

An overview of the BEREC work on the national resilience of network operations

In 2020 BEREC published a report on BEREC recent activities concerning the EU 5G Cybersecurity Toolbox Strategic Measures 5 and 6 (Diversification of suppliers and strengthening national resilience). BEREC identified a need to understand the impacts of various approaches of multi-vendor strategies as well as to improve the national resilience and the resilience of network supply chains, both at European and at national level.

In order to gain a better understanding on national resilience, BEREC drafted two separate questionnaires to collect relevant information from the market players and national authorities (NRAs).

The first questionnaire was drafted in May 2021 and was distributed by BEREC members to their national Mobile Network Operators (MNOs). The answers collection period was summer 2021. The main aim of the questionnaire was to understand how and where MNOs operate some of their network security related functions. BEREC received 70 (anonymised) MNOs answers from 24 Member States.

The second questionnaire was created in order to collect information about existing and planned legislation that regulates the way MNOs run their important operational functions that manage the security of networks. The response period for this questionnaire was March 2022. Answers were received from 30 national authorities (NRAs).

Both surveys provide insights into the national resilience by examining the organisation and operation of the following security related functions within the MNOs' networks:

- **Network Operations Centre (NOC)**
- **Cybersecurity Team** often called the Security Operations Centre (SOC) or Computer Security Incident Response Team (CSIRT),
- **Fraud Team**
- **Lawful Interception Team:** As a legally sanctioned official access to private communications, Lawful Interception (LI) is a security process in which a service provider or network operator collects and provides law enforcement officials with intercepted communications of private individuals or organizations.

With the questionnaire BEREC also examined the sharing of Cyber Threat Information (CTI).

BEREC analysed all responses gathered and prepared an internal report. The results are not made public due to the confidentiality and sensitivity of the responses received from the MNOs and NRAs.

The results obtained from the MNO survey allow BEREC to gain insights in how a significant number of MNOs in the EU organise these important security related network functions, in particular whether these are operated internally or outsourced and where they are located.

In general it is observed that most MNOs operate these functions internally. Those operated externally are located within the EU or EEA mostly. Technical capabilities allow MNOs to outsource and/or relocate these functions elsewhere. Based on responses only a minority of the MNOs have organised these functions in such a way.

The outsourcing and relocation of these network functions can pose additional risks for the national resilience of network operations. This risk can be reduced by taking appropriate measures.

The survey for NRAs allows BEREC to identify the countries with current or planned legislation that imposes requirements on how the MNOs operate security related functions within their network.

It is observed that there are differences between countries for each of the four network operations functions. Nearly one half of the countries that provided the information have some form of legislation in place currently or are planning to adopt one. These national regulations belong to different legislative domains in primary or secondary legislation and prescribe multiple security requirements.

The information gathered provides apart from the current state of play and the initiatives taken by other countries also the information about the number of NRAs that are considering the introduction of national legal provisions to further improve the national resilience of network operations. .

With the NRA survey, BEREC did not gather very detailed information about particular provisions of the legislation in place or planned. A number of countries are still in the EECC and 5G Toolbox implementation phase. Sharing of good practices and experiences between the countries will allow obtaining a more in-depth description of the national situations and future plans. This internal report will therefore be useful for BEREC members that are searching for some sort of useful input to find a suitable solutions. Due to relevance of the topic BEREC will continue to work on it. A discussion about the efficiency and sustainability of some measures that are already in place in some countries could be part of the BEREC's future activities in this field.