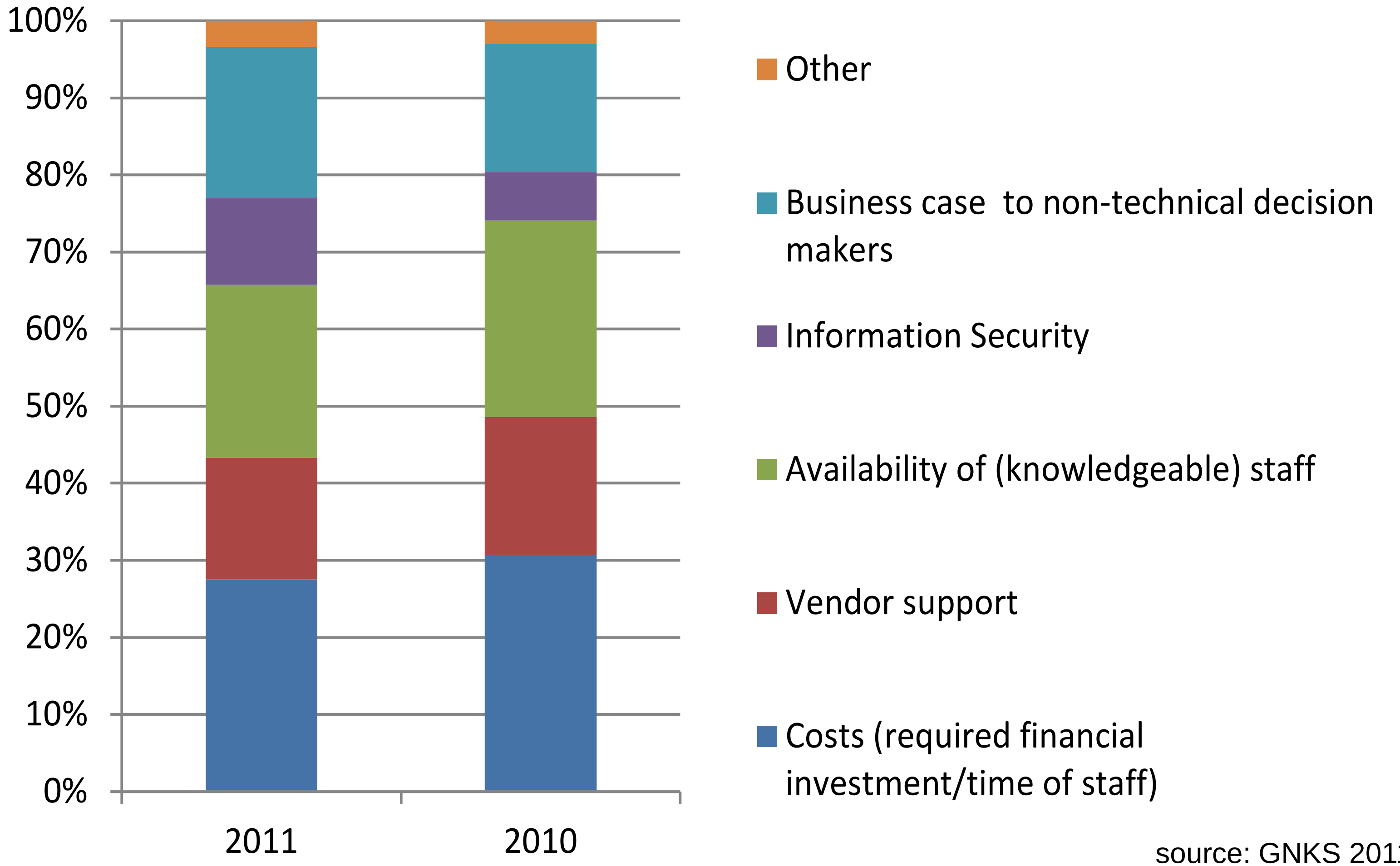
* “consider” was not a seperate option in survey 2010 but combined in “Yes”

Q11 - Why doesn't your organization consider having an IPv6 allocation/assignment?



* Responses to survey Q12 - what you expect to be the biggest hurdle(s) to your organization if you were to deploy IPv6? Only by respondents who do *not* have plans to implement IPv6, yet: 16% of all respondents in 2010, 7% of all respondents in 2011.

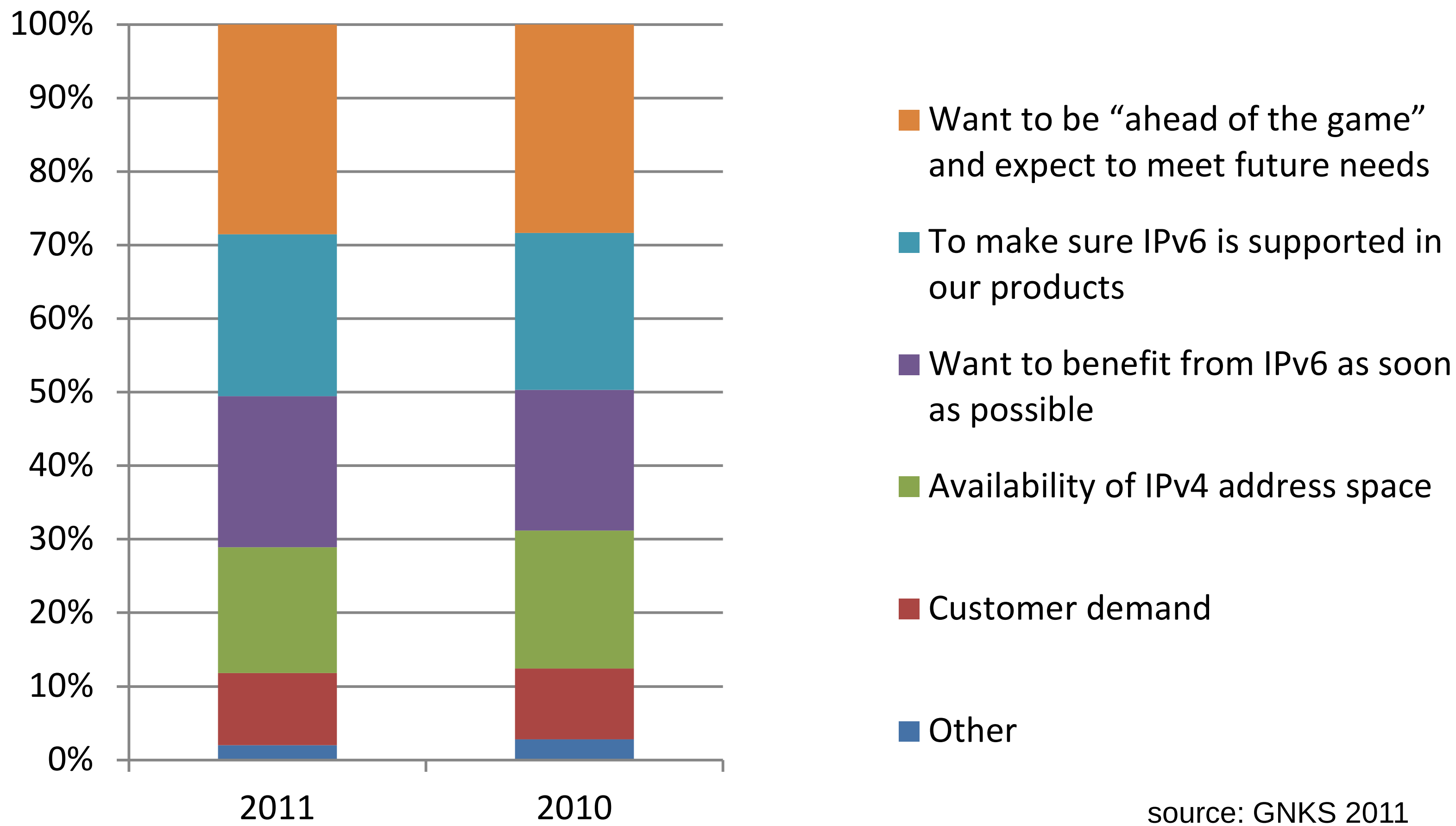
Q12 - What do you expect to be the biggest hurdle(s) to your organization if you were to deploy IPv6?



source: GNKS 2011

Please note these are responses from the 7% indicated to not consider having an IPv6 allocation/assignment,i.e. In 2011 less than half of the number of respondents of 2010.

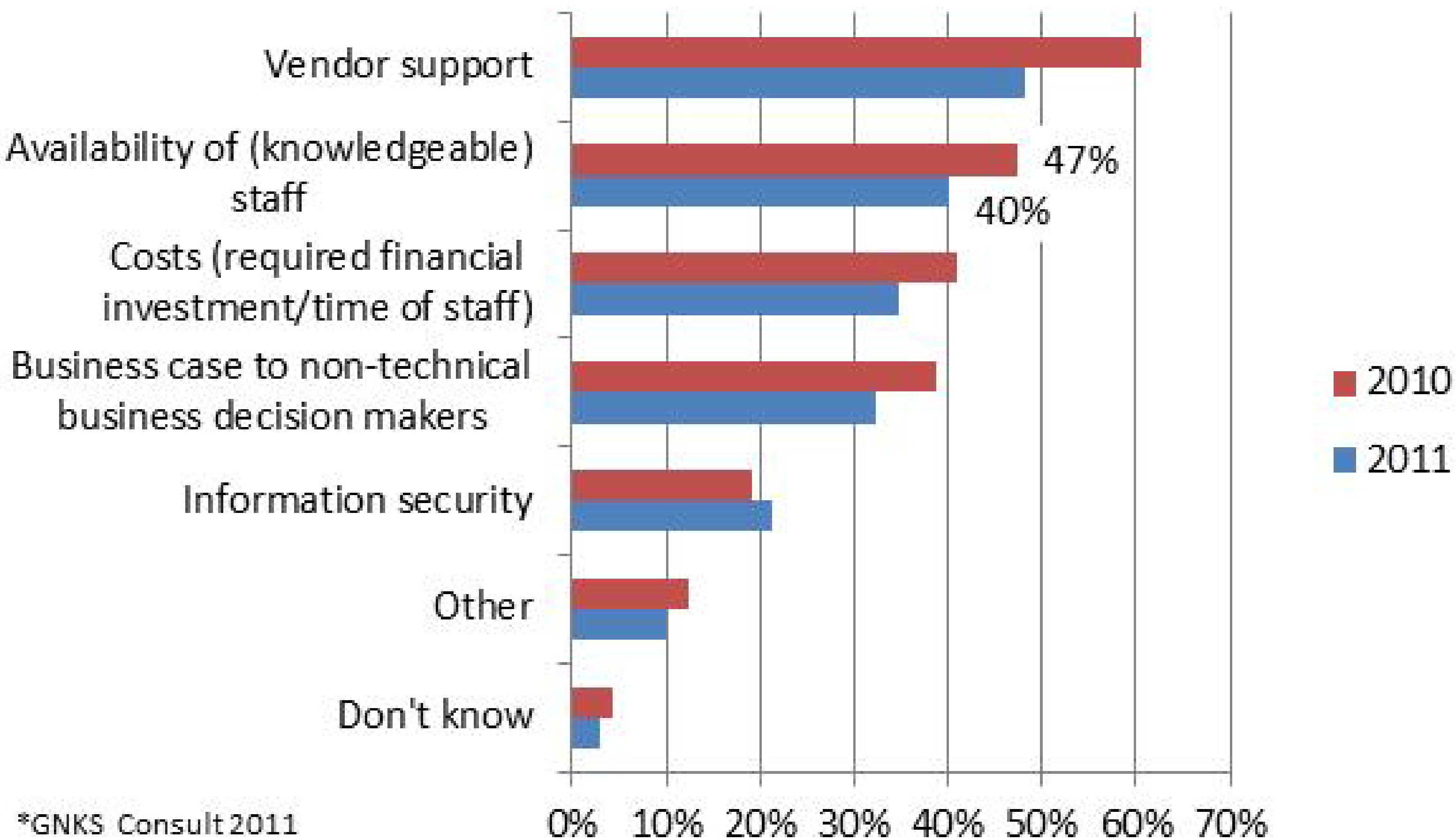
Q13 - What motivated your organization to consider having an IPv6 allocation/assignment?



source: GNKS 2011

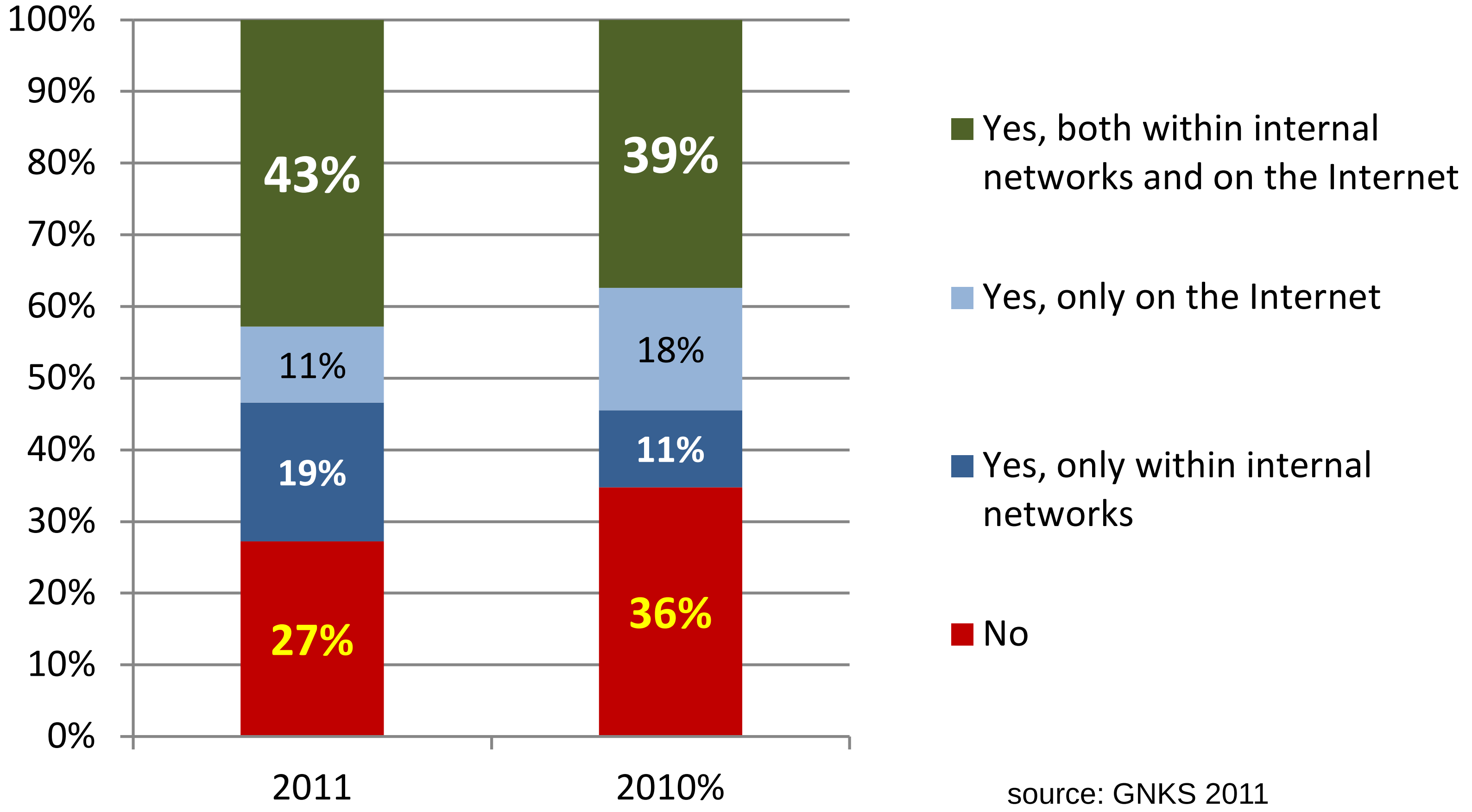
Please note these are responses from the 93% indicated to have or consider having an IPv6 allocation/assignment. Also note that there is no considerable change.

Q16 - What are likely to be the biggest hurdle(s) when deploying IPv6?



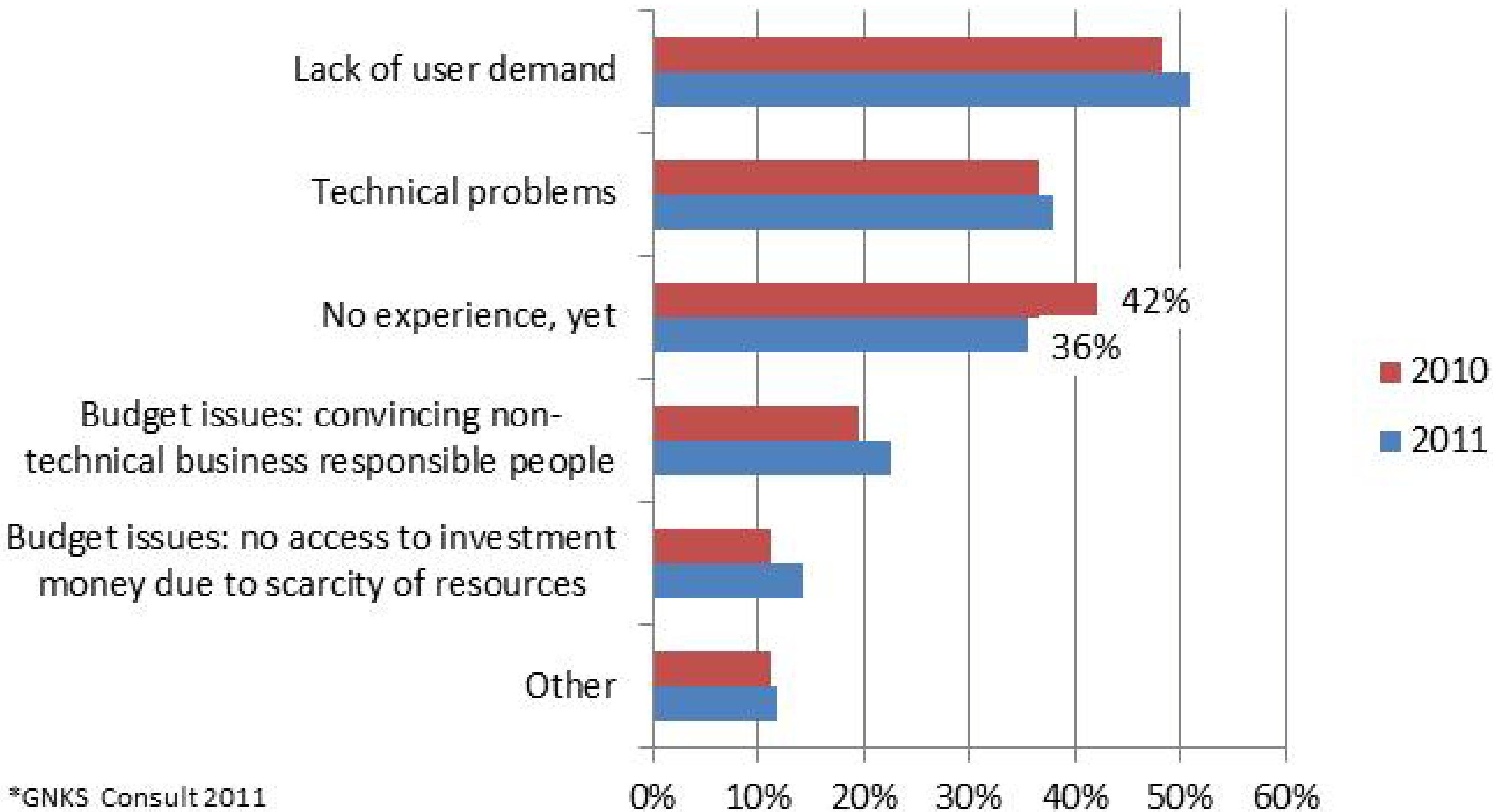
* Responses to survey Q16 - What are likely to be the biggest hurdle(s) when deploying IPv6? Based on experience with organisations who implemented IPv6 (71% in 2011) or have started planning for its implementation (22% in 2011).

Q15 - Does your organization have an IPv6 presence ?



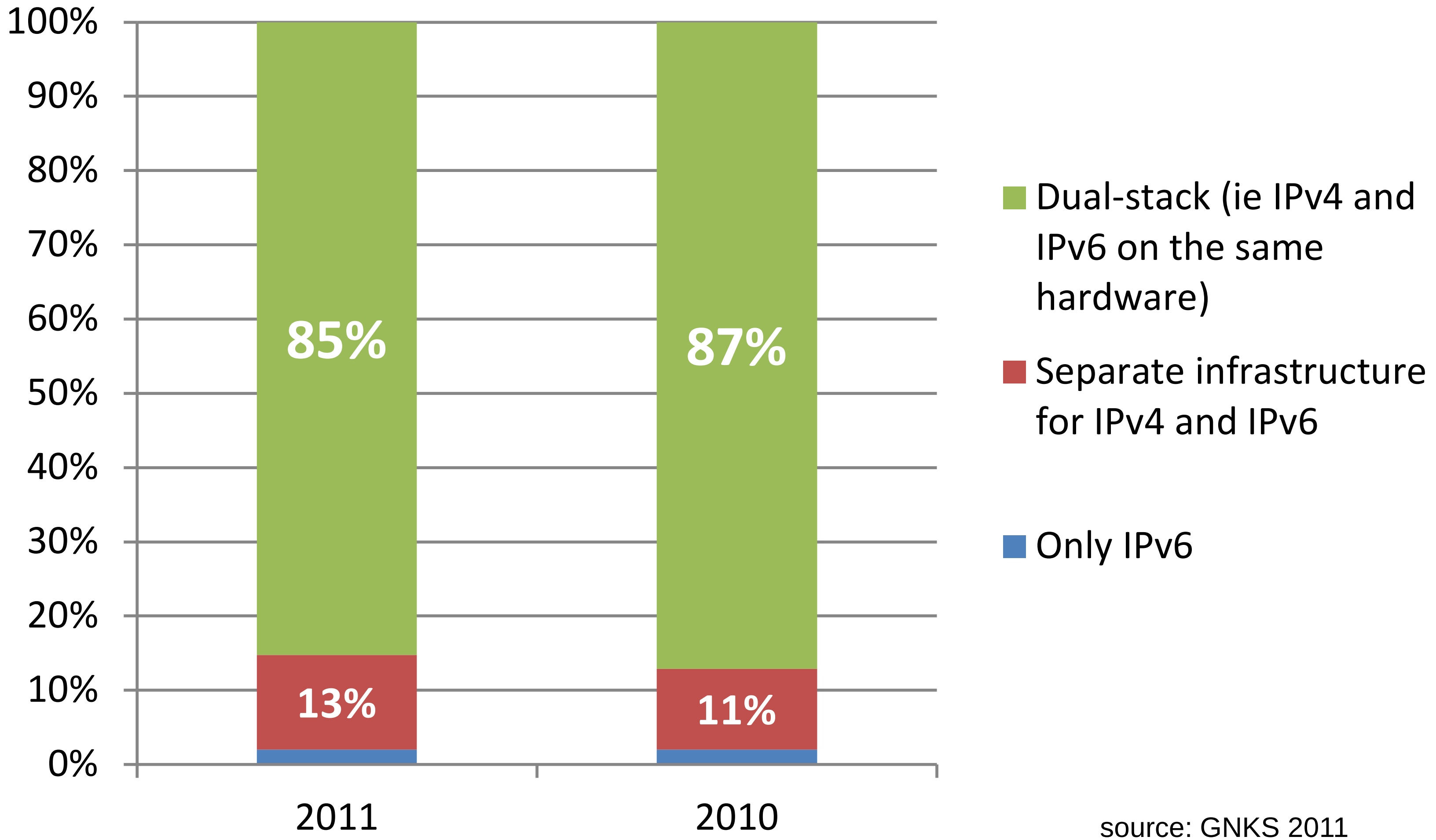
source: GNKS 2011

Q17 - What are the biggest problems with IPv6 in production?



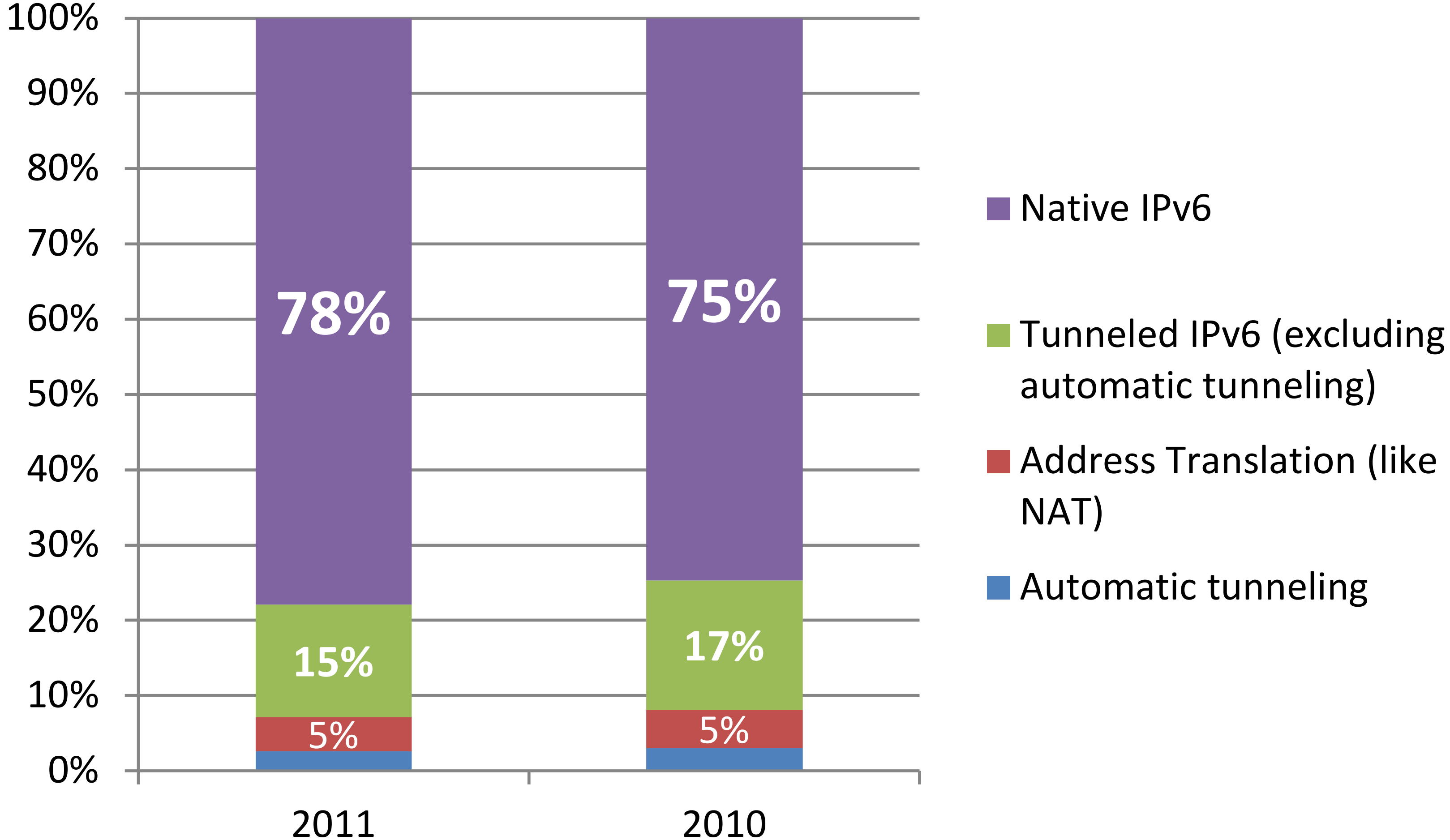
* Responses to survey Q17 - What are the biggest problems with IPv6 in production? Based on experience with organisations who have IPv6 in production.

Q18 - your organization's IPv6 setup



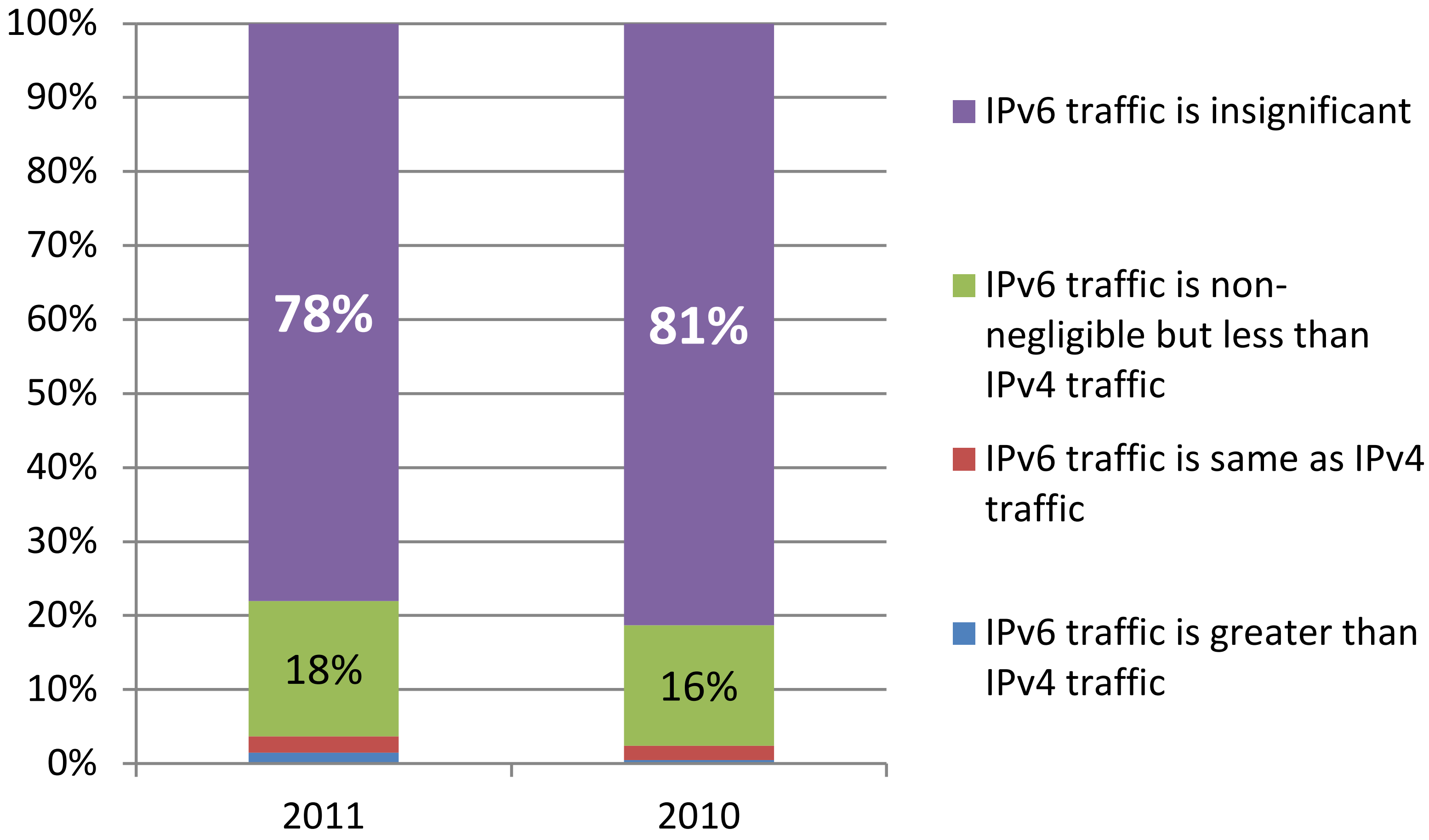
source: GNKS 2011

Q19 - nature of your organization's IPv6 production services



source: GNKS 2011

Q20 - If your organization has IPv6 in production, how does the amount of IPv6 traffic compare to your IPv4 traffic?



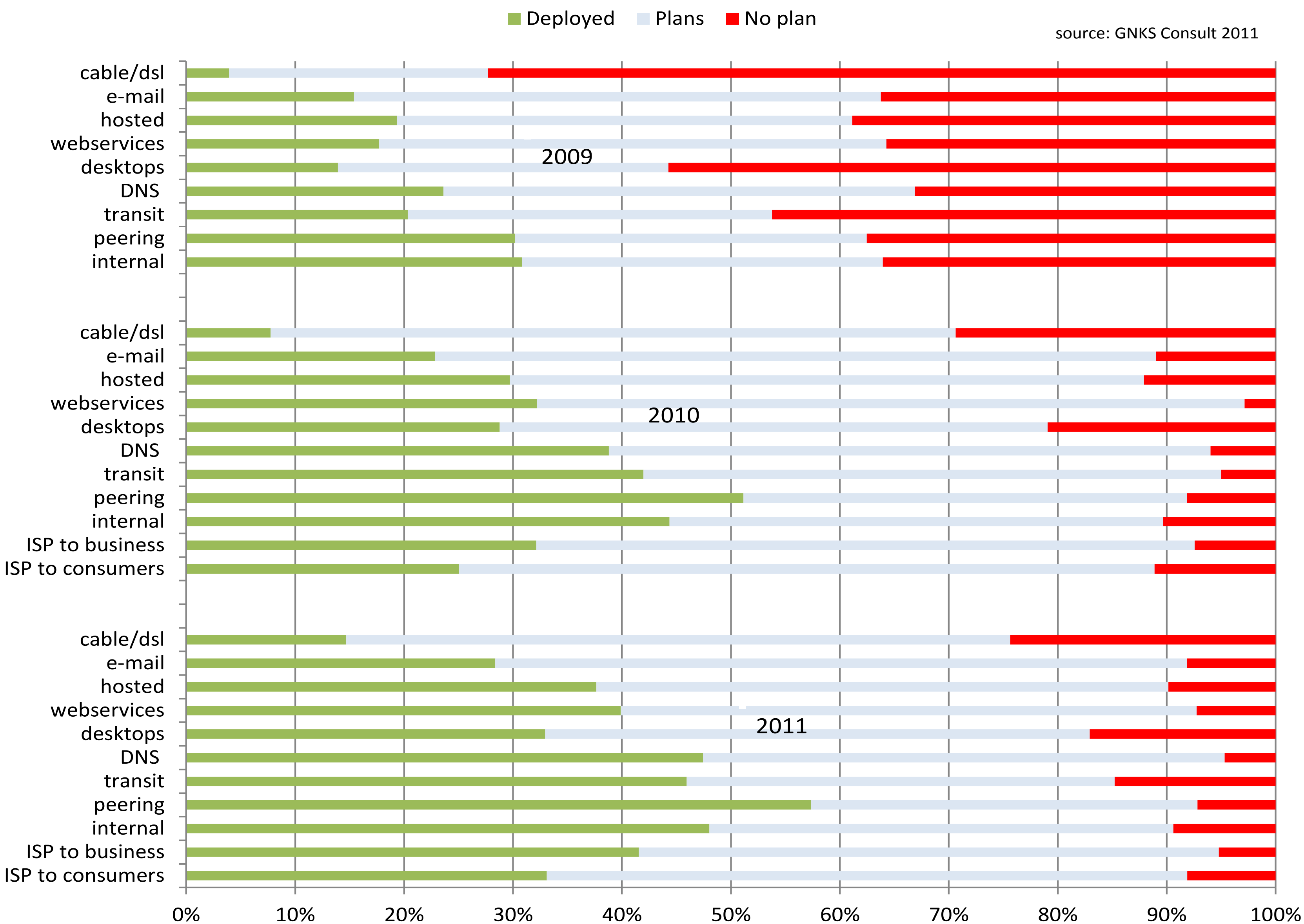
source: GNKS 2011

Section 3 - planning

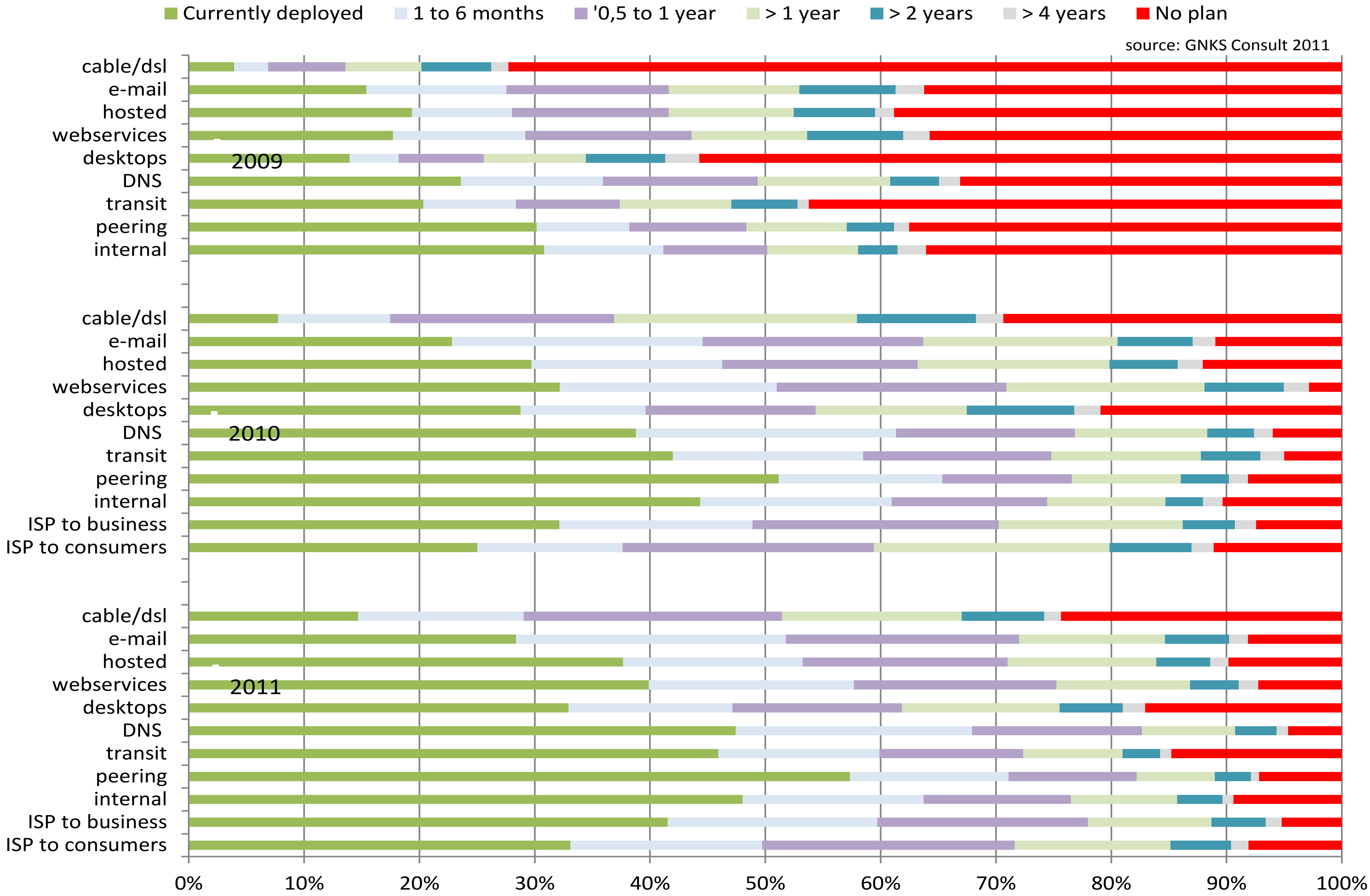
- Preparedness for IPv6 among ISPs has grown, since the original survey in 2009. Preparedness means here that ISPs are implementing IPv6 capability, planning for the deployment, and preparing for the increasing demand that they expect to come from their customers soon.

- Both deployment and planning has improved significantly between June 2009 and June 2010, and even more so towards July 2011 – decreasing the “no plans” even further, and with clear advancement of both plans, and implementation itself.

Q22 - Which best describes your organization's IPv6 implementation (plans)?



Q22 - Which best describes your organization's IPv6 implementation (plans)?



We thank all respondents for their contributions !

94% 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

GNKS Consult