



Policy SIG  
APNIC 21@Perth, Australia

# Survey results in JP on IPv6 assignment size

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# Overview of the Survey

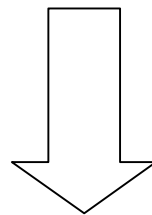


# Introduction

This presentation introduces the survey result in JP on IPv6 assignment size

# Background

- A new assignment size of /56 for home/SOHO users was proposed by Geoff Huston in APNIC20 (prop-031-v002)
- Some LIRs in JP expressed strong concerns



Is this just the minority, or representative of JP?

- JPNIC felt the needs to look into the situation



# Objective of the survey

- Study the impact of the IPv6 assignment policy change on LIRs over :
  - Service, Network, Customer, Cost
- Compare the impact over three different proposals discussed in APNIC, RIPE and ARIN
  - Is a particular proposal more agreeable than the others?



# Overview

- Target
  - 64 LIRs with IPv6 allocation via JPNIC
- No. of responses
  - 36 LIRs(56%)
- Types of service
  - Testing 72.2%
  - Commercial 27.8%

# Method

- Conducted an e-mail questionnaire to LIRs on the four areas for each of the three cases
- Case1(APNIC20)
  - /56 must be assigned to SOHO/home-users
- Case2(RIPE50/51)
  - LIRs can decide /48 or /56 as an assignment
- Case 3(ARINXVI)
  - LIRs can assign any size by bite e.g., /61, /39, etc

Least flexible



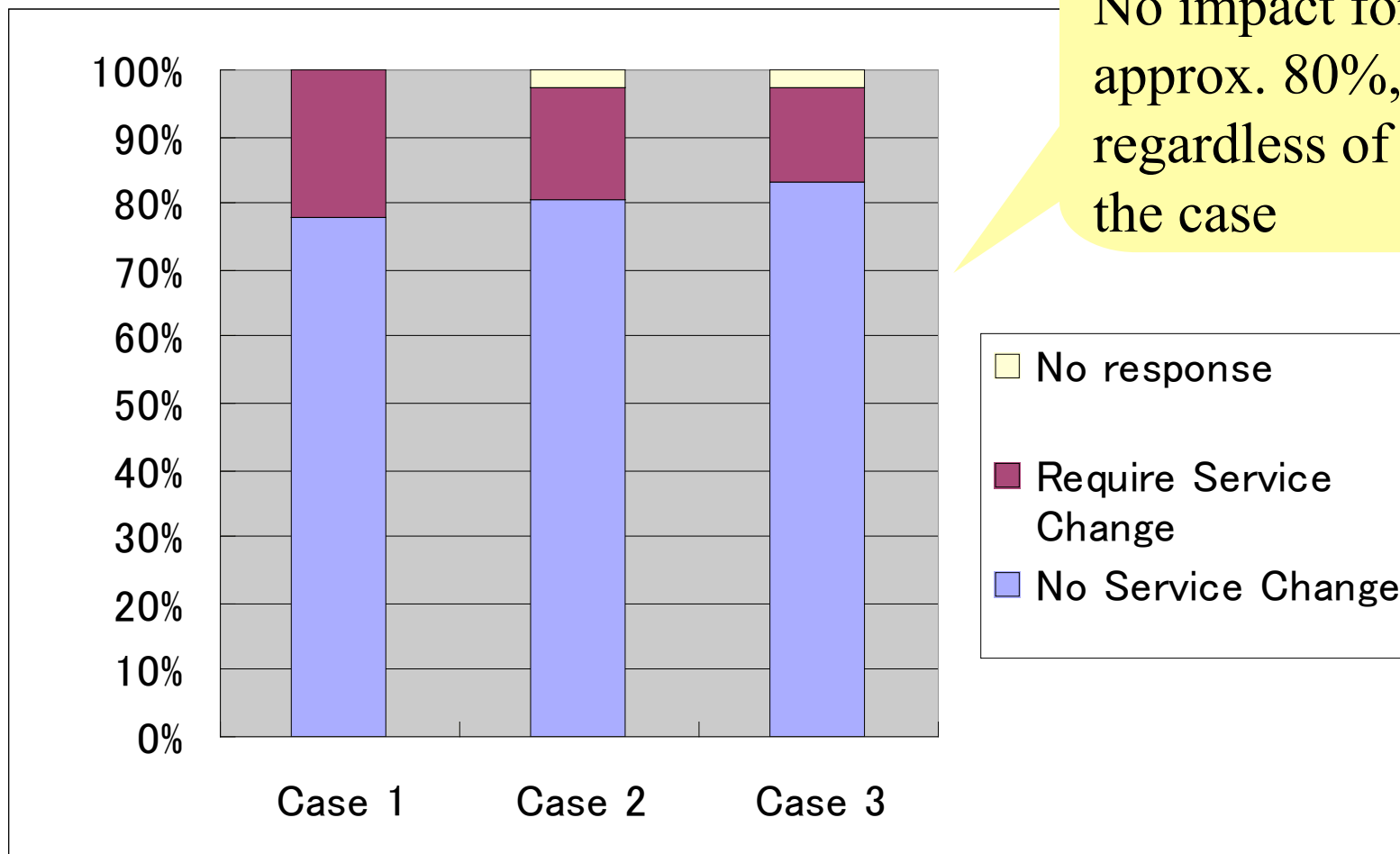
Most flexible



# Results

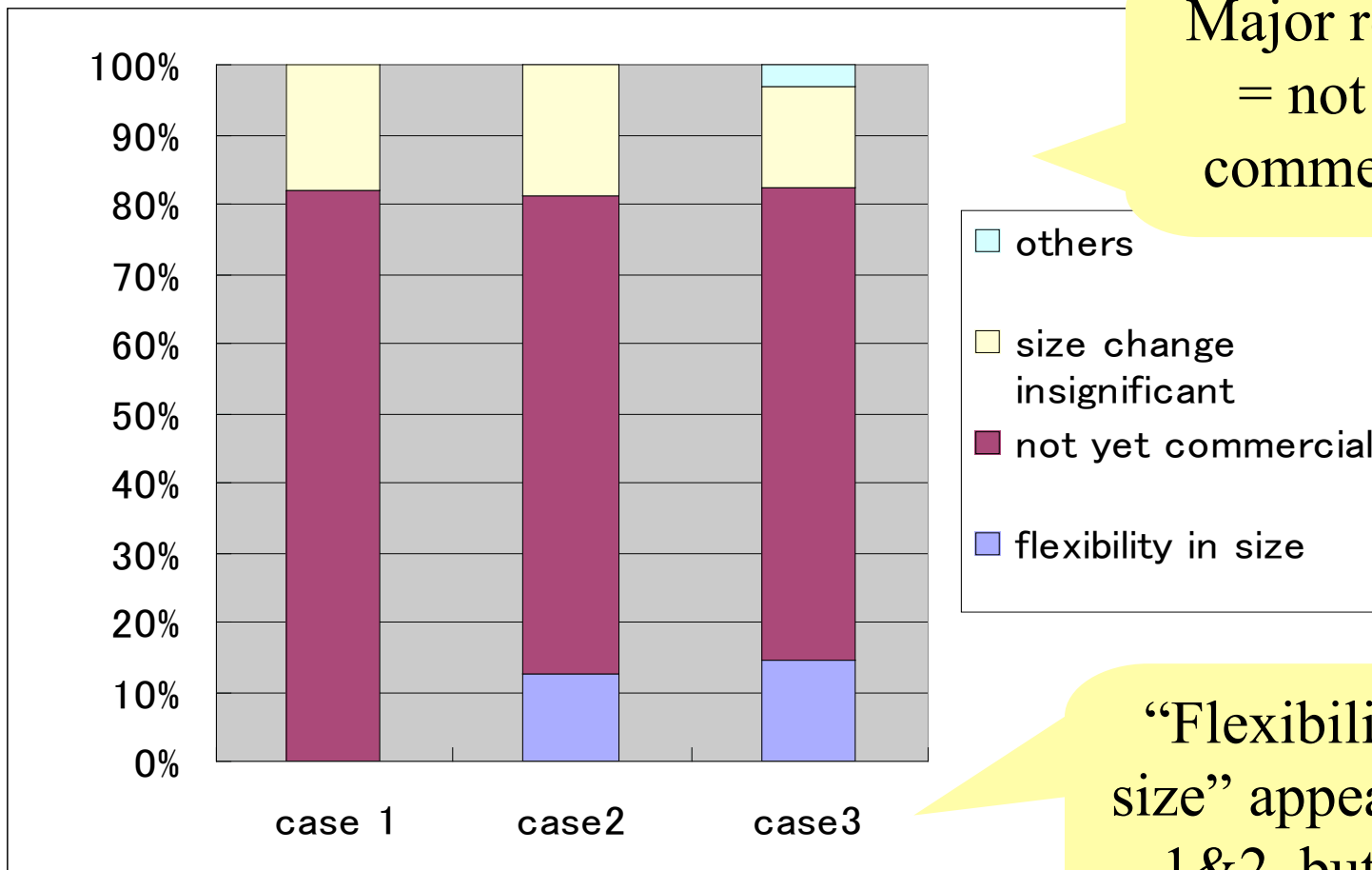


# 1) Impact on Service



Flexibility of assignment size

# Reasons for No Service Change

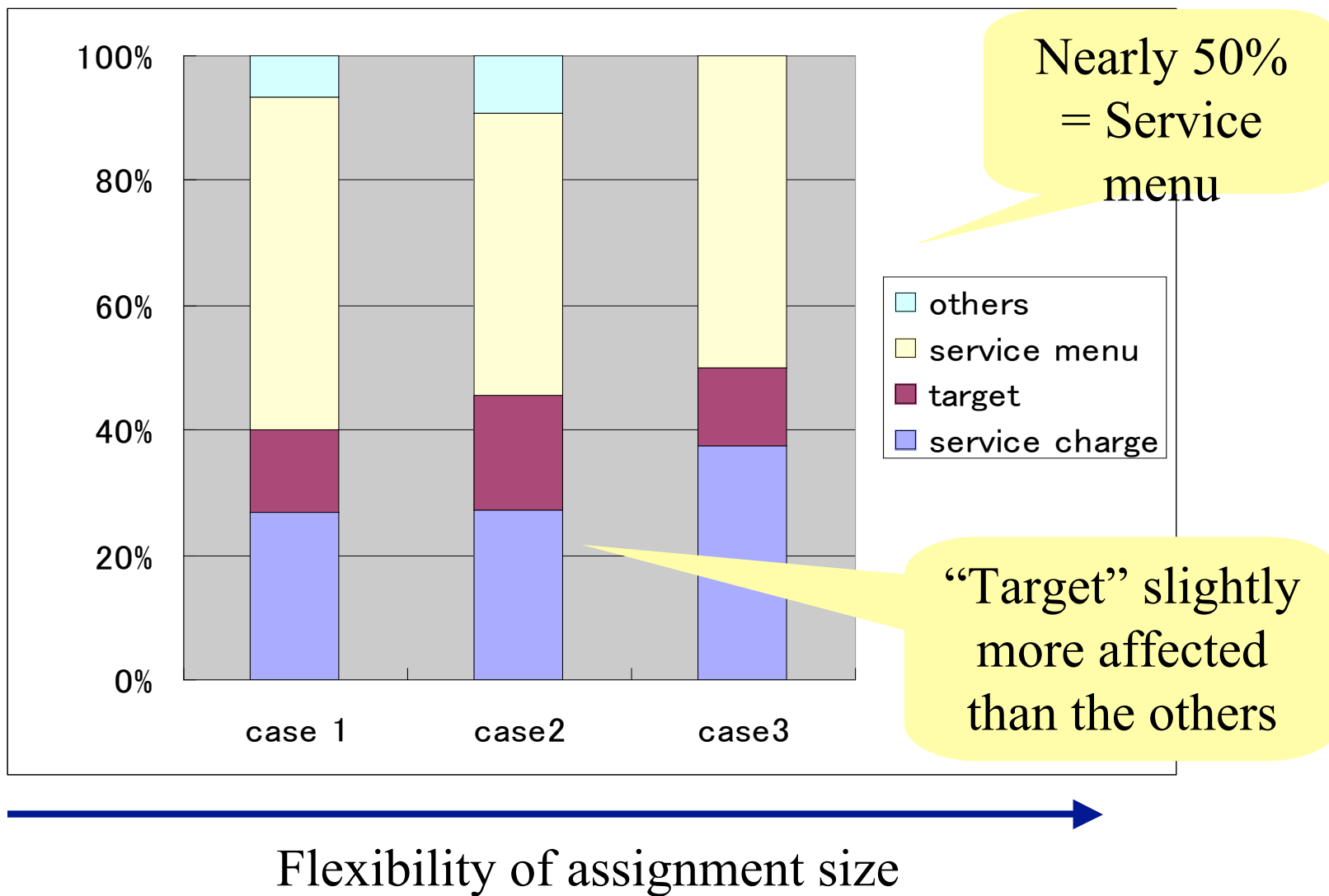


Major reason = not yet commercial

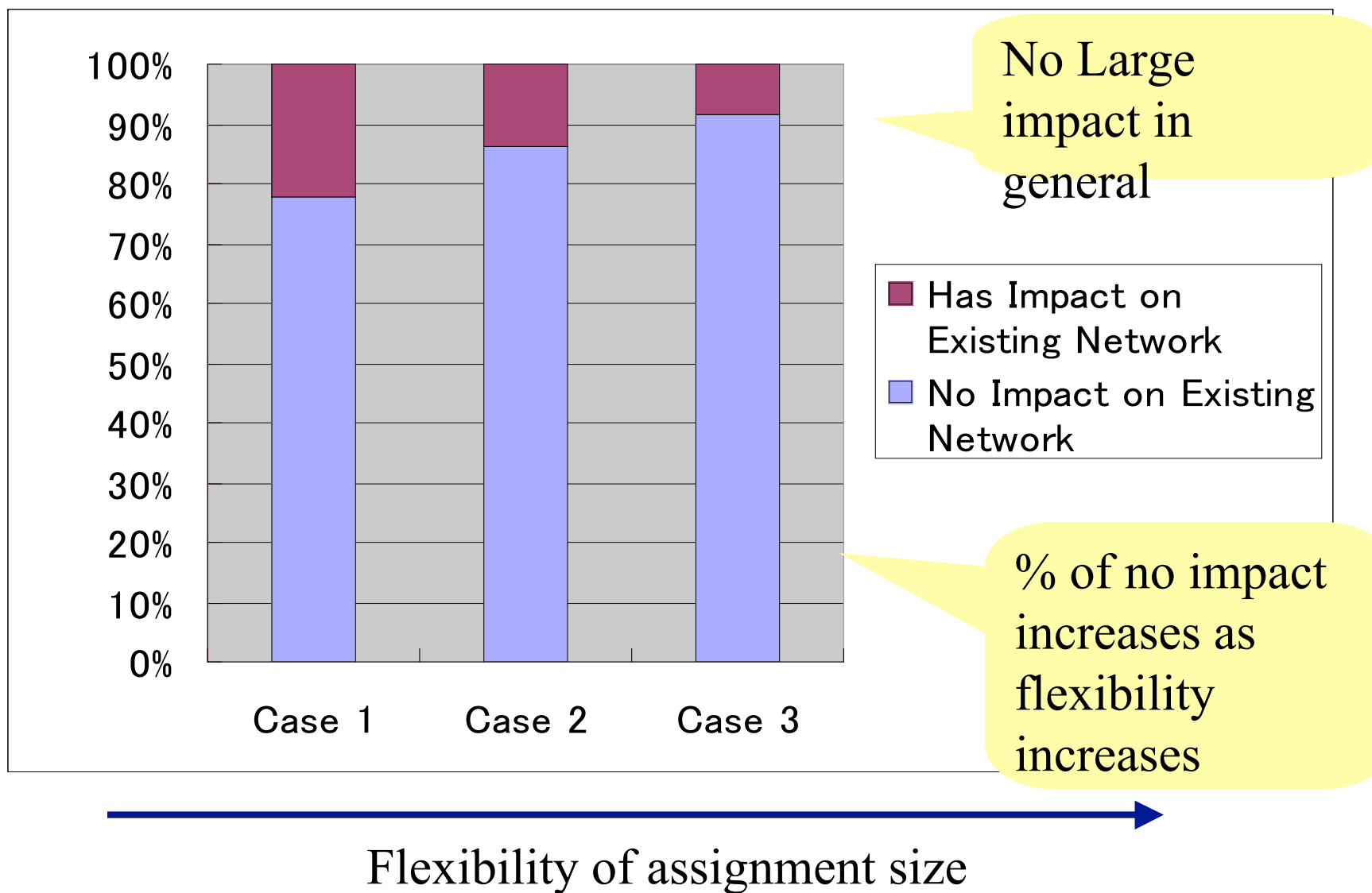
“Flexibility in size” appears for 1&2, but not too substantial

Flexibility of assignment size

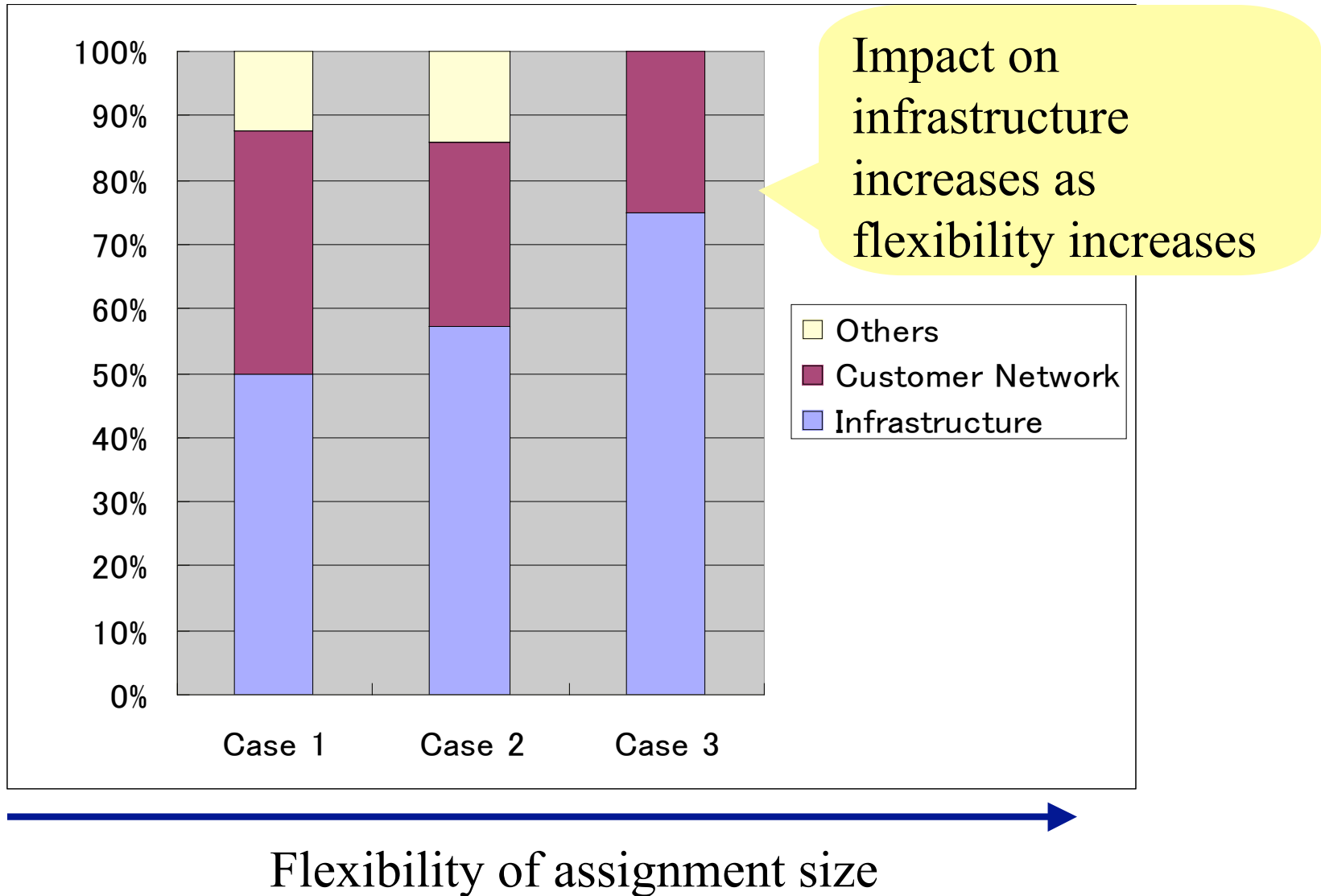
# Areas of Service Change



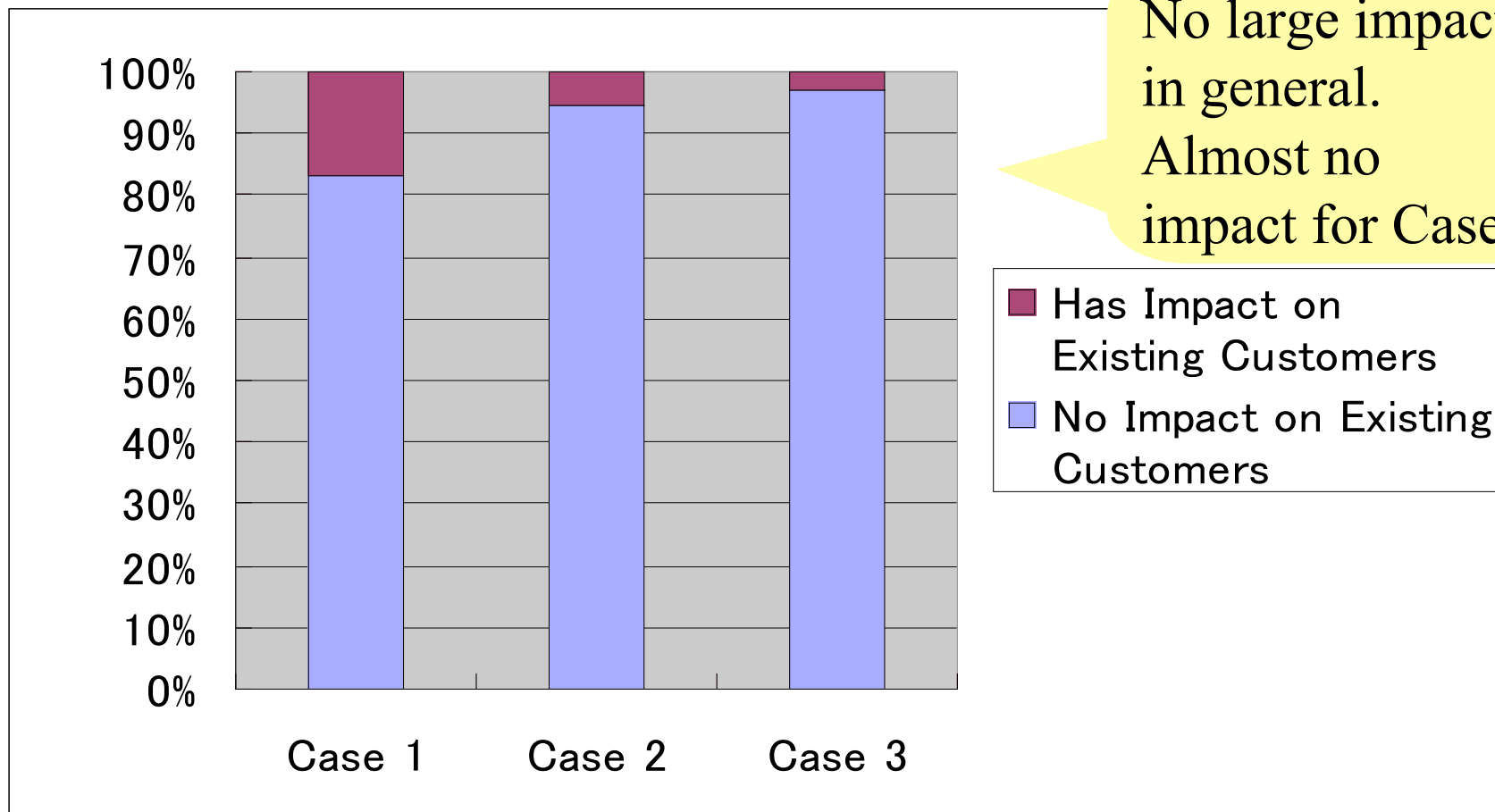
## 2) Impact on Network



# Areas of Impact on Network

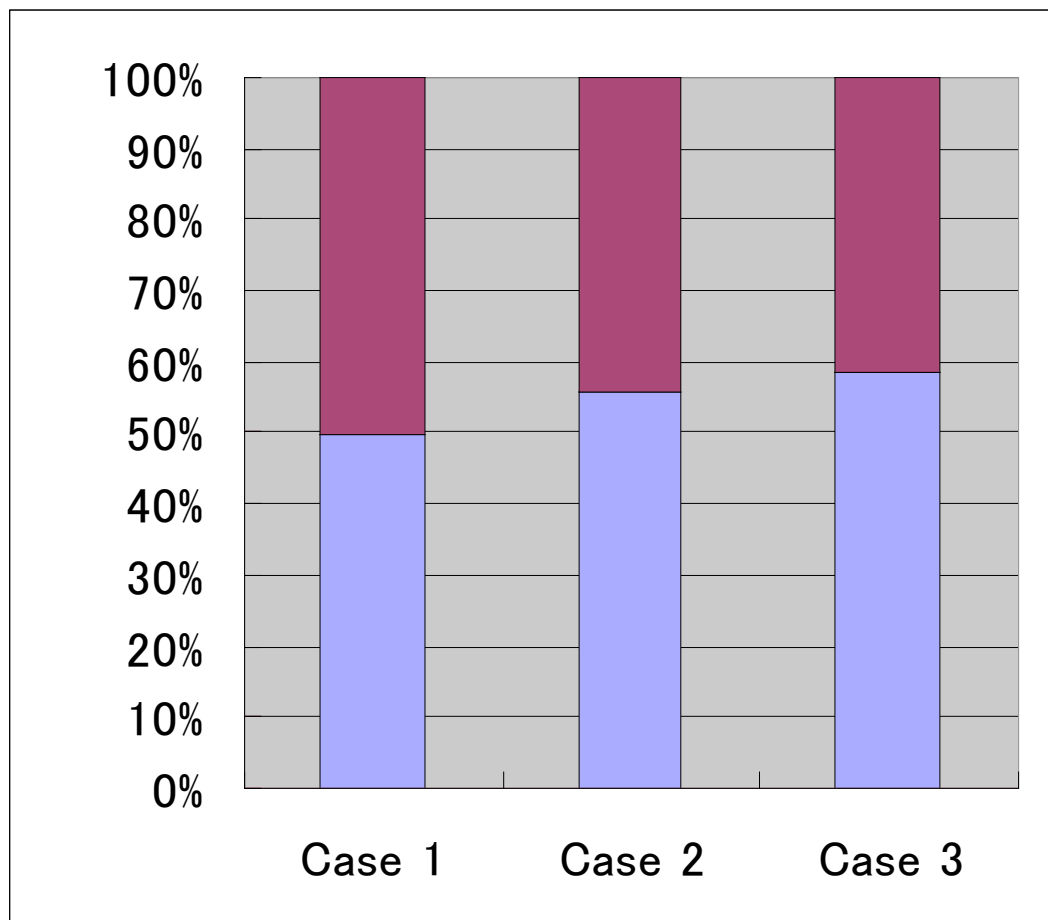


# 3) Impact on Existing Customers



Flexibility of assignment size

# Additional Costs



Additional costs required for approx. 50%

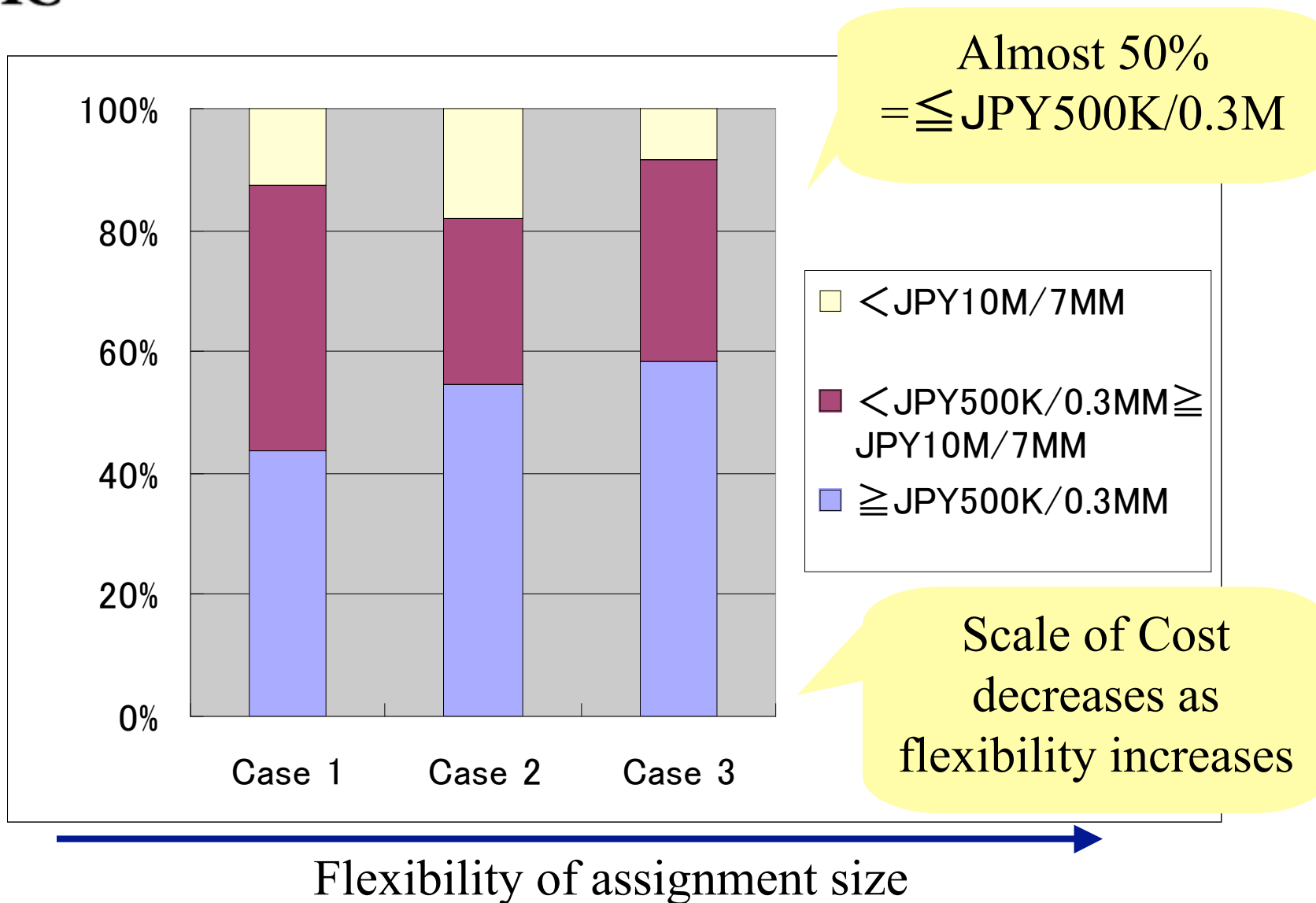
Requires additional expenses/man-hour  
No additional expenses/man-hour

% slightly decreases as flexibility increases



Flexibility of assignment size

# Scale of Costs







# Major Comments(1)


- Against removing fixed boundaries
  - Removes advantages of IPv6 by applying the same condition as IPv4
  - No direct costs but fixed costs increases for network complexity and hostmaster work
- Concerns over impact on IPv6 deployment
  - Frequent policy changes gives IPv6 unstable image and hinders deployment
  - Additional costs should be avoided



## Major Comments(2)

- Why need changes in addition to HD-ratio?
  - Not sufficient with lifetime extension of 600 years?
- The situation in JP and other communities
  - If other communities are favorable, what is the reason?
  - Are other communities making discussions with awareness of these impacts in JP?
- Details of the proposal should be clarified
  - How to judge the appropriate size, criteria for subsequent allocation, etc

# Observation

- No large impact on service, network and customers, but has impact on cost for nearly 50%, and large impact(<10MJPY) for 2 LIRs  
A yellow callout box with a tail pointing to the text '<10MJPY' in the previous bullet point. It contains the text '< 85K USD' in black font.
- Case3 demonstrates the least impact statistically, but strong concerns were expressed on the comments section
- Case2 would probably be most agreeable out of the three, but careful consideration is necessary for cost impact



# The General Feeling in JP

- Not necessarily against the change if it is for the good of the Internet, but not quite convinced of the needs so far
  - Negative impact is visible and specific, but positive impact gives conceptual impression
- Change in HD-ratio is acceptable, but is the assignment size change really necessary with impacts on the current service?

Haven't taken  
a consensus  
vote yet



## Issues to be considered

- To what extent should impact on the current ISPs be considered?
- What would be a good balance between long term view and impact on the current IPv6 service?

# Questions?

