

**prop-105:**

# Distribution of returned IPv4 address (Modification of prop-088)

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JP IPv4 address allocation discussion team

# Introduction

- This policy proposes to define a separate distribution policy for all non-103 IPv4 address blocks in the APNIC pool, to start the distributions once "Global policy for post exhaustion IPv4 allocation mechanisms by the IANA" is activated.

# Current IPv4 address allocation

- We're now using 'final /8 policy' to allocate IPv4 address.
  - Maximum /22 for one LIR from the reserved /8 for this purpose (103/8)
  - <http://www.apnic.net/policy/add-manage-policy#delegations>
- The same policy applies for distributions of:
  - returned IPv4 address to APNIC
  - re-allocations to APNIC from IANA

Prop-088

Situation changed for IPv4 address allocation

- Global Policy “Global Policy for Post Exhaustion: IPv4 Allocation Mechanisms by the IANA” was ratified (May 2012)
  - IPv4 address returned to IANA will be distributed to RIRs
    - ARIN (/8+/19), RIPE-NCC (/12+/14) and APNIC (35 /16s + 72 /24s.) returned historical IPv4 address space.
    - It is estimated **approximately /10** could be re-allocated to APNIC from IANA by the global policy
- APNIC return pool: approximately /13 (12\*/16)

# Proposal

- Modify prop-088 to distribute non-103 IPv4 address blocks to APNIC account holders.

Non-103 IPv4 address:

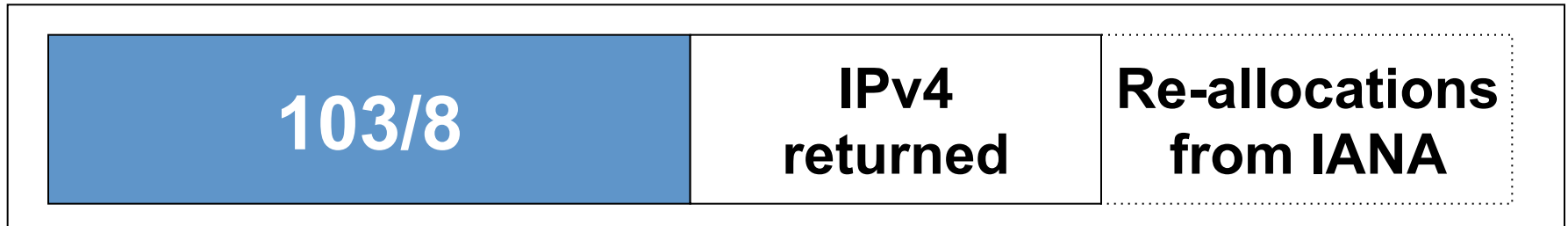
- returned IPv4 address to APNIC
- re-allocations to APNIC from IANA

# How to distribute

- If APNIC account holder, who was allocated an /22 from final /8 pool needs an additional IPv4 address block, they are eligible to receive another distribution of IPv4 block.
- Same policy as the final /8 policy will be applied in terms of the criteria and the size of the distribution given the requestor has utilized a total of /22 block from 103/8.
- This policy will be effective after allocation of returned IPv4 address blocks from IANA.

# Proposal Summary

## APNIC IPv4 pool

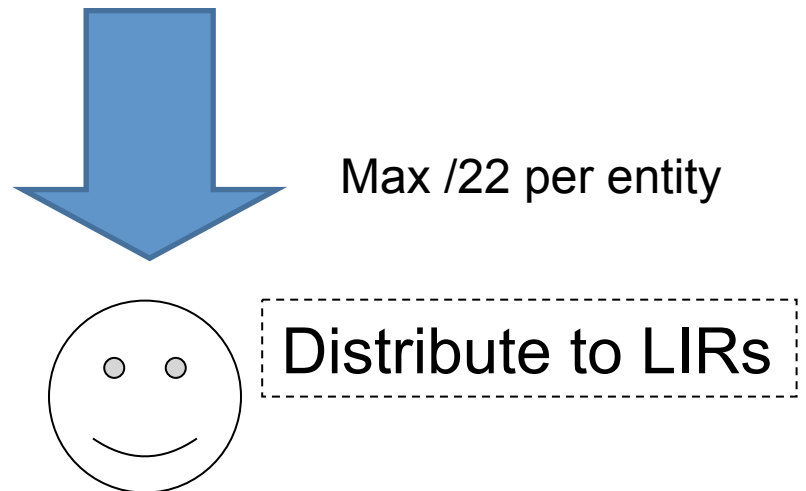
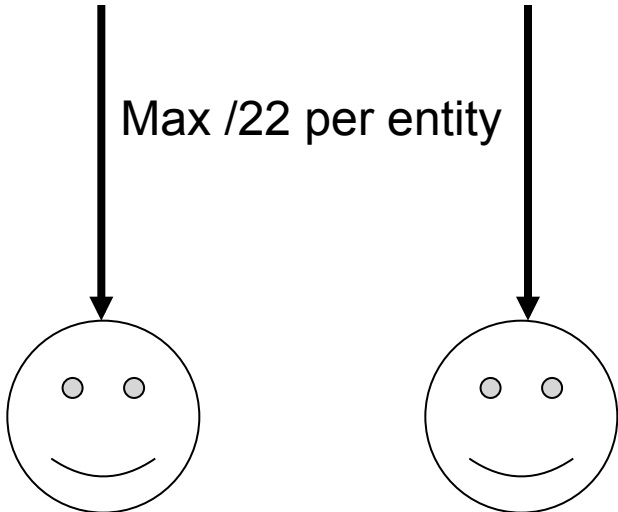


Roughly /8 remaining

Roughly **/10+**

Max /22 per entity

Max /22 per entity



# Pros/cons

- Advantages: Able to utilize non-103/8 address pool in APNIC for immediate distribution, instead of keeping as a reserve, in addition to 103/8.
- Disadvantages: Adopting this policy will discourage IPv6 deployment in the APNIC region. However, according to our survey, majority of the respondents responded revising the policy does not impact their IPv6 deployment plan.



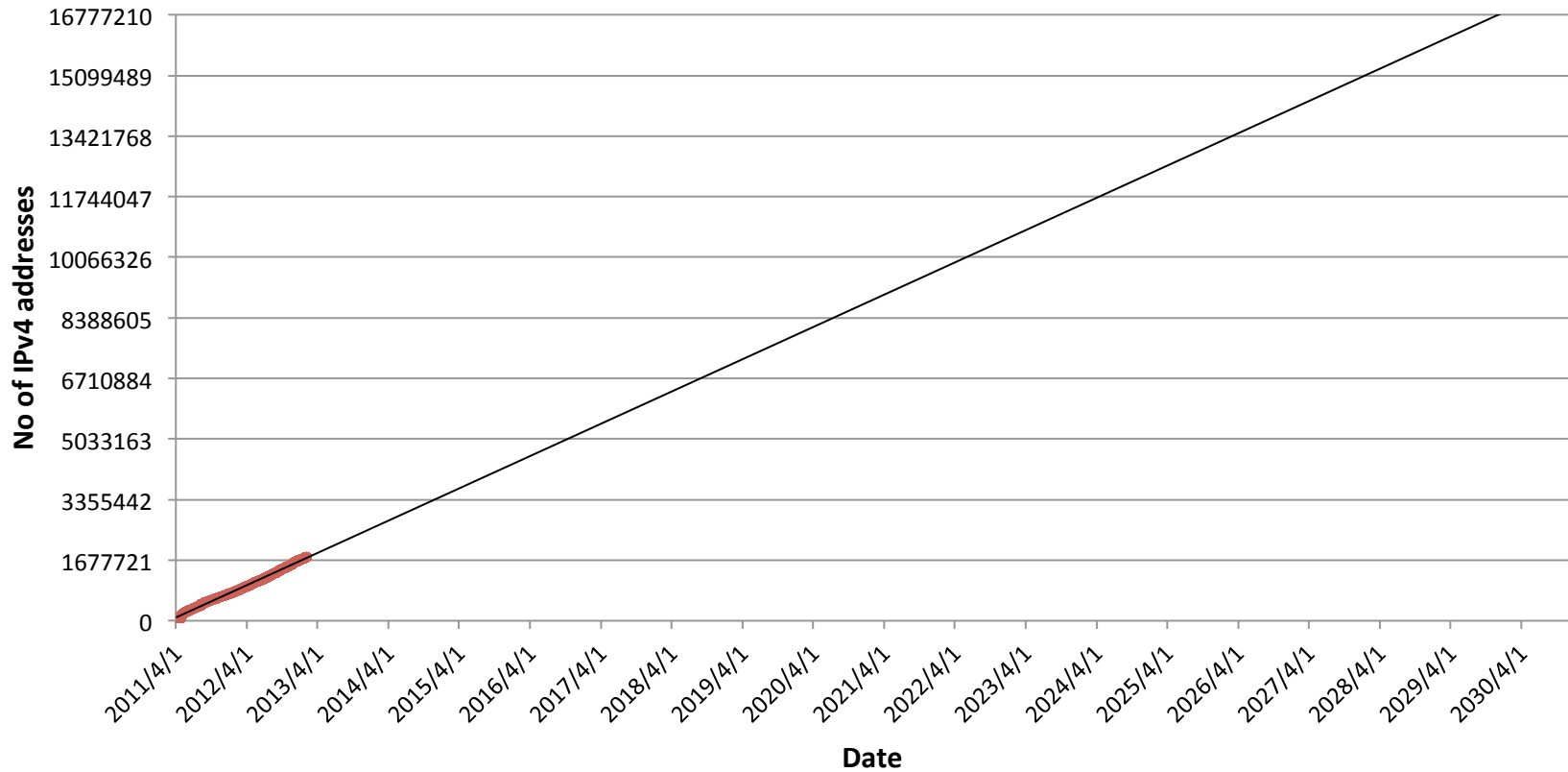
# Summary

- Propose to modify prop-088 to distribute
  - returned IPv4 address to APNIC
  - re-allocations to APNIC from IANA
- Same policy as the final /8 policy will be applied in terms of the criteria and the size of the distribution given the requestor has utilized a total of /22 block from 103/8.

# REFERENCE

# 103/8 Delegation

103/8 delegation trend



# Survey: What would ISPs think about revising the current policy?

- We conducted a survey to hear opinions of APNIC members and LIRs in JPNIC region.
- We wanted to find out;
  - Would it help if IPv4 could be distributed to those who need it now, from the “non-103/8” pool ?
  - Would changing the distribution policy for “non-103/8” pool hinder IPv6 deployment plans by ISPs?

# Overview of the Survey (1)

	APNIC region	JPNIC region
Survey Period	26 Nov – 10 Dec, 2012	30 July- 10 Aug, 2012
Target	- LIR under APNIC Management - Asia Pacific community	- LIR under JPNIC Management
Responses	89 organisations (including 56 LIRs)	61 LIRs

150 organisations responded in total

# Overview of the Survey (2)

- Questions :6 questions in total
  - Would you apply if additional IPv4 could be allocated?
  - Use of IPv4 address for such allocation
  - Effect on IPv6 deployment if further IPv4 could be allocated
  - Minimum size required to make such allocation useful
  - Opinion about revising the current final /8 policy
  - Plus Fee comments section

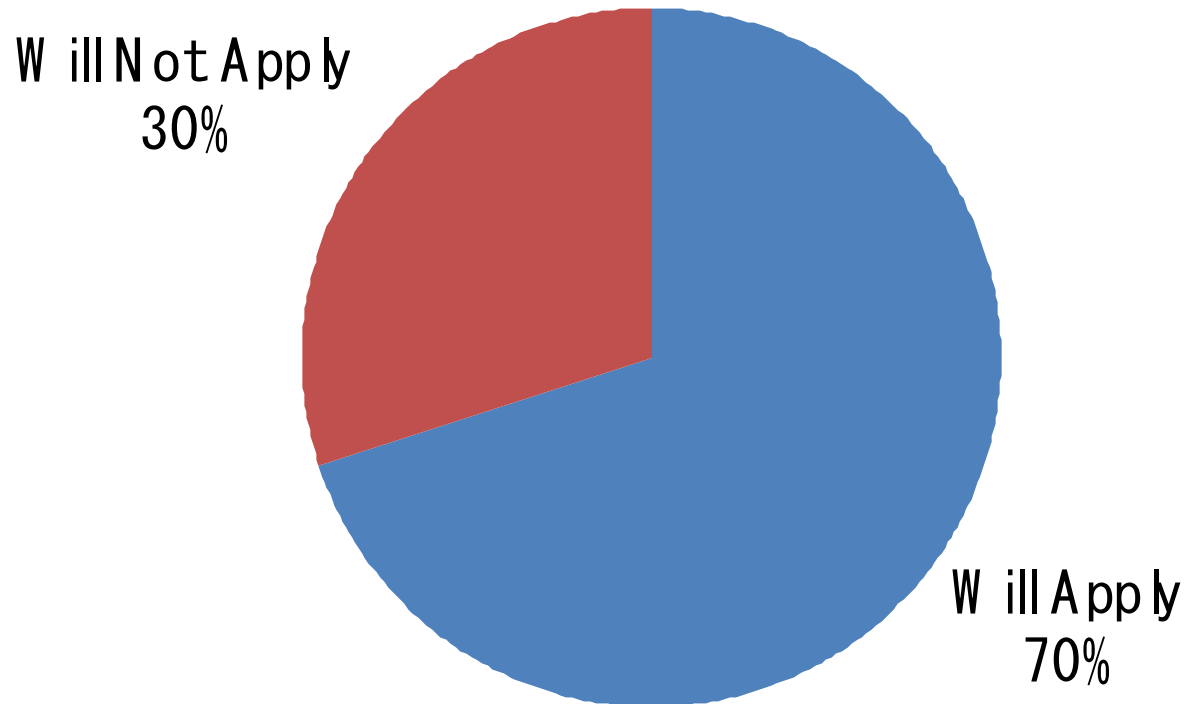
# Summary of the Survey Result

- If further allocations from the “non-103/8” pool is possible;
  - Will apply 70% > Will NOT apply 30%
- Those who “Will Apply” has higher % of IPv6 allocations
  - Will apply 75% > Will NOT apply 53%
  - Still needs IPv4, even if working on IPv6 deployment
- 86 % responded that revision of the policy will not effect IPv6 deployment plans
- 69% in favor of revising distribution policy for non-103/8 blocks
- 39% think that even /22 and less is useful if it is possible to receive a delegation

# Survey Result:Q1

## Allocation from non-103/8 blocks

Question: If it is possible to receive a delegation of IPv4 address block, in addition to the delegation allowed under the final /8 policy, would your organization request to receive such additional IPv4 block?





# Survey Result:Q1

## Opinions For/Against

- Opinions “Will Apply”
  - If make efficient use if there are needs
  - IPv4 is necessary until IPv6 is widely deployed
  - It takes time to deploy IPv6 (especially in developing economies)
  - Already causing problems in providing service(especially new LIRs and LIRs in developing economies)
- Opinions “Will Not Apply”
  - We should deploy IPv6
  - Efficient utilization is desirable, but perhaps only some (big) LIRs can receive the allocations

# Survey Result: Q2

## How allocated IPv4 will be used

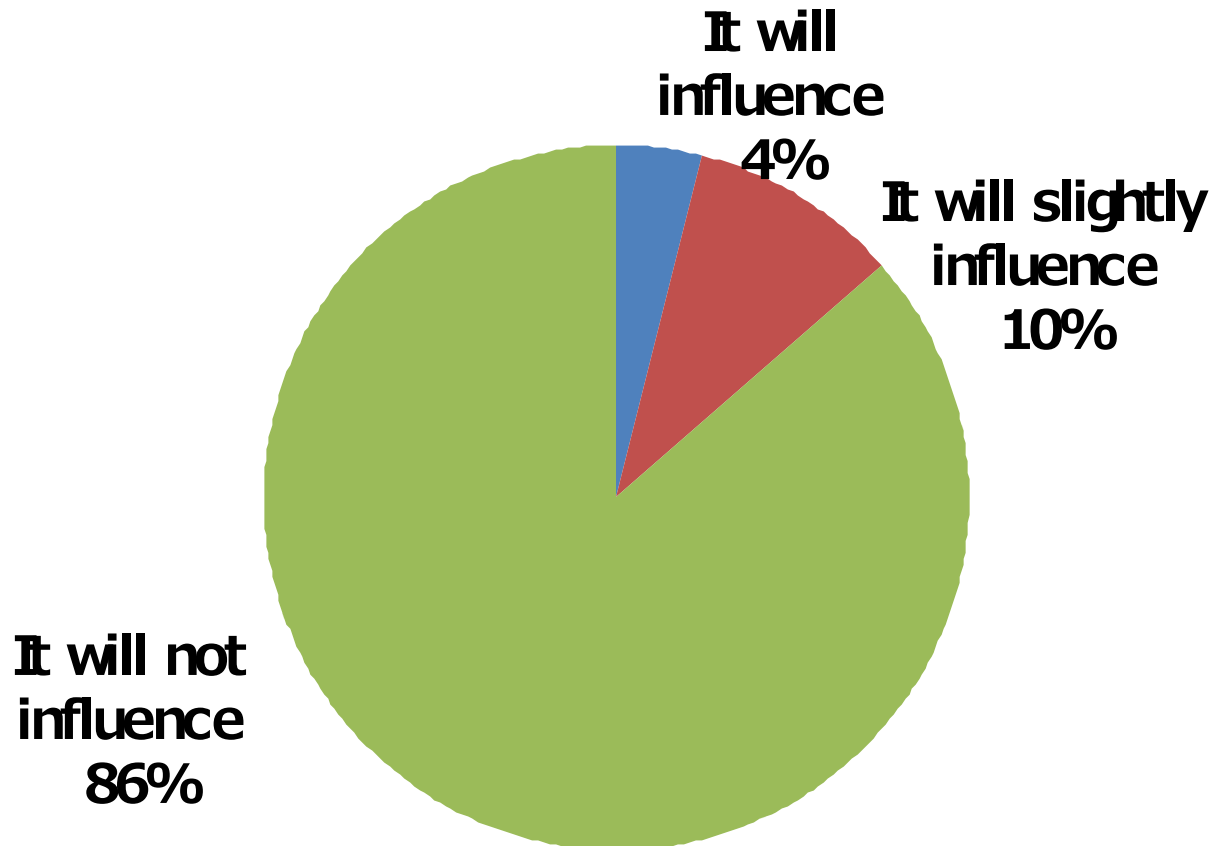
Question: Please share how you plan to use the IPv4 address block you will request; It could be what you roughly have in mind at this stage.

- 98% responded some concrete plans
  - New customers/Expanding needs of existing customers: 56 organisations
  - Co-existence with/Prepare for IPv6: 3 organisations
  - Assignment where are completely unable to assign IPv6: 3 organisations
  - ...and others

# Survey Result: Q3

## Effect on IPv6 Deployment Plan

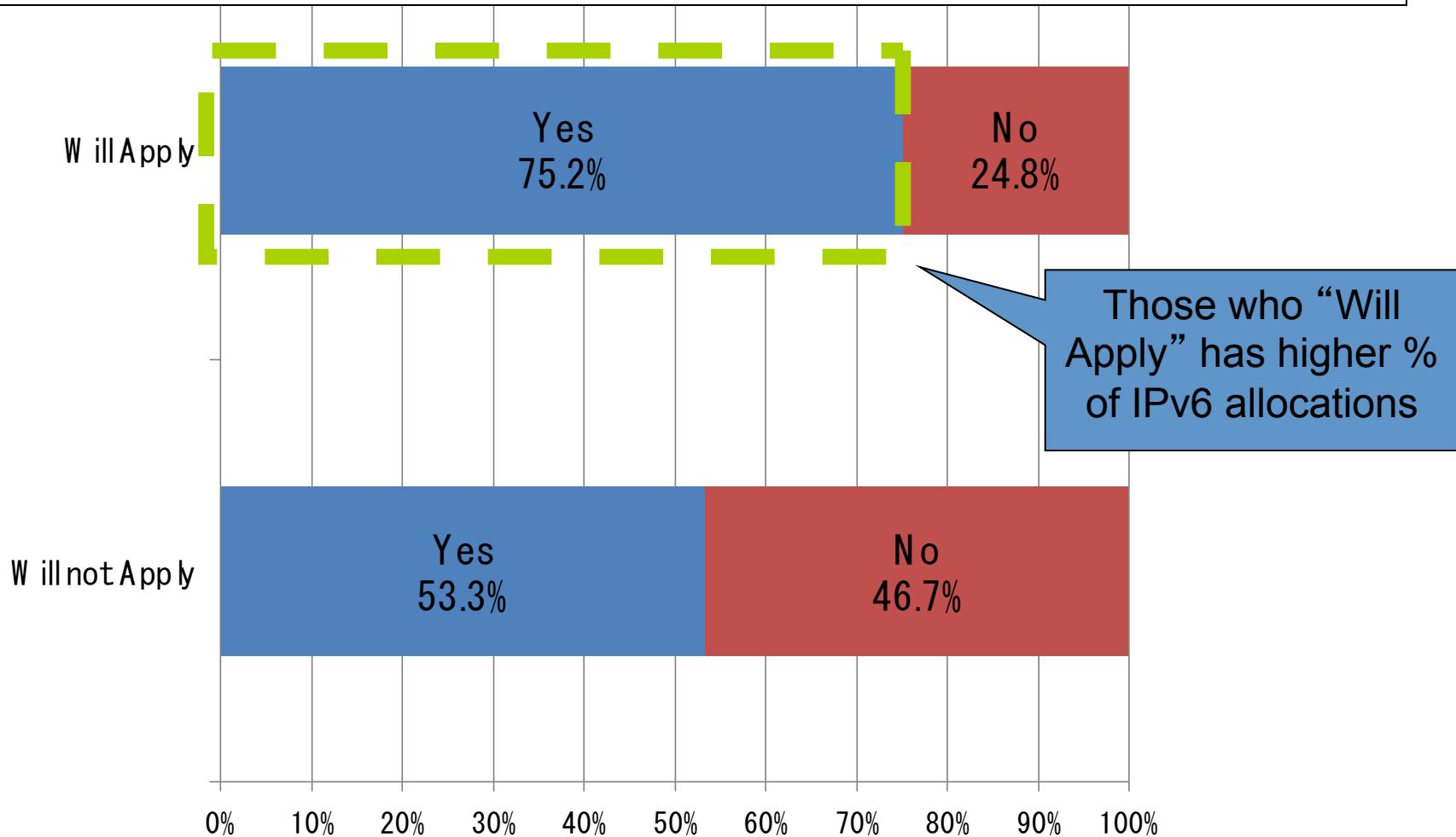
**Question:** If such additional delegation of IPv4 address block is possible, would it influence preparation for IPv6 in organization in such a way as to postpone or stop your IPv6 deployment plan?



# Survey Result: Q3-2

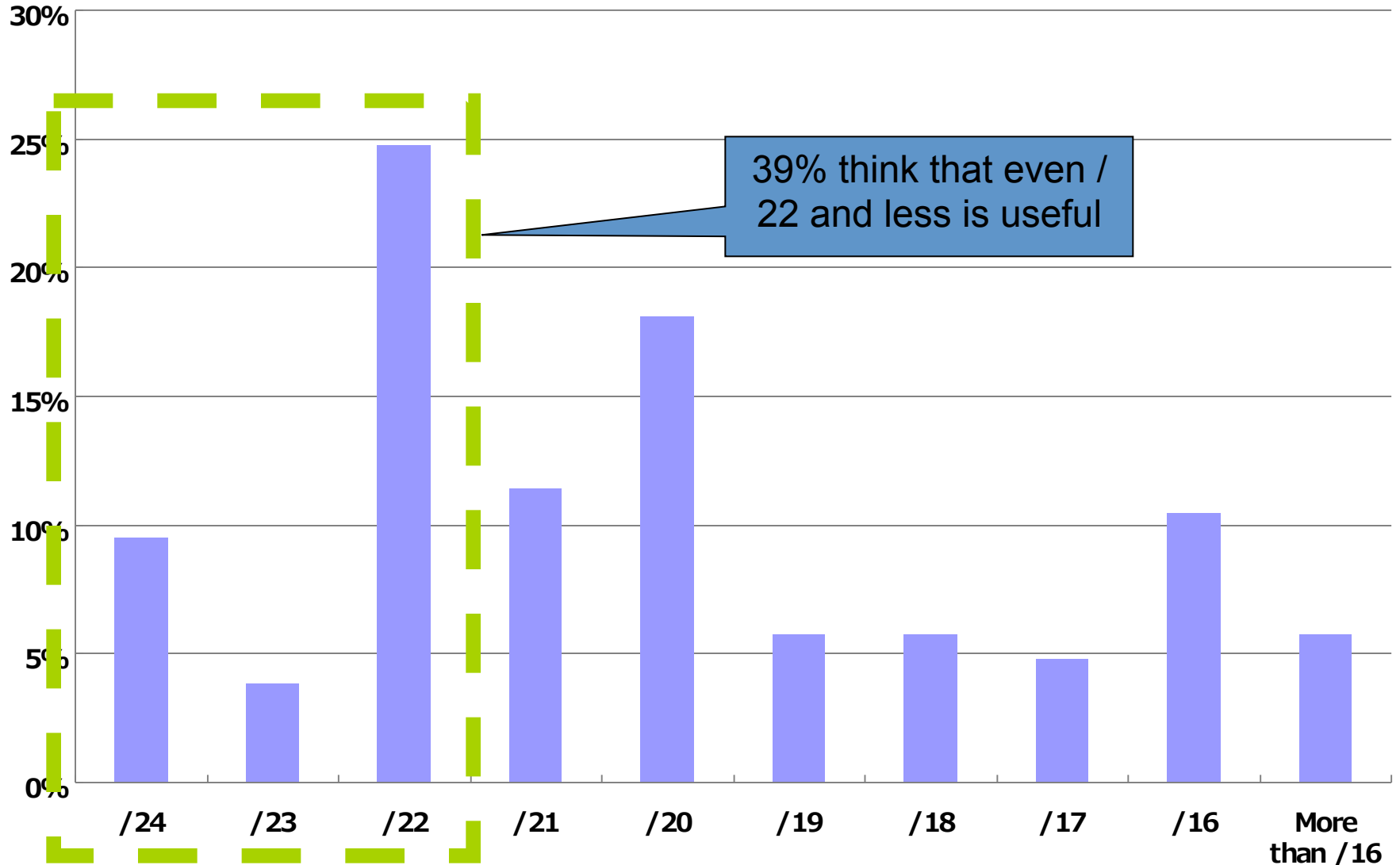
## Effect on IPv6 Deployment Plan

Question: Have you already receive IPv6 delegation(s)?



# Survey Result: Q4

## Minimum size required to be useful



# Survey Result: Q5

## Needs to re-consider the final /8 policy

Question: There are also other opinions in APNIC forum about the need to consideration to define a separate policy from the current final /8 policy. What do you think about such opinion?

