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The digitisation of Ukraine: anatomy of a success story

Sławomir Matuszak

On 23 August, on the eve of the 30th anniversary of Ukraine's independence, a law came into force recognising electronic ID cards and passports as equivalent to their physical counterparts. Earlier, on 6 August, President Volodymyr Zelensky signed a law providing for all offices to operate on a paperless basis. One of the main election slogans in his winning campaign in 2019 was 'the smartphone state', and this has also been a key idea towards modernising the country on the anniversary of its independence. The idea assumes that most administrative services will – in as convenient a manner as possible for the citizen – be transferred online, in order to cut back on the need for visits to offices and reduce the role of officials. While many of Zelensky's election promises have not been implemented, the country has in fact made impressive progress over the last two years with regard to digitisation as broadly understood. Mykhailo Fedorov, the minister for digital transformation, can be considered the father of this success. He brought about the launch of the *Diia* website and application, which has already made it possible to deal with most important matters online; by the end of Zelensky's term of office, all administrative services are to be available via the Internet. Automating these processes will reduce the risks of corruption and improve the provision of public services – something which is often very burdensome in Ukraine – and also increase the competitiveness of the economy and the effectiveness of bureaucracy.

The roots of the success

The groundbreaking new bill on paperless work for all offices stipulates that officials serving customers will not have the right to demand a paper copy of any document (such as the ID card, a marriage certificate, a statement of income, etc.) if it already exists in the state registers. When the new rules come into force, citizens will no longer need to visit multiple offices to obtain certificates, which should significantly speed up the handling of cases. The delay in the *Verkhovna Rada* (Ukrainian parliament) in passing the law means that it will not come into force until November, instead of the anniversary of independence, as had been planned.

The digitisation of the country has significantly accelerated because politicians from the younger generation came to power after the 2019 elections. This is true of the majority of members in the governments of Oleksiy Honcharuk (the ministers' average age was 39, the youngest cabinet in Europe

OSW

Centre for Eastern Studies
ul. Koszykowa 6a, 00-564 Warsaw, Poland
tel.: (+48) 22 525 80 00, info@osw.waw.pl
www.osw.waw.pl

EDITORS: Mateusz Gniazdowski, Tadeusz Iwański, Katarzyna Kazimierska, Tomasz Strzelczyk
TRANSLATION: Jim Todd

DTP: Wojciech Mańkowski

at the time)[1] and the current PM Denys Shmyhal. They had not had any experience of working in state offices, but were well versed in new technologies and aware of the advantages they offered. As a result, compared to their predecessors, they gave higher priority to increasing the pace of this transformation process.

> **The new ministry's priority was to create a single, central online website offering as many of the administrative services hitherto provided by offices as possible.**

The driving force behind the digitisation is Fedorov (born 1991). In 2015–9, he was the owner of a small online advertising company. During the presidential campaign in 2019, he was responsible for promoting Zelensky on social networks, and was one of the main authors of his victory. In August 2019, he became deputy prime minister and minister for digital transformation (becoming the youngest person to hold a ministerial position in the history of Ukraine) in the Honcharuk government; he is one of the few members of that cabinet who is also in the Shmyhal government today. During his almost two years in office, it is difficult to identify any scandals – concerning either corruption or morals – which could be linked to him. Fedorov avoids conflicts, and focuses solely on the activities of his ministry in his public statements.

The Ministry for Digital Transformation (MDT) was created especially for him in September 2019, on the basis of the State Agency for Digital Administration, an institution which had been established five years earlier, but which at the time was underfunded and not very successful. Fedorov had a free hand in choosing his associates, and *de facto* organised the ministry from scratch. This gave it an advantage over the fossilised and overly complex bureaucratic structures that characterise the vast majority of state institutions. Systemic actions were also undertaken: a deputy minister responsible for digitisation was appointed in each ministry, and deputy governors were appointed at the regional level in order to coordinate the process in the regions.

Diia, or action

The new ministry's priority was to create a single, central website offering as many of the administrative services hitherto provided by offices as possible. As early as September 2019, the *Diia* website (the name is an abbreviation of the Ukrainian phrase '*Derzhava i ya*' – 'The state and me' – and also means the noun 'action') was launched in beta mode; it was created thanks to grants from the US, the UK and Switzerland. Initially, the website and the smartphone application offered a limited range of services (mainly access to ID cards, driving licenses, etc.), but new options were gradually added. *Diia* became fully operational in February 2020; the website currently allows online access to 50 administrative services, and the application around a dozen.

Through *Diia*, one can register or liquidate a company in just a few minutes (this applies to sole proprietorships and some limited-liability companies), sign contracts with an electronic signature, register a newborn child (including all the accompanying benefits), and also submit tax returns to the fiscal service (for certain categories of entrepreneurs). One of *Diia*'s most important new features is the ability to change one's residential registration. According to Fedorov's estimates, over 30% of Ukrainians do not live at their formal place of residence, and about a million are not registered at all. This is because re-registration is a bureaucratic and time-consuming process (e.g. those subject to military service must report personally to the military commission to inform them about the change). Thanks to the application, however, this now only takes a few minutes. *Diia* will continue to expand: for example, an 'e-Entrepreneur' service is to be launched in the near future, which will enable the automatic issuance of licences, such as those needed to open restaurants. According to data from the

[1] Є. Тейзе, 'Юні і зелені: уряд України – наймолодший у Європі', Deutsche Welle, 3 September 2019, dw.com.

new Ministry, *Diia* is being used by nearly 8 million citizens, 4.3 million of whom use the application and 3.9 million the website.[2] The ultimate goal is for it to become the only 'window' to all services offered by the state by 2024.

Accelerated by the pandemic

The process of digitisation in Ukraine would not have progressed nearly so rapidly without the COVID-19 pandemic. Although lockdowns were introduced for shorter periods in Ukraine compared to most Western countries, were often regionally focused, and were associated with less severe restrictions, they did force a change in how the state offices functioned. The need for remote customer service broke down the bureaucracy's resistance to innovative solutions, and the applicants became used to settling matters online. The need to maintain social distance also forced some citizens to learn to function in digital reality more quickly. For several months it has been possible to sign up for the COVID-19 vaccination using *Diia*, and to receive a certificate confirming that one has received it. As of 20 August, vaccination certificates given in the application have been recognised by the EU.

Challenges: poor infrastructure in the regions and insufficient knowledge

One of the obstacles to the expansion of digitisation is the country's poor broadband internet infrastructure. In December 2020, the MDT completed its first comprehensive audit of the situation, which showed that over 15,000 villages inhabited by 3.2 million people (out of Ukraine's total population of 38 million) do not have access to fibreoptic cable. People were particularly severely affected by this during the pandemic and the distance learning introduced at that time, which in many regions was merely a fiction. Another 8200 villages and urban estates had fibreoptic cables, but with slow connections.[3] Only around 3700 localities (including virtually all the cities) have infrastructure which allows high-speed internet connections. Levels of access are quite diverse regionally: the situation is at its relative best in western Ukraine, while the greatest problems are in the centre (except for Kyiv and the Kyiv region) and south of the country, especially in places away from major urban centres (see Map). The audit showed that over 5000 schools (out of 16,000) do not have access to broadband internet. In addition, numerous other anomalies were revealed; for example, some buildings were fictitiously connected to the network multiple times.

The MDT has received funding amounting to 500 million hryvnia (US$18.6 million) for the current year in order to connect 6000 locations (schools, hospitals, libraries, etc.) to broadband internet in 3000 towns & cities. It is assumed that providing a state-sponsored fibre connection to a given locality should reduce the costs of connecting individual households. According to the plans, 95% of localities should have access to broadband internet (fibreoptic or mobile 4G) by the end of 2023. The ministry has also signed a memorandum with mobile operators to increase 4G network coverage throughout the country. The cost of the entire investment is estimated at 2–3 billion hryvnia (US$75–112 million).

Another obstacle to the digitisation process is the relatively small number of residents who use the internet. According to a study by GlobalLogic, the figure amounted to nearly 30 million in 2021, but has risen by 2 million since 2019, mainly due to the pandemic and the related restrictions. It is also estimated that over half of Ukrainians do not have sufficient digital competences (15.1% have none at all, and a further 37.9% are below average)[4]. The ministry's task is to raise this rate for 6 million

[2] 'Минцифры в Дії, или зачем Михаил Федоров покупает в Интернете поддельные документы', LIGA.Tech, 1 April 2021, tech.liga.net.

[3] According to the NPERF tests carried out by the MDT, lines with a download capacity of less than 30 Mb/s and a latency (ping) greater than 10 ms, or of less than 50 Mb/s and a latency greater than 20 ms, were considered as non-compliant with the standards.

[4] 'Мінцифри збирається навчити 6 мільйонів українців цифрових навичок за 3 роки', Урядовий портал, 22 March 2021, kmu.gov.ua.

citizens by 2024. To this end '*Diia*. Digital Education', offering materials to train people in the use of the internet, was launched in February 2020. Half a million people had registered for the online courses by March 2021. Those who wish to can also take a state exam for a Certificate of Digital Awareness.

Security issues

The security of the new services remains an open issue, especially as Ukraine has experienced numerous cyberattacks in recent years, including against its critical infrastructure. The *Diia* system itself does not store personal information; it merely serves as a link between different registers. The MDT has offered a reward of one million hryvnia to anyone who can breach its security, but so far no one has managed to do so. The state of the registers is another problem; according to Fedorov, there are about 200 state registers in the country, whose information is often duplicated or incomplete. In addition, some of them are in private hands, which leaves them open to large-scale abuse. One example is the National Register of Seafarers, responsible for issuing seafarers' permits. The Security Service of Ukraine (SBU) estimates the proceeds of bribes when issuing such permits at US$150 million annually. In July this year the register was confiscated by the SBU and handed over to the Ministry of Infrastructure. Previously, a similar situation had arisen with the construction register, which was hosted on servers outside Ukraine, but in 2020 (despite threats received by MDT employees) control over it was regained, and a new 'e-Construction' website was launched. The overall lack of transparency and the decentralisation of the registers allow for numerous abuses, such as collecting child subsidies in several regions at once, or receiving pensions for deceased people. In order to counteract such practices, the MDT is now systematically digitising the registers of various institutions with the ultimate aim of combining them into a unified system, which should significantly reduce bureaucratic corruption.

> **The success of the digitisation process has been possible thanks to the talent of Fedorov, who, despite his youth and limited experience in government, has coordinated the entire process efficiently.**

Another of the government's priorities is the issue of open data related to the digitisation of the registers. The first steps in this direction were taken during the presidency of Petro Poroshenko, including the launch of a website with public data. Thanks to Fedorov's actions, the process of making this information available has gained momentum. Currently, it is possible to monitor the income and expenditure of the state budget and local governments, and even of individual schools. This has significantly increased the transparency of these institutions and facilitated the detection of fraud and corruption. In the Open Data Maturity report from December 2020, Ukraine came 17th among European countries in terms of the quality of open data – ahead of 11 EU member states.[5] This result can be expected to rise even further this year.

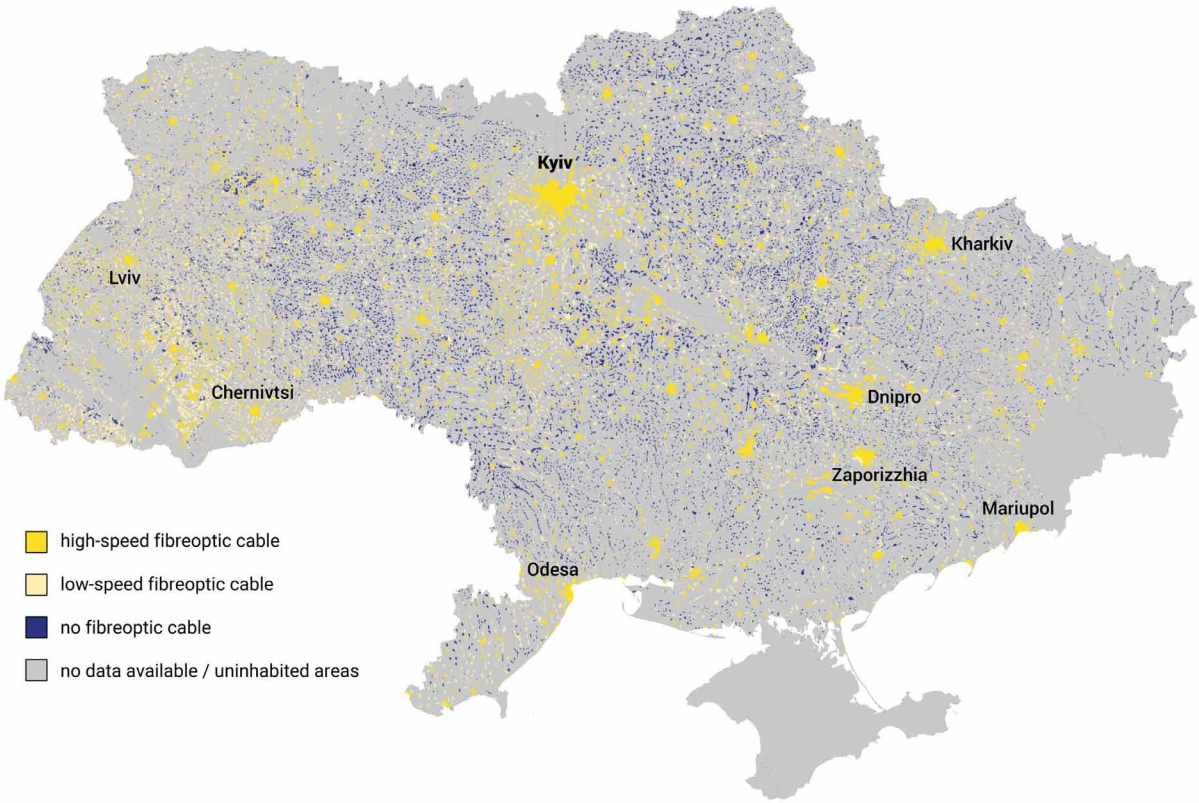
Conclusions and prospects

There is no doubt that Ukraine has made impressive progress in terms of digitisation since mid-2019. There are many indications that when Zelensky's term ends in 2024, it may actually have become a 'smartphone state', offering fully online administrative services without the need to visit offices. This will have been possible thanks to the fact that digitisation is one of the president's priorities, but most of all thanks to the talent of Fedorov, who, despite his youth and limited experience in government, has proved able to coordinate the entire process efficiently. It is significant that the ministry had to be created practically from scratch, guaranteeing it complete control over the selection of personnel and creating the structure of the institution according to what it really needed.

[5] 'Відкриті дані в Україні розвинені на 6% краще, ніж у середньому в ЄС – рейтинг', Економічна правда, 17 December 2020, epravda.com.ua.

Nevertheless, it should be expected that even if the plans concerning the dissemination of broadband internet are achieved, there will still be a large group of excluded people in the country. Ukraine is a very large country, and due to its limited resources it will not be able to provide online access in every village. In addition, the digitisation of public services raises another problem to which hardly anyone has so far paid attention: moving these services online and automating most of the related processes will force a reduction in the number of office workers, especially lower-level officials. It may prove difficult or impossible for them to find a new job, especially in the case of older workers and those living in small centres. There are currently no estimates of how many people this may affect; when asked about the issue in interviews, Fedorov has so far avoided giving clear answers. However, this process is inevitable and does not only concern Ukraine. Nevertheless, digitisation will not only increase the speed and convenience of using administrative services, but also – thanks to the introduction of transparent registers – it will ensure that public funds are spent more efficiently and significantly reduce the risks of corruption. It will also be an important impulse to the country's further economic development and increase its competitiveness in the world.

Map. The range of the Ukrainian optical fibre network



Source: author's research based on data from the Ministry of Digital Transformation, data.gov.ua.