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| **Telecommunication Development Advisory Group (TDAG)**  **31st Meeting, Geneva, Switzerland, 20-23 May 2024** | A close up of a sign  Description automatically generated |
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|  | **Document TDAG-2****4/27-E** |
|  | **10 April 2024** |
|  | **English only** |
| Hungary | |
| **Follow-up on the 3G switchover programme in Hungary** | |
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| **Summary:**  At the 30th meeting of TDAG, 19-23 June 2023, NMHH briefly introduced its 3G switchover programme in Document [TDAG-23/29](https://www.itu.int/md/D22-TDAG30-C-0029/). As several Member States requested a follow-up on our programme, we hereby submit a long and a short analysis of it.  **Action required:**  TDAG is invited to note this document and provide guidance as deemed appropriate.  **References:**  Document [TDAG-23/29](https://www.itu.int/md/D22-TDAG30-C-0029/) | |

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***How has the NetreFel! Programme helped consumers?***

**The role of the Hungarian NRA in the 3G phase-out**

With its regulatory, coordination, communication and support role the National Media and Infocommunications Authority (NMHH) has contributed in a unique way to the phase-out of 3G services in Hungary, ensuring that the interests of users, MNOs and public authorities are equally taken into account. The NetreFel! communications and device trade-in support programme launched by the Hungarian NRA played an important role in halving the number of 3G handsets and a reduction of 2G handsets by a quarter, topped with the virtual disappearance of 3G handsets carrying a mobile data plan. Under the HUF 5 billion (Appr. EUR 13 million) device trade-in programme, 120,000 people have benefited from a subsidy of between HUF 20,000 (Appr. 50 EUR) and HUF 40,000 (Appr 100 EUR) to buy a more modern 4G or 5G handset with VoLTE capability. The communication efforts of the NetreFel! Programme have also contributed to the fact that no consumer complaints were registered with either the MNOs or the authorities about the switch-off of 3G services.

**Inevitable technology change**

In 2019, mobile operators in Hungary notified the NMHH that they plan to phase out 3G in the 3-5 years ahead. Their technical argument, which is in line with the NRA’s strategic objectives, was that freeing up 3G spectrum would significantly increase spectrum efficiency and accelerate the roll-out of 5G networks, as well as reduce the MNO’s operating costs.

In autumn 2019, the NMHH launched a pre-decision project to thoroughly explore how the weight of 3G networks in voice and data traffic has changed, how 3G phase-out might affect specific consumer and user groups, and what the role of the NRA might be in the process. The analysis showed that data traffic on 3G networks fell steadily and significantly between 2015 and 2020 (from 50% to below 10%), while voice traffic followed the same trend with a slight delay.

Share of voice and data traffic on 3G networks, 2015-2022

A graph of a graph showing the number of the same number of devices

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*Source: NMHH mobile market reports*

According to data from service providers, at the beginning of 2020 the share of 3G phones in the total number of active mobile handsets in Hungary was around 8% (around 1 million handsets), two thirds of which were connected to residential subscriptions, with up to 200 thousand handsets carrying mobile data traffic. NMHH has identified the consumer groups primarily affected by 3G switch-off and the main challenges for each target group as follows:

* **3G device owners with a mobile internet subscription:** after the switch-off, they will no longer be able to use mobile internet;
* **3G owners without a mobile internet subscription:** after the switch-off, they will no longer be able to subscribe to mobile internet;
* **3G M2M users:** for services with higher data traffic requirements, 2G networks cannot guarantee service continuity, so a new 4G/5G-enabled device and SIM card will be required.

The study estimated that the share of M2M devices with 3G-enabled SIMs was around 20% of the approximately 1 million active M2M devices, with around two thirds of devices using 2G (the combined share of 4G/5G-enabled devices was less than 10%). Around 80% of 3G-enabled M2M SIMs were used in online cash registers. However, the study suggested that the 3G switch-off was not a major risk even in this segment, as the low data traffic of cash registers can be served by 2G networks.

On the basis of the results, the NMHH decided in early 2020 to support the 3G phase-out process with the means at its disposal in order to strengthen the digital ecosystem in Hungary, to enforce consumer protection aspects, to increase the efficiency of mobile operators and to better use the spectrum stock. To this end, the NetreFel! Programme has set out a threefold objective:

* the **inclusion in the digital society of target groups not yet using mobile internet** (communication, education, motivation, participation in the device trade-in programme where appropriate);
* **preparing residential 3G users** (communication activities), **supporting the replacement of handsets that are** not suitable for 4G/5G services (device trade-in support programme);
* **preparing business and public 3G M2M users for** the expected switch-off (communication, conferences, briefings, workshops).

**NetreFel! communication programme**

The programme used a variety of communication tools (website, Facebook activities, displays, press, media and online advertising, conferences, podcasts, influencers, public appearances, etc.) to raise awareness of the benefits of digital devices and services in general and the importance of replacing 2G and 3G phones in particular.

The NMHH positioned the 3G phase-out communication not as a stand-alone initiative, but as part of an umbrella programme for digitalisation, focusing on mobile internet and smart devices (NetreFel!), in which the future switch-off of 3G was only one of the arguments for choosing more internet capable 4G and 5G devices. It was important to show that all elements of the digital ecosystem are constantly evolving, reaching new milestones - such as the phasing out of 3G, which (like black and white TV or two-stroke cars) has passed its time.

The primary target group of the communication element of the NetreFel! Programme was the citizens - typically older people - who have not yet entered the world of mobile internet; the secondary target group was the "helpers" (younger relatives and neighbours of the elderly) who are more technologically informed and open-minded and therefore willing to support them in decision-making, administration and technology change.

In the period leading up to the launch of the device trade-in programme, NetreFel! communications reached out to all users who do not use mobile internet: those who have a suitable handset should start using it, and those who do not have one should replace theiroutdated phone with a modern one. Following the launch of the device trade-in programme, the communication's objectives were to encourage as many 3G (and later 2G) handset owners as possible to participate in the programme.

Launched in spring 2021, the communication campaign aimed to encourage the replacement of devices with no or limited mobile internet access and the development of digital skills. The face of the campaign, which was well received, was TV personality Marcsi Borbás, who is also very popular among the elderly. In the over 50s, the reach of the TV spots was 78% (almost 3 million people), the radio spots 21%, the press ads reached more than half of the age group, and the 40 million online impressions helped the programme to gain more than 5,000 followers on social media during the campaign.

Following the announcement of the device trade-in support programme, the communication activity has broadened both in terms of its key messages and target groups, while maintaining the general digitalisation focus of the previous NetreFel! campaign. At this stage, MNOs and device distributors were already involved in the communication of the device trade-in support programme, so NMHH could focus on raising awareness of the programme and the availability of general and technical information on the trade-in process. It was also important to highlight some aspects that had not been emphasised in previous communications, such as the fact that those who only use their 3G phone for making calls or sending SMS (or who only use their mobile device for internet access on a WiFi network) will not notice the switch-off of 3G services.

All relevant information was made available on the programme's website [(www.netrefel.hu](http://www.netrefel.hu)), from the features of the different generations of mobile devices to the applications available on smartphones and useful considerations when choosing a device. Technical information on the support programme included questions of eligibility, where, how much and under what conditions to get a supported device, what happens to the data on the old device, etc.) Users also could check the type and eligibility of their device by IMEI number select the nearest dealer to their home, download the power of attorney form, etc.).

In parallel to the public communication campaign, to prepare 3G M2M operators and users, NMHH:

* raised awareness of the importance of the 3G switch-off through a **public hearing** and a free-to-attend **conference;**
* **has consulted with MNOs on** a number of occasions, urging them to start preparing jointly with their M2M customers for the 3G phase-out;
* has contacted **government and public institutions on** several occasions, asking them to consult their mobile operators if they use 3G services;
* has raised stakeholders' awareness of the 3G phase-out in a series of third-party **conferences and interviews;**
* has taken the initiative to include the replacement of obsolete M2M equipment among the **eligible activities and costs** in the framework of business development tenders financed from EU cohesion funds.

**The device trade-in support programme**

The first question to be decided about the device trade-in programme was whether it is really justified to use public funds for this purpose. After weighing up the consumer protection aspects, it was clear that both the lack of information, the unwillingness to switch and the lack of funds would disadvantage certain groups of users. Weighing up the social and economic benefits beyond the individual benefits, it was also shown that the programme would benefit all stakeholders and the Hungarian digital ecosystem as a whole.

The support programme was limited to the residential segment and the programme only provided support for the replacement of active, in-use (operational) 2G/3G devices. Proof of use was verified by means of an IMEI database created specifically for the purpose of the device trade-in support programme. Applications were limited to one 3G/2G device trade-in per person and per IMEI number.

As one of the main objectives of the programme was to reduce the stock of mobile phones in the population that were not suitable for Internet use, the programme did not allow for the retention of old handsets. Participants had to remove all personal data from their handsets beforehand and declare that the data had been irretrievably deleted, with the factory settings restored. Besides, dealers participating in the programme had to undertake to collect, store and dispose of the equipment in a sealed system in accordance with waste management rules.

For the first three months of the programme, the trade-in was only available for 3G handsets, and for the remainder of the programme, both 2G and 3G handsets could be replaced. The new handset was required to be VoLTE-enabled in order to minimise the impact of voice traffic previously carried on 3G handsets and falling back to 2G networks.

The programme did not cover mobile internet subscriptions, as this would have raised the possibility of indirect subsidies to MNOs and would have unduly extended the duration of the programme (until the end of the subscription subsidy). At the time of the launch of the device trade-in support programme, the subsidy amount was HUF 20 thousand (Appr. 50 EUR) per handset, but the gross retail price of the new handset to be purchased with the subsidy could not exceed HUF 120 thousand (Appr 315 EUR). Later, the subsidy was increased to HUF 40 thousand (Appr. 100 EUR) and the upper price limit was abolished.

With regard to the location of the trade-in, competition policy considerations and the desire to maximise the number of trade-in points and to ensure the fullest possible national coverage meant that, in addition to the shops of the four Hungarian MNOs, large retail chains and smaller electronics and IT shops could also participate in the programme, provided they met the conditions regarding the minimum supply of handsets, physical and IT infrastructure and the destruction of the handed-in handsets. Multi-store retail chains were also required to commit to invoicing subsidies on a consolidated, network-wide basis on a monthly basis.

The scheme eventually involved 700 shops across the country, giving virtually all beneficiaries convenient access to a trade-in point near their homes. Most of the devices sold under the programme - and therefore most of the support - were sold through independent device distributors.

It was essential for the success of the programme that the grant programme was run by an organisation with experience of supporting similar initiatives, adequate human resources capacity and an IT support system. The International Development and Resource Coordination Agency (NFFKÜ), a subsidiary of the then Ministry of Innovation and Technology (ITM), was chosen as the partner, having already been involved in the implementation of several similar large-scale public programmes.

**Regulatory challenges**

Several challenges related to competition regulation, state aid and data protection had to be addressed in the context of the public authorities' support for 3G switch-off in Hungary. At the beginning of the process, MNOs would have preferred a 3G phase-out coordinated by NMHH with a clear and predictable timetable for all, to avoid that none of them would be the first to take the decision to switch off for fear of losing customers.

The Hungarian Competition Act (Tpvt.) clearly prohibits coordinated market conduct by undertakings, but also provides for exceptions to the general prohibition. The argument for applying the exception could have been based on the expected increase in consumer welfare, more efficient spectrum management, increased resources for 5G developments or the promotion of general policy objectives. However, both MNOs and the NMHH's legal experts ultimately considered it an excessive risk that the competition authority would not issue a preliminary position on the behaviour of regulated undertakings when investigating restrictive agreements between market players under the Tpvt, but would only express its legally valid position *ex post* in decisions. The switch-off of 3G networks has therefore been carried out on the basis of separate strategies and decisions by each mobile operator, with a deliberate absence of consultation between the undertakings.

The implementation of the device trade-in support programme by the NMHH was made possible by the fact that under the Media Act (Mttv) the NMHH is involved in protecting the interests of communications operators and users, promoting fair and effective competition, and has the possibility to use its resources to provide support or contributions to develop a culture of informed consumer decision-making.

It also had to be clarified whether the scheme complied with the rules on state aid in EU law, which essentially prohibit it. At the time the scheme was designed, there was already a precedent for aid granted directly to consumers for the phase-out of a particular technology to be found compatible with EU law, as there was already a consumer equipment subsidy scheme for the digital switchover. Another important precedent was the "Warmth at Home" scheme, which involved state aid directly to consumers, without discriminatory element, on the basis of objective criteria. The State Aid Monitoring Office (TVI) has therefore approved the scheme.

From a data protection point of view, the scheme involved two essentially separate data management processes: the compilation and management of the IMEI number database of 3G/2G mobile phones eligible for the trade-in subsidy, and the management of the personal data of individuals applying for the subsidy, including the fate of any personal data retained on the phones submitted for trade-in.

The use of the IMEI database had to be designed in line with the principles of the GDPR, in particular the principles of purpose limitation and data minimisation: neither the trader nor the consumer directly interested in the IMEI number could obtain more personal data than strictly necessary for the support transaction.

Operations involving the personal data of beneficiaries raised fewer data protection issues. An essential element of the data management was that the IT system serving the application generated and recorded a unique code based on the user’s ID card data (the so-called 4T data) at the time of purchase using a predefined algorithm, and was able to check whether the trade-in opportunity had already been used with this data. Again, the principles of purpose limitation and data economy were maximised, as the database of closed transactions consisted of a set of codes that could not be used to retrieve either the personal data of the beneficiaries or the IMEI numbers of the mobile devices concerned.

**Results of the NetreFel! Programme**

The device trade-in support scheme was open to interested parties for more than a year, providing a safety net for anyone who would have had to make a relatively large financial investment to replace a device on their own. Some 120,000 people eventually took part in the scheme, and almost all of the HUF 5 billion available was spent.

NMHH’s communication efforts and the preparation of the support programme clearly helped the MNOs to prepare for the switch-off, accurately identify their 2G and 3G users, the active M2M devices on their networks, better understand the main consumer choices and motivations, the scope and scale of the challenges associated with 3G switch-off.

Data of Q1 2023 shows that in recent years, even those who did not take advantage of the subsidised device trade-in programme have increasingly opted to replace their 3G/2G handsets. In the last three years:

* the **number of** active **residential 2G devices decreased** **by 460 thousand** (to 1370 thousand);
* the **number of** active **residential 3G devices fell** **by 320 thousand** (to 309 thousand);
* the **number of 3G devices that also carry data traffic shrunk** **by 260 thousand** (to 10-15 thousand).

Overall, the period preceding the phase-out of 3G services saw a significant modernisation of the Hungarian residential handset base, with NMHH's communications, regulatory and support role making a significant contribution.

The smooth phase-out of 3G services, and the related renewal of the population's assets, could play an important role in the more efficient use of spectrum, the deployment of 5G services, the improvement of the choice and quality of mobile internet services, the development of digital competences of the population, and the overall balanced development of the digital ecosystem in Hungary in the coming years.

An important benefit of the support programme is that the device trade-in scheme was implemented in an exemplary communication, strategic and IT cooperation between MNOs, electronic stores and public administration actors, which could be a useful precedent and promising good practice for future programmes supporting digitalisation in Hungary and elsewhere in Europe.

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