Study on IPv6 transition readiness in Mongolia

Gereltsetseg Altangerel /Ph.D student/
Eötvös Loránd University (ELTE), Budapest, Hungary

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Motivation

- To study IPv6 transition process and readiness in Mongolia based on survey from the ISPs and organizations.

Background of Mongolia

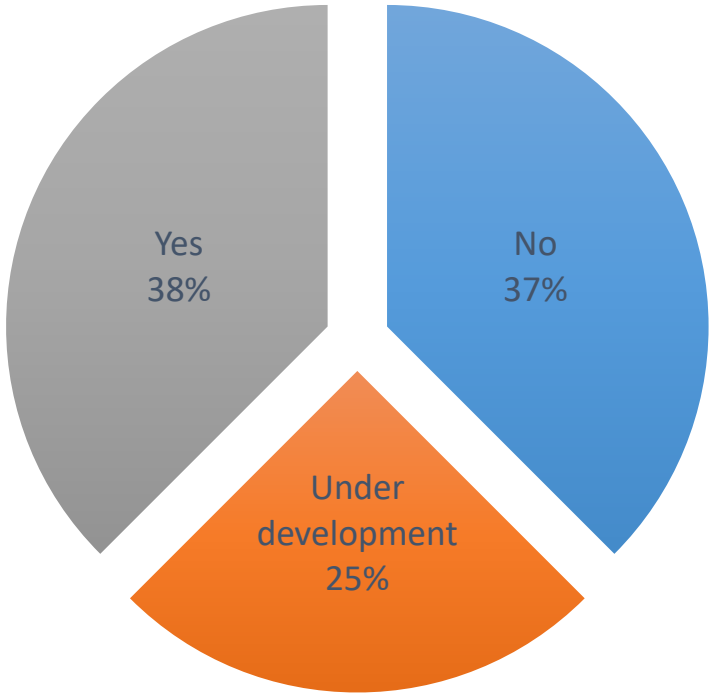
- Population: 3.5 million
- Number of internet users: 1.5 million
- 0.02 % - access Google over IPv6.
- 41 ISPs, 4 Mobile operators in Mongolia
- Information Technology, Post and Telecommunications Authority (ITPTA) and the Communications Regulation Commission (CRC) of Mongolia
- 22 ISPs and 34 companies are participated in that survey.

The IPv6 survey from the ISPs

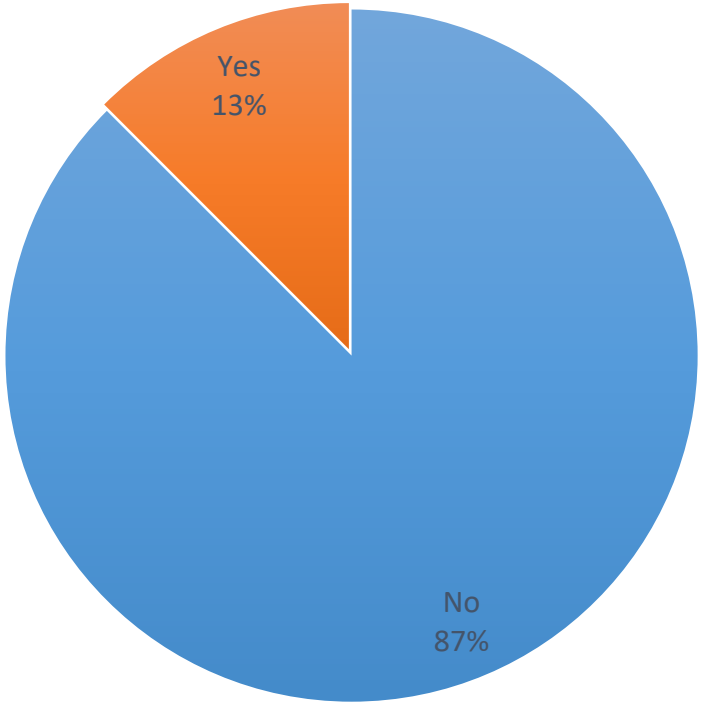
- 22 ISPs are answered the survey.
- The survey is based on questionnaire and interview.
- Selected more active ISPs.

The IPv6 survey from the ISPs

Are you planning (currently, or any time soon) IPv6 transition?

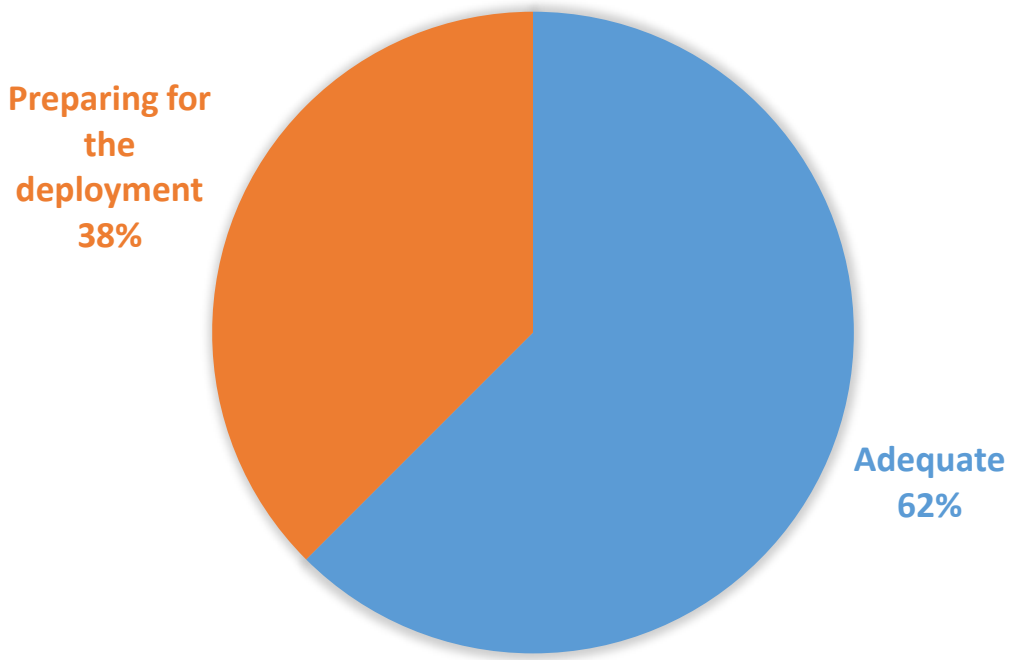


Is there any budget for the IPv6 transition process?

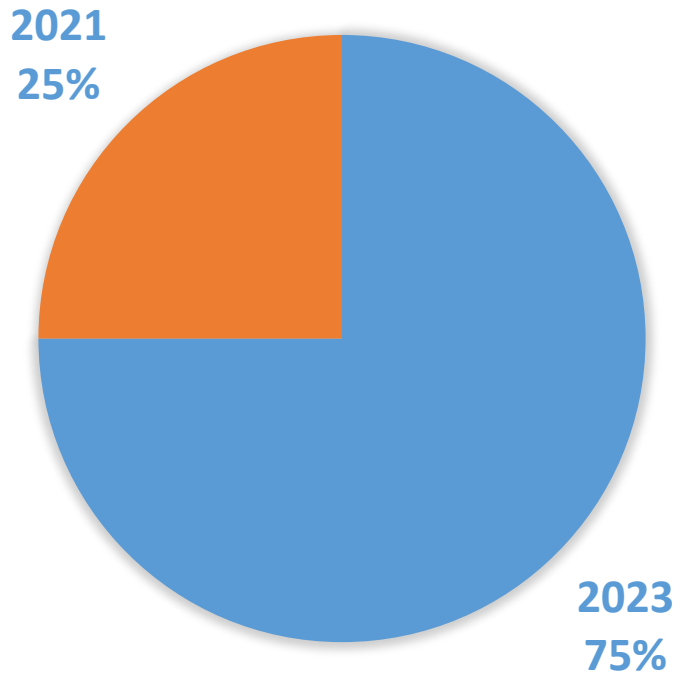


The IPv6 survey from the ISPs

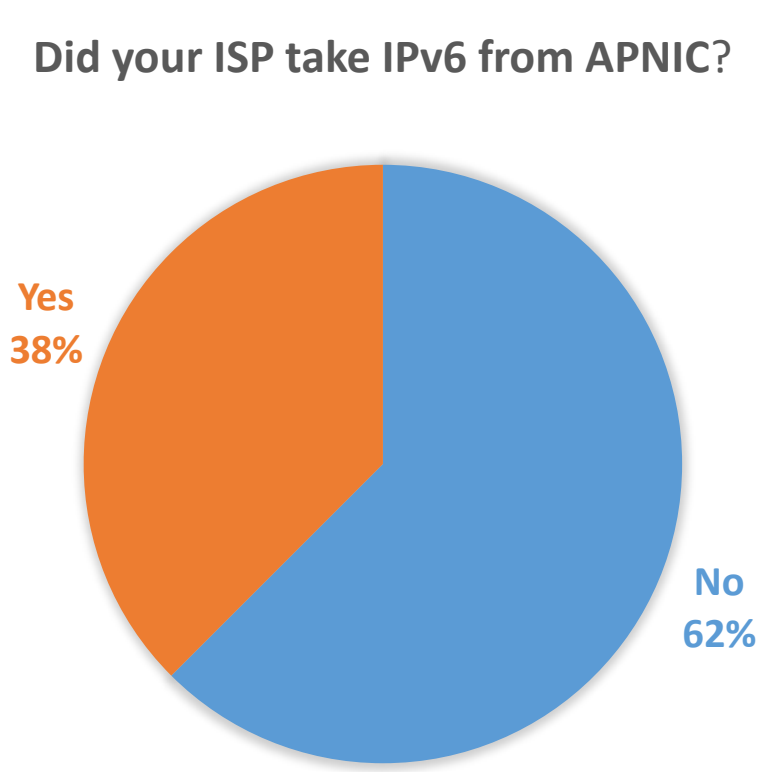
To deploy IPv6, is your engineers and technicians' skill adequate?

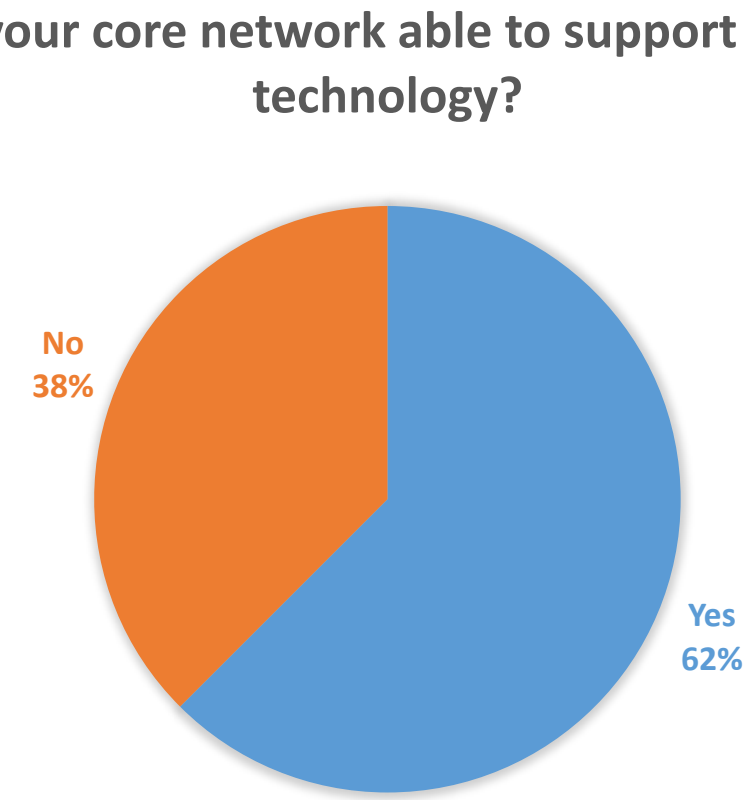


When do you expect your IPv4 address space to run out?

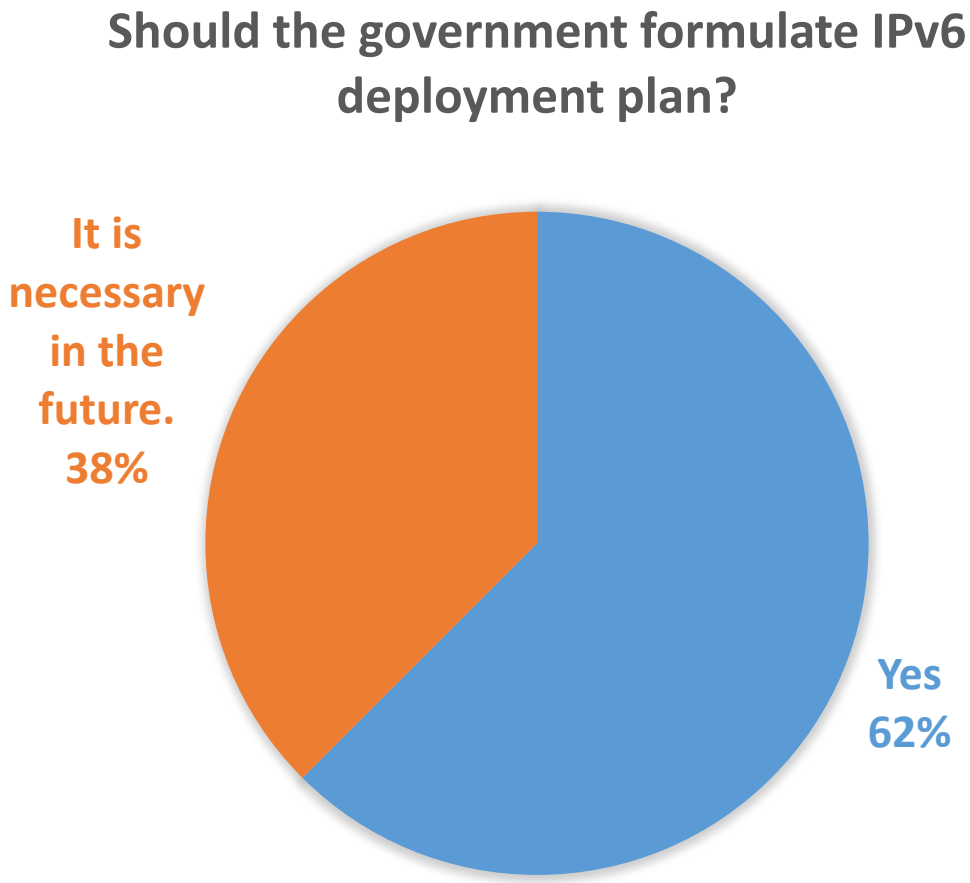


The IPv6 survey from the ISPs





The IPv6 survey from the ISPs



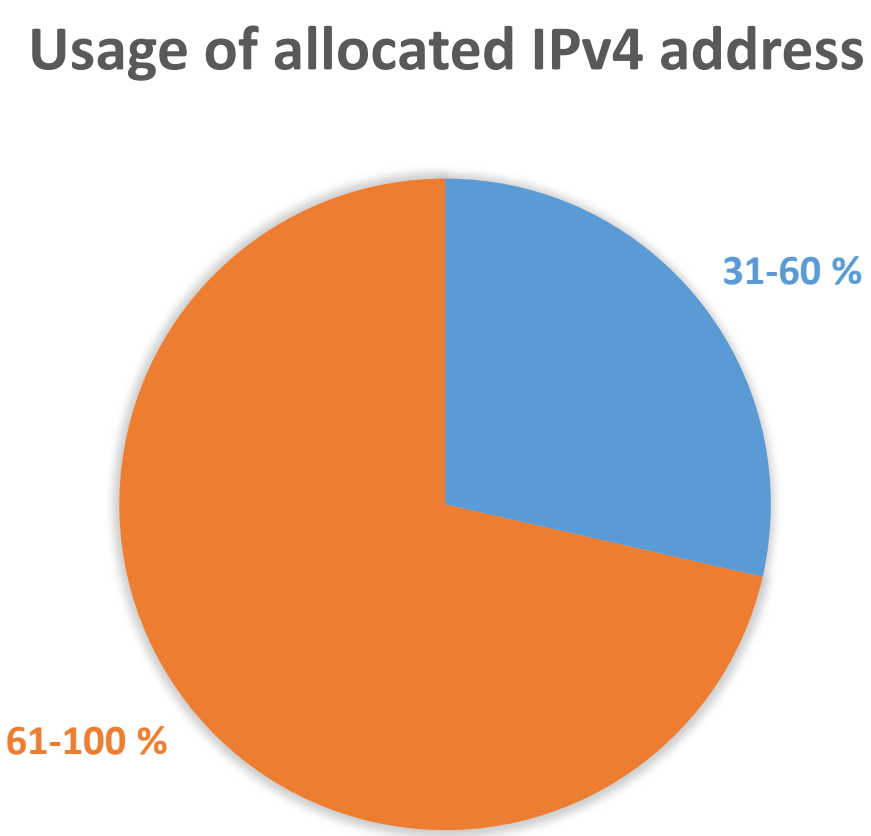
Recommendations from the survey of ISP

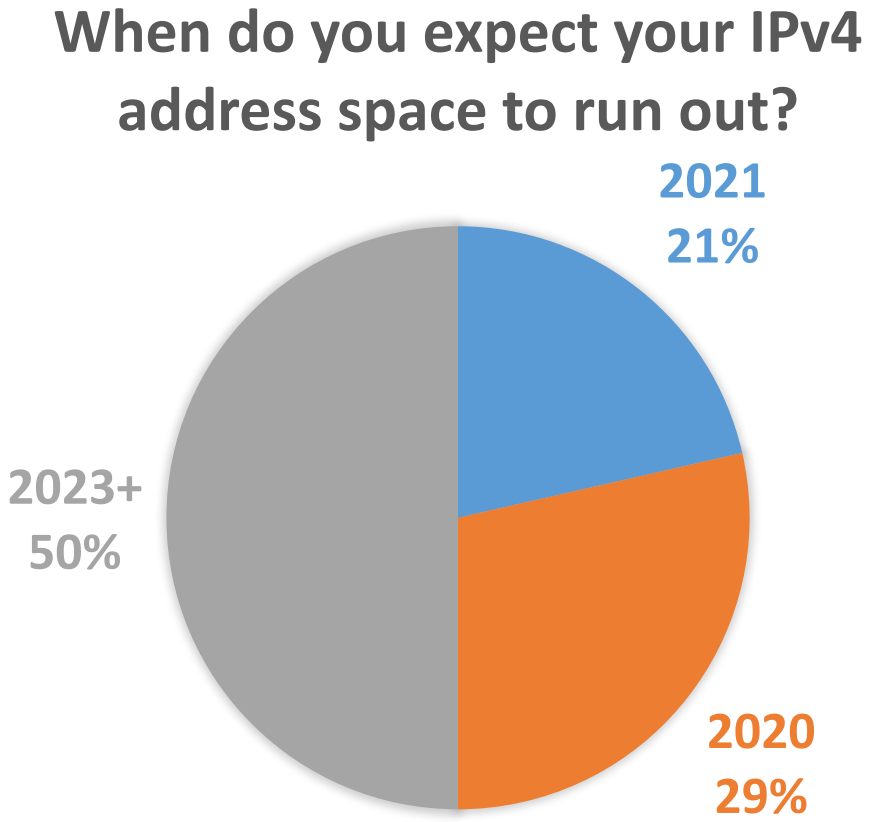
- IPv6 readiness assessment.
- ITPTA and CRC should formulate IPv6 deployment policies.
- ISPs and ICT regulation organizations should promote the transition process.
- Studying IPv6 deployment experiences from other countries.
- ISPs should make plan for IPv6 deployment.
- Taking IPv6 courses for technicians from Mongolian ICT universities.
- Understanding more advantages of IPv6.
- Learning and testing migration technologies such as dual stack, and tunneling in the experimental environment.
- ISPs should prepare IPv6 deployment guidelines for their customers.

IPv6 survey from organizations (ISP customers)

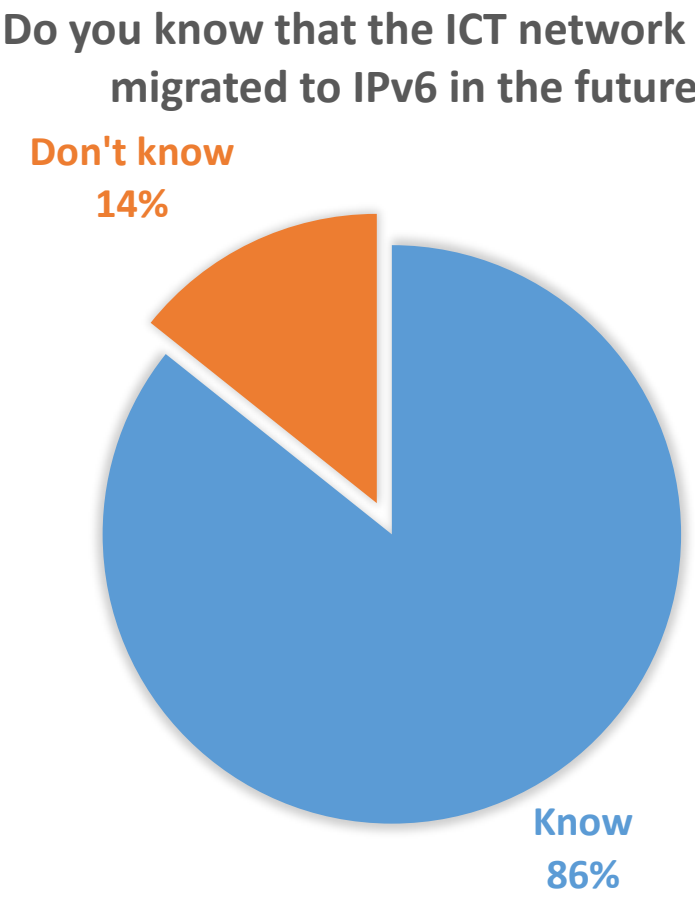
- 34 public and private organizations answered the survey.
- The survey structure:
  - -IPv4 address usage
  - -About IPv6
  - -IPv4 to IPv6 deployment process, readiness

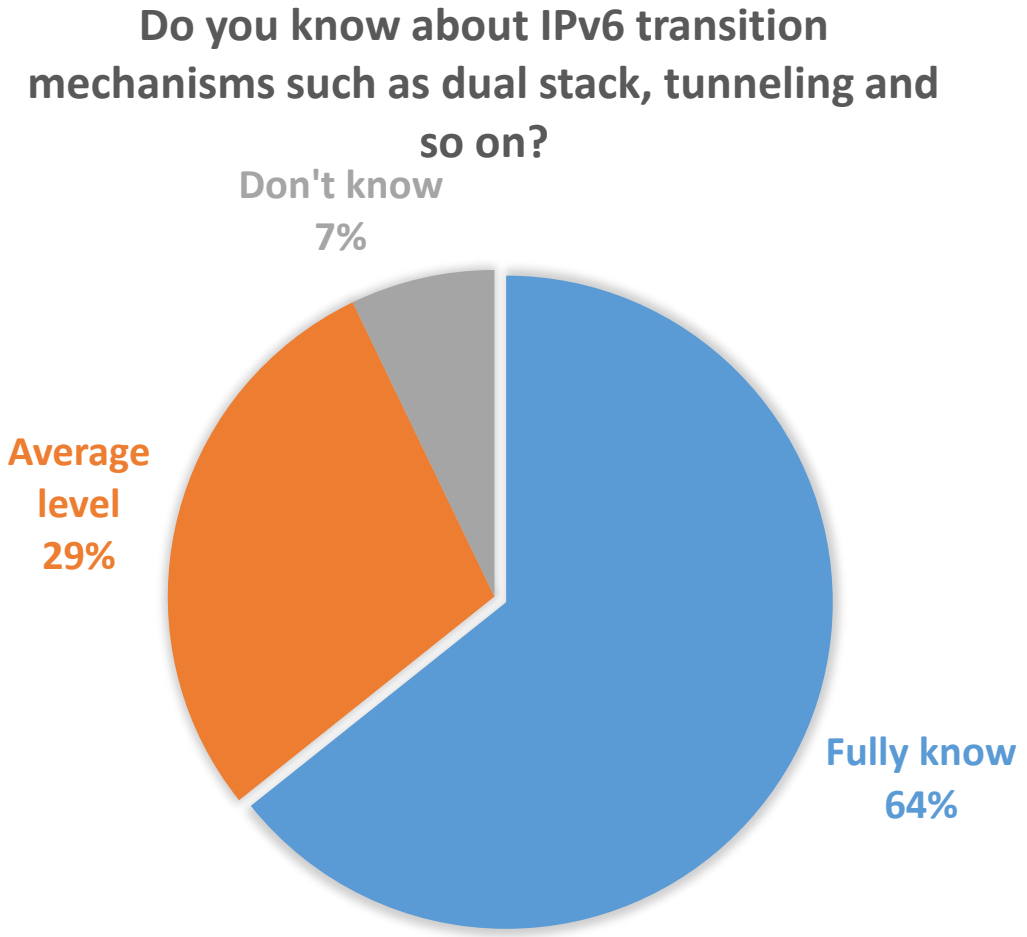
IPv4 address usage



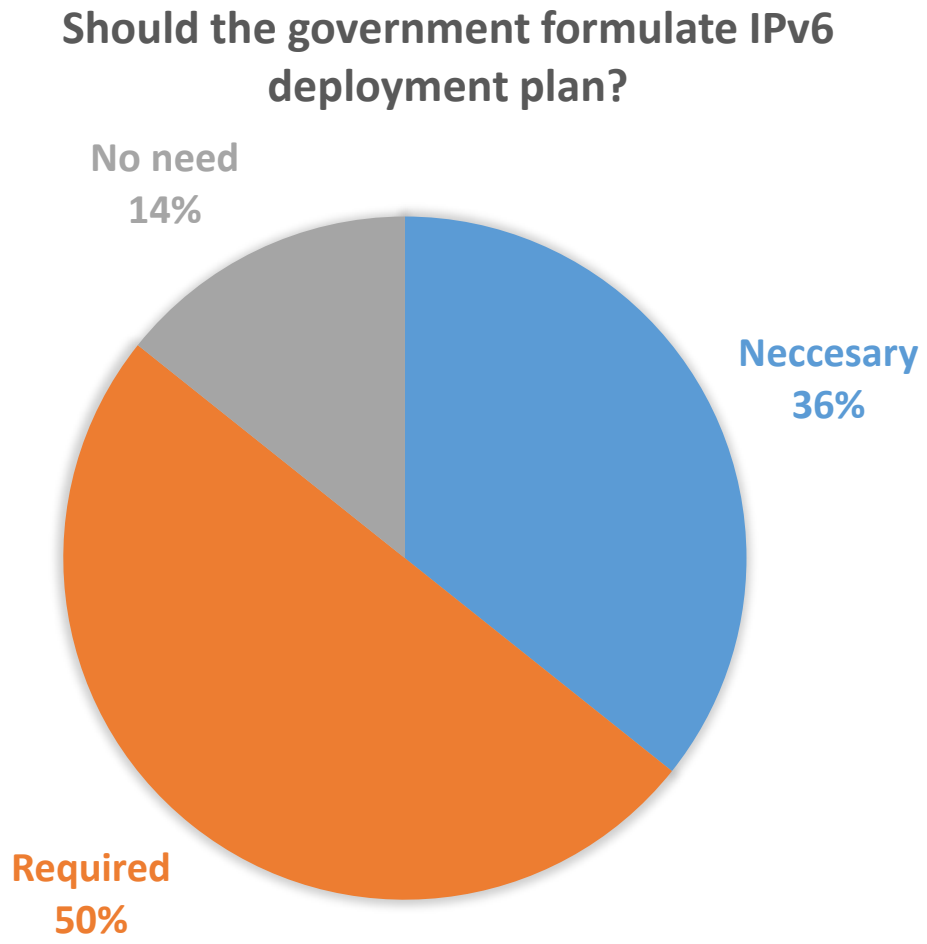


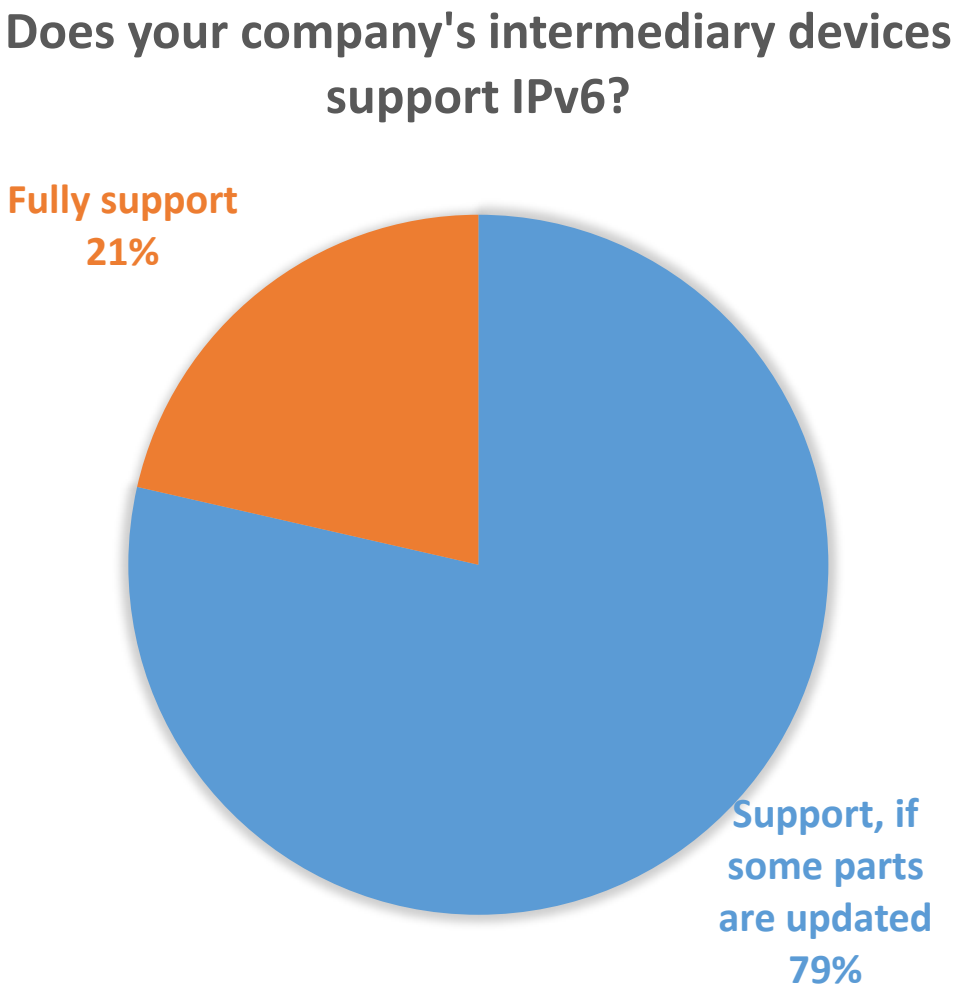
About IPv6


Do you know that the ICT network will be migrated to IPv6 in the future?
Don't know
14%
Know
86%

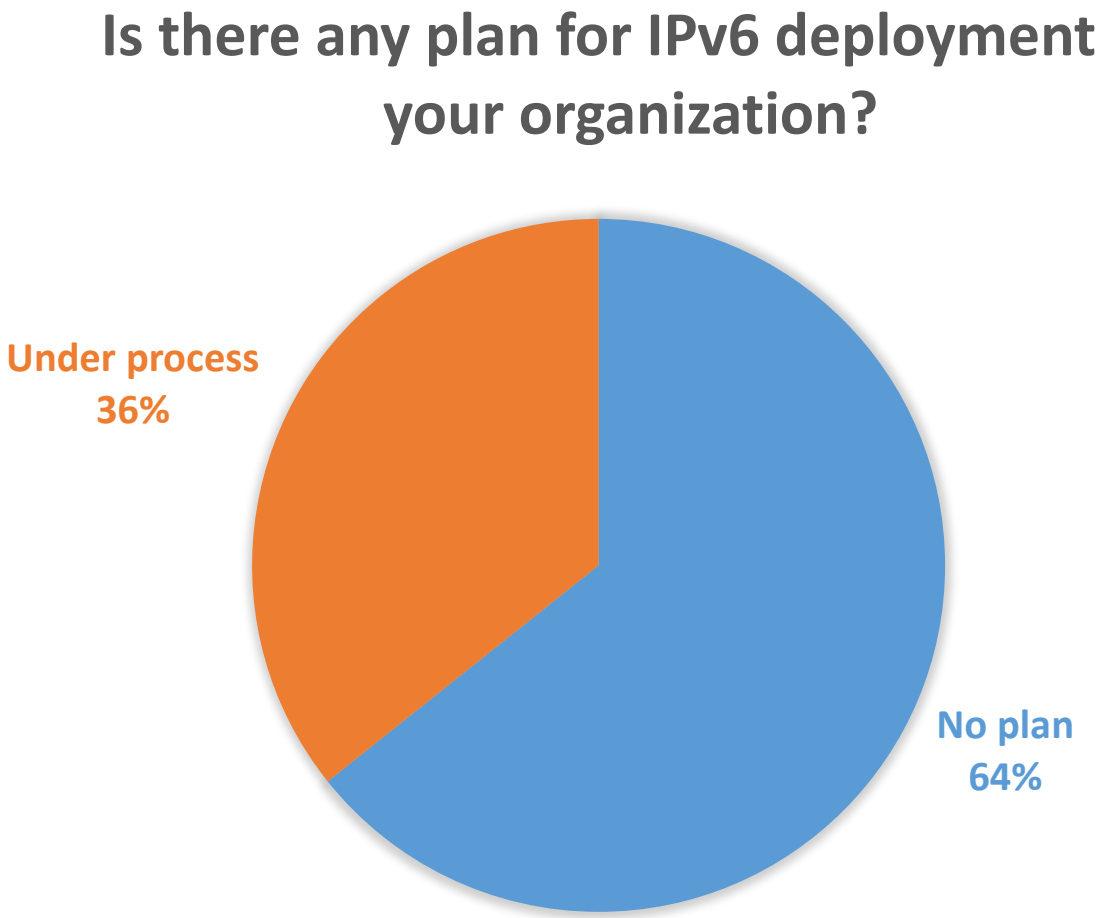

Do you know about IPv6 transition mechanisms such as dual stack, tunneling and so on?
Don't know
7%
Average level
29%
Fully know
64%

IPv4 to IPv6 deployment process, readiness





IPv4 to IPv6 deployment process, readiness



Recommendations from the survey of companies

- IPv6 readiness assessment.
- Companies should make plan for IPv6 deployment.
- Asking suggestions from ISPs.
- May take IPv6 training for technicians from Mongolian ICT universities. Learn deeply about IPv6 advantages.
- Create a simulation environment to test IPv6.

Conclusions

- Analysis of the survey - policy, motivation, and investment
- Promoting to deploy IPv6 – advantages
- First step – IPv6 deployment roadmap
- Technical and human recourse – reasonable
- ISP – initial stage
- Companies – very close
- Consider recommendations from this survey
- Study other countries’ best practices