



CNNIC UPDATE

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Internet development in China

Membership growth

IP/AS allocation

IPv6 Deployment in China

Training program

RPKI in CNNIC

Future work

中国网民规模和互联网普及率



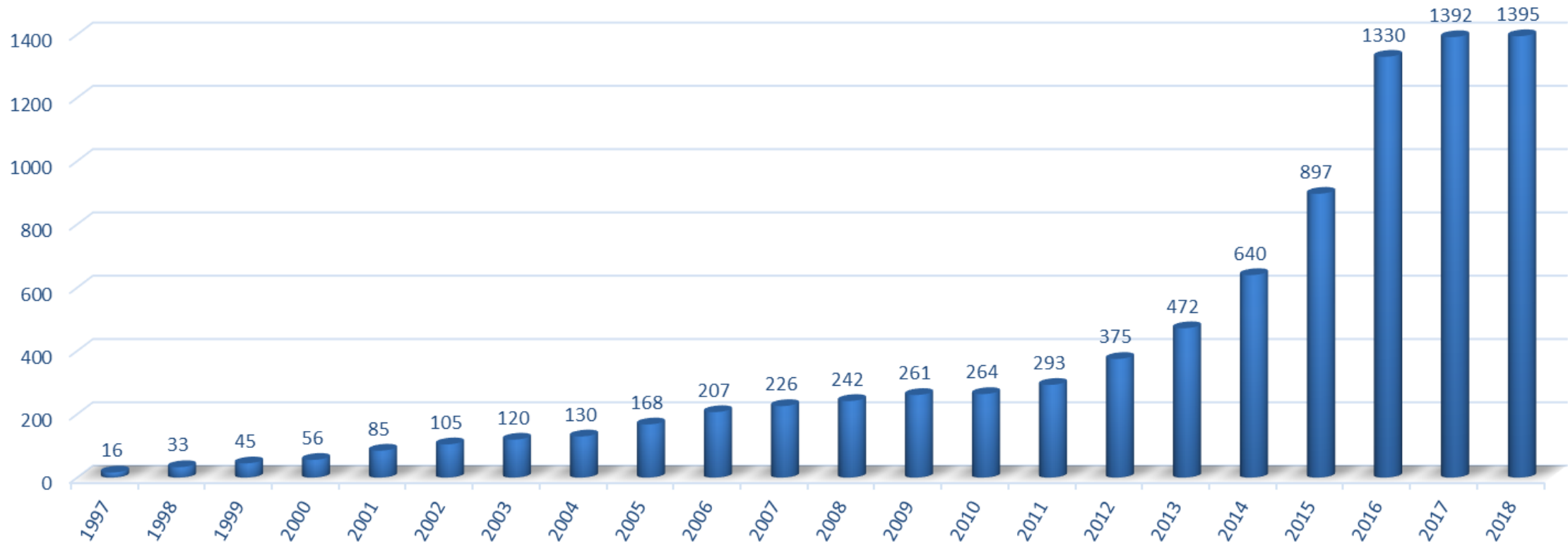
■ Internet users 802 million, Internet penetration rate 57.7%

中国手机网民规模及其占网民比例

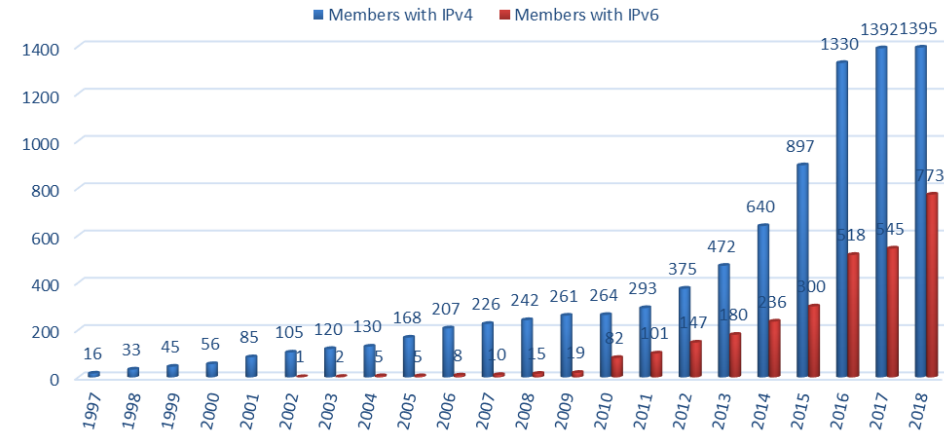
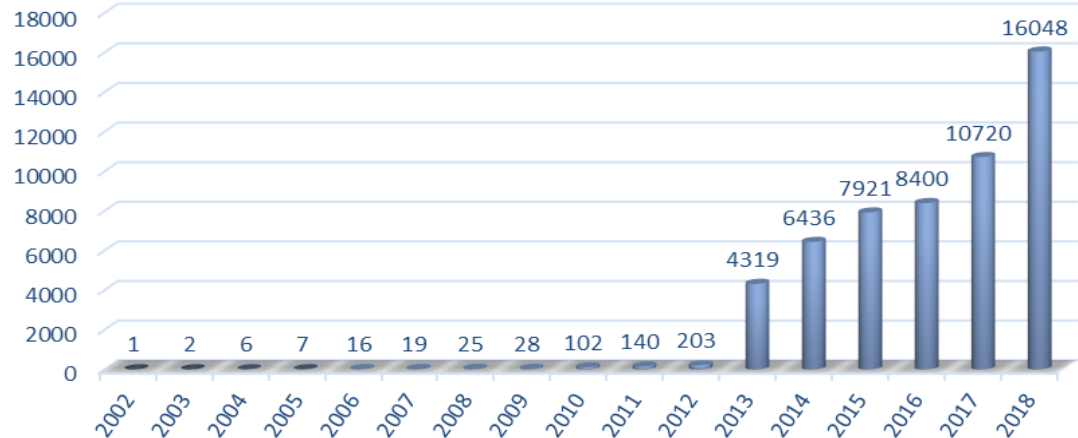
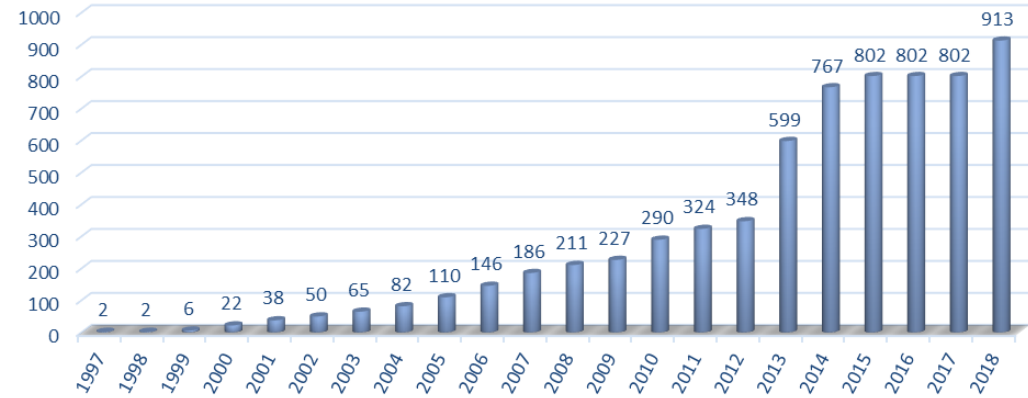
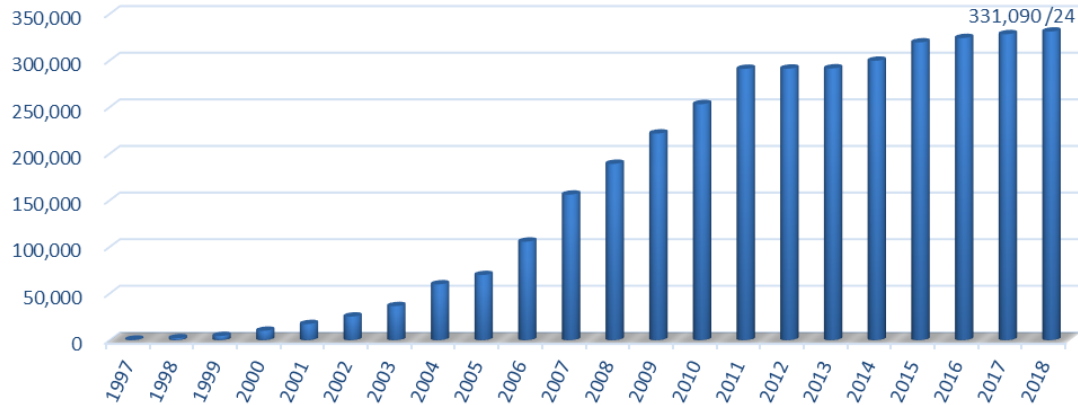


■ Mobile Internet users 788 million, 98.3% of the total Internet users

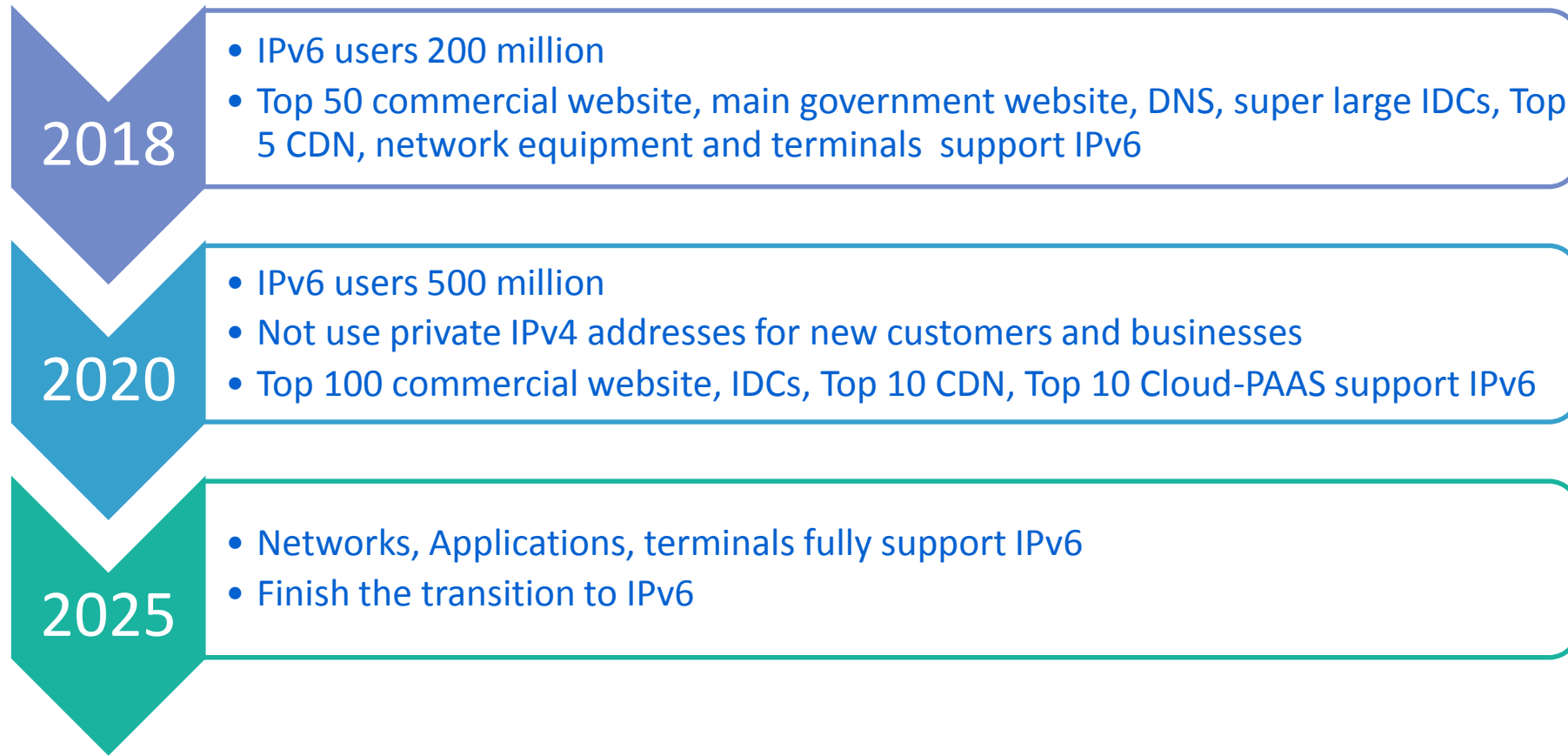
■ 1,395 CNNIC IP members, by the end of December 2018



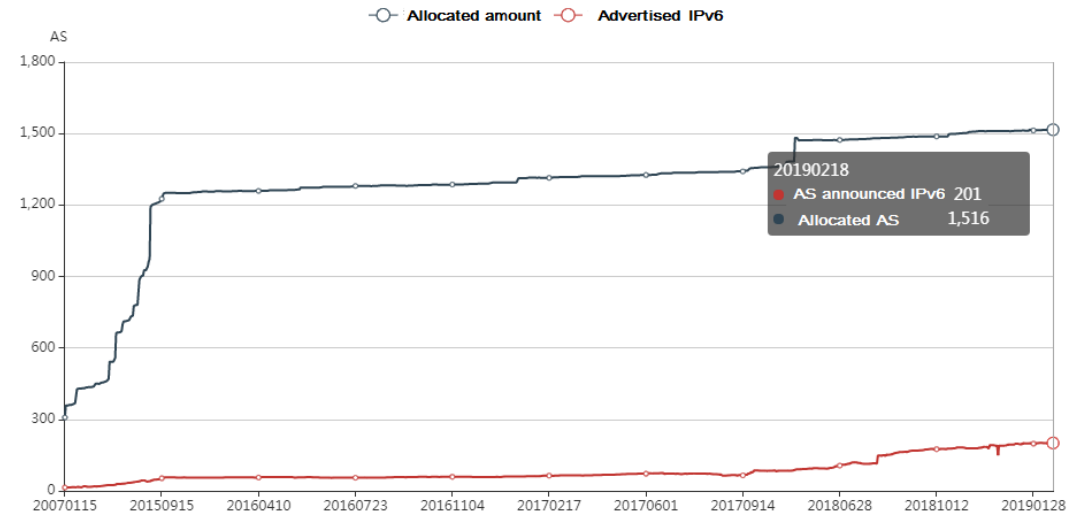
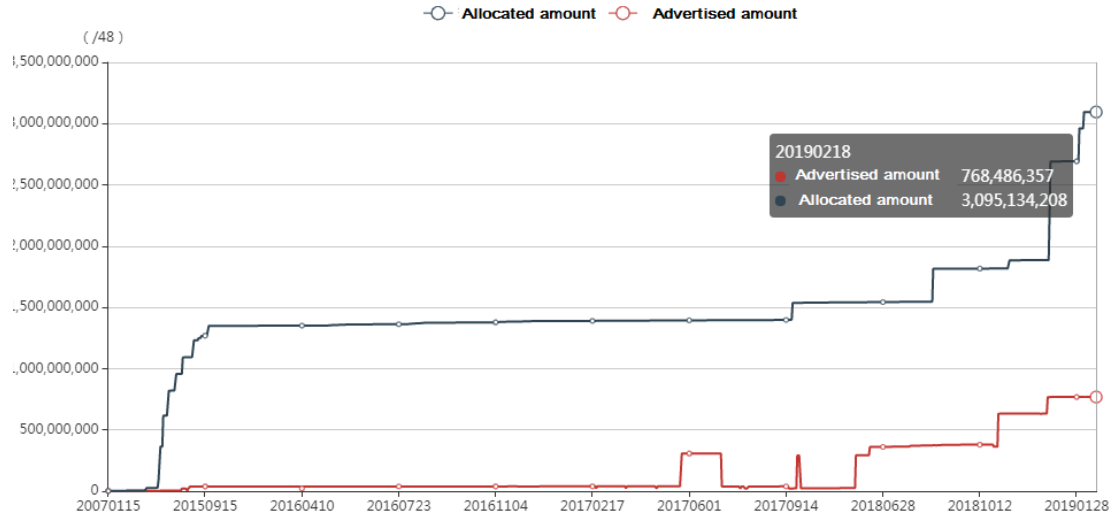
- CNNIC has allocated 331,090 /24s IPv4 addresses, 16,048 /32s IPv6 blocks and 913 AS numbers



■ IPv6 National Action Plan, issued by Chinese government in Nov 26th, 2017



China IPv6 advertised status



- By 2019.2 , China holds 47,228 /32 , accounting for 17.3% of the global allocated IPv6 addresses
- Advertised addresses account for 24.8% of the total allocated addresses in China, account for 9.7% of the global advertised
- 201 ASNs advertise IPv6 addresses, the ratio is 13.3%

- 3 major ISPs in China finished IPv6 upgrade for LTE network, all backbone network devices supported IPv6, most MANs complete IPv6 transformation, international IPv6 bandwidth is over 100 Gbps, all the recursive DNS system finished Dual-Stack upgrade, assigned IPv6 address to 865 million LTE users and fixed broadband users.
- Most of the government websites in China provide IPv4 and IPv6 service simultaneously (>67.7%).
- A clear IPv6 upgrade plan for top 50 websites and applications in China has been made separately and the actions are being taken gradually.
- In 2018, Dual-Stack supported in all CNNIC Data Centers.
- All the infrastructure in CNNIC are IPv6 ready.

- **2018.7 Beijing**
 - 2days, 70 trainees
 - IPv6, RPKI
- **2018.12 Shenzhen**
 - 3days, 90 trainees
 - IPv6, RPKI



- National government website IPv6 upgrade workshop hold by General Office of the State Council, 2018.11, Shijiazhuang Hebei
- Provide IPv6 and DNS training to information officers from Macao SAR government in China National School of Administrationk, 2018.9
- China Energy IPv6 Seminar.
- National Health Commission IPv6 Seminar.

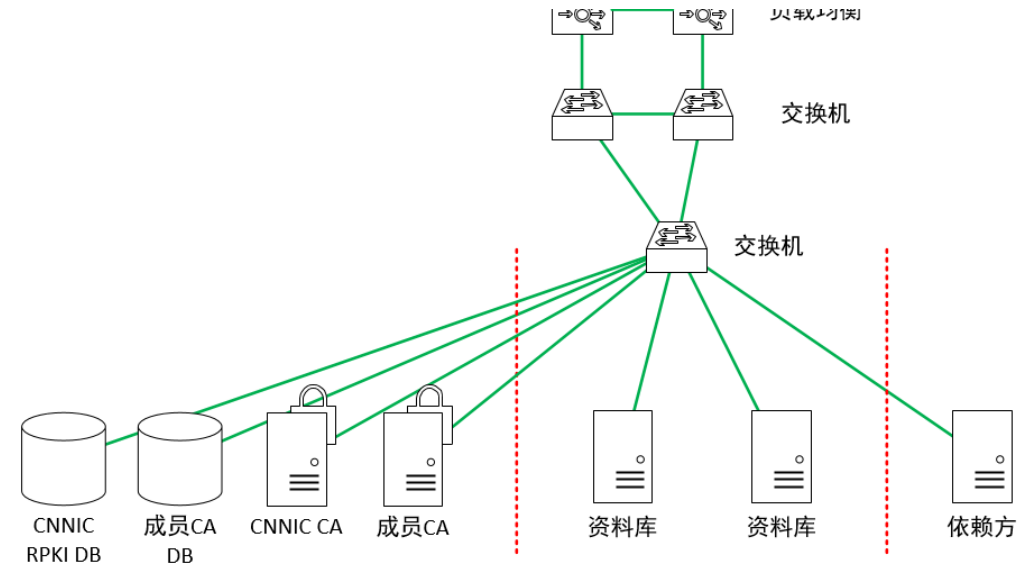


- Review RPKI platform status in CNNIC, fix several functions and reconnect with APNIC RPKI platform in November, all the features are ready.
- On the workshop in Shenzhen 2018.12, engineers from CNNIC shared RPKI concept and hands-on skills (how-to establish child CA and ROA records, etc.) with our Alliance members
- Now we have:
 - 176 Certificates
 - 178 CRLs
 - 39 ROAs



- **Work with APNIC on promoting IPv6 upgrade in China, be ready to help organizations moving to IPv6.**
- **Upgrade DNS sites for .CN worldwide once the local network is ready.**
- **Standardization in CCSA.**
- **Regular workshop via IP Address Allocation Alliance.**
- **Participate in the Community Trainers program.**

- Work with APNIC on promoting RPKI deployment in CHINA.
- Upgrade the RPKI platform in CNNIC, by establishing several RPKI service site in different cities.
- Public RP service for organizations in CHINA.
- Standardization in IETF and CCSA.
- Set RPKI topics in workshop.



- **Analyze prop-125, review CNNIC IP business system, new functions will be added into the system (in 2019):**
 - **Regularly verify the validity of the mailbox registered in the IRT account.**
 - **Put access restrictions on the members who fail to pass the verification.**

THANKS!

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