Diia mobile application

Evaluation report

E-Governance Academy

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Scope of the evaluation report

The evaluation report assesses the effect of the launch of Diia mobile application developed and promoted by the Ministry of Digital Transformation of Ukraine.

In particular, the evaluation report focuses on analyzing social, economic, environmental, and transparency impact and the impact on the prevention of the spread of COVID-19 virus related to the launch Diia mobile application.

The document covers the impact of Diia application on the territory of Ukraine within a period starting December 2019 until December 2021.

Methods

The evaluation is conducted using statistical data analysis from official and public sources, including quotative, qualitative, cohort and time series analysis.

When preparing the current assessment, the legal framework and regulations analysis was also performed. Such study included Ukrainian laws, decisions of the Government of Ukraine and related bodies, tax regulations and other sector-specific regulations.

The evaluation also included performing interviews with experts and related parties as well as polls among Diia mobile application users and target groups. Such interviews included experts in the following areas: environment, law enforcement, judiciary, healthcare, education, corruption prevention and personal ID production.

By assessing the environmental impact, the focus was made on deforestation level displayed in a number of trees cut per year or for another period stated. The calculation of the deforestation was done using the fellow formula:

$$Def\_eff = \frac{N_{Page_{off}} * N_{user_{off}} * M_{page}}{N_{tree\_per\_t}}$$

Def_eff – deforestation effect

N_{page_off} – number of pages needed for the offline solution

N_{user_off} – number of users of the offline solution

M_{page} – mass of one sheet of paper

$N_{tree\_per\_t}$ – number of trees needed to produce one ton of paper

The economic impact analysis was executed using Standard Cost Model (SCM) according to the OECD recommendations. When performing the economic analysis, the below formulas were also used:

The difference in offline and online solution cost (UAH):

$$Diff\_cost = (t_{off} - t_{on}) * S_h + (interm_{cost_{off}} - interm_{cost_{on}}) + (mater_{cost_{off}} - mater_{cost_{on}})$$

t_{off} – time needed for the offline procedure (hours)

t_{on} - time required for the online procedure (hours)

S_h - money equivalent of time calculated as per hour salary based on the average wage in Ukraine (UAH/hour)

$interm_{cost_{off}}$ – the cost of intermediaries offline (UAH)

$interm_{cost_{on}}$ - the cost of intermediaries online (UAH)

$mater_{cost_{off}}$ - additional costs offline (UAH)

$mater_{cost_{on}}$ - additional costs online (UAH)

Overall potential cost, UAH:

$$Total\ potential\ costs_{off} = t_{off} * S_h * N_t + interm_{cost_{off}} * N_t + mater_{cost_{off}} * N_t$$

$$Total\ potential\ costs_{on} = t_{on} * S_h * N_t + interm_{cost_{on}} * N_t + mater_{cost_{on}} * N_t$$

N_t - all users per year

Overall savings, UAH:

$$Econ\_ef_{potential} = Diff_{cost} * N_t$$
$$Econ\_ef_{real} = Diff_{cost} * N_{on}$$

N_{on}- online users per year

Executive summary

Diia is an ecosystem uniting most of the services provided by the Government and making them easily accessible online in one place via Diia mobile app and web portal. Diia ecosystem also includes theme blocks on education (Diia Education), small and medium-size business support (Diia Business), administrative services (Diia website and Diia application), as well as the special project on the legal framework for the IT industry (Diia City).

Launched in December 2019 by November 2021, Diia mobile application became the most downloaded app in Ukraine according to similarweb.com and a frequently used app for more than 10 million users, roughly every fourth Ukrainian according to the Ministry of Digital transformation of Ukraine.

One of the reasons for the Diia app popularity is the simplification of 10 public services and the digitalization of 11 documents.

Ukraine became the first country globally to legally recognize e-passport without presenting a hard copy. E-passport in Diia app significantly simplified the use of a passport. If applying for a passport for the first time, it takes seven documents and up to 20 days. If applying for the change of the passport to a new one in case of passport loss, theft, damage, expiry, or marriage (data change), it takes nine documents, up to 20 days and 363 UAH payment (ca 14 USD) and makes about 6% of minimal wage in Ukraine (6000 UAH). E-passport solves the above problems, as it does not require reissue and can't be lost, stolen or damaged. According to the poll conducted for this report, digitalization of the passport increased transparency of the procedure by 38.7%. E-passport also allows to save around 1500 trees and reduce the use of plastic by 45 tons per year.

International e-passport became one of the most popular documents in Diia app, accounting for around 7.4 million, meaning that almost every fifth Ukrainian decided to opt for a digital document. According to the poll conducted for this report, digitalizing of international passports increased transparency of this procedure by 22.6%. International e-passport also allows saving around 3,750 trees per year.

Digital student ID became used by roughly every eighth student in Ukraine. According to the poll conducted for this report, digitalizing the student ID increased transparency of getting a Student ID by 30%. The current economic effect of issuing 654 898 digital student IDs is estimated to be from 49,117,150 UAH to 74,003,474 UAH (from 1.8 to 2.8 million USD).

Digital COVID-19 vaccination certificates played a major role in stopping a massive paper COVID-19 certificates fraud and stimulated a dramatic increase in the number of actual vaccinations mitigating the risks of COVID-19 pandemic. In addition, digitalizing of COVID-19 certificates increased transparency of getting a certificate by 41.9%, according to the poll conducted for this report.

Digital taxpayer code provided simplification of the use of the document. Reissuing a paper version of the document requires collecting three records and waiting five days (and in some cases, up to ten days). According to the poll conducted for this report, digitalizing taxpayer code increased transparency of getting a code by 12.9%.

Digital Internally Displaced Person (IDP) certificate provided usability and

transparency improvements for one of the most vulnerable categories of Ukrainians: IDPs who suffered from the Russian aggression in the East of Ukraine and Crimea and were forced to leave their homes. Digital IDP certificate resolved the problem by reissuing a paper version of the document, which takes from three to eight documents and takes up to three days. In addition, Digitalizing of IDP certificate increased the transparency of getting a certificate by 35.4%, according to the poll conducted for this report.

Digital birth certificate simplified the use and reissue of the document. Reissuing the paper document process could take up to ten days, while in Diia app, a person gets a certificate instantly, saving time and money. The digital birth certificate requires no paper and provides a much more environmentally friendly solution to personal identification documents.

By using Diia app, Ukraine became one of the first countries to legally recognize e-driving licenses. An e-driving license could prevent up to 80% of fines for driving without a license (from 425 UAH (about 16 USD) to 20,400 UAH (761 USD)).

Digital vehicle registration could prevent up to 90% of fines for driving without registration, making from 425 UAH (about $16) to 850 UAH ($32). The estimated economic effect of the complete switch from plastic to digital vehicle registration could be around 3,200,000,000 UAH per year (around 119.4 million USD per year).

Digital compulsory third-party car insurance (CTPCI) could prevent up to 70% of fines for driving without a registration making savings from 425 UAH (about 16 USD) to 850 UAH (32 USD). Digital CTPCI could save around 20 trees each year.

Digitalizing the process of **residence address registration** significantly simplifies the most common public service in Ukraine. Without Diia app, changing residence address registration requires around three weeks of bureaucratic procedures. With Diia app, it takes only about 15 minutes to apply online and the new registration will be granted within 24 hours. The estimated economic effect of the introduction of digital residence address registration makes be around 1,500,000,000 UAH per year (approximately 56 million USD per year) or 93% of expenses on the offline procedure. Furthermore, digitalizing of driving license increased transparency of getting a document by 42.3%, according to the poll conducted for this report.

Digitalizing the process of **driving license replacement** is also saving resources remarkably. The traditional process of driving license replacement requires a person to register for an appointment at the Ministry of Interior service centre. At the time of appointment, the person must physically go to the premises of the service centre, wait in numerous lines, provide five documents, take a photo at the specially designated place the service centre, pay 219 UAH (around 8 USD). The waiting time is up to five days after all the procedures are done and all the documents are applied. Applying with Diia app, takes up to ten minutes from one's smartphone, which makes the procedure significantly easier, faster, and more convenient. The current economic effect makes around 80,000,000 UAH (around 3 million USD). If we estimate that 100% of all applicants for new driving licenses in Ukraine would reissue them using Diia app, the overall economic effect will make around 1.33 billion UAH (approximately 50 million USD) per year. According to the poll conducted for this report, digitalizing of driving license increased transparency of getting a document by 51.6%.

Diia app provides a solution **to monitor and pay fines for driving**. Without the Diia app service, users risk doubling the amount of a fine. Moreover, if a large number of

unpaid fines pile in a time, the driver's car could be towed away by Government until the driver pays off the penalties in full. Also, unpaid fines could block the driver's car from being sold. Diia solves the above problem by providing 24-hour monitoring of the fine payment status and sending push notifications to a user in case of an unpaid fine. Diia also allows users to pay the fine right away in the app.

The introduction of **Diia signature** (remote digital signature) makes the use of electronic signature much easier and more convenient. The traditional process of getting an e-signature requires collecting four documents, registering in one of the certification centers, visiting the certification center, and finally, generating the electronic signature with the help of the center's staff. In Diia app , it takes less than ten minutes on a user's smartphone. Furthermore, Diia provides the e-signature generation service and a convenient way to apply it by using face recognition instead of usual passwords when signing e-documents and providing validation and authentication. The usability of this service resulted in more than 6 million generated signatures and 327 000 transactions with a 97% success rate.

Diia QR simplifies the processes of sharing documents, reducing the efforts to some seconds needed to scan the QR code. The copies of the needed documents are instantly shared via the QR code by using this application. Furthermore, Diia QR simplifies the document sharing process not only for the person sharing a document but also for the entity receiving it. When using Diia QR, the receiving side gets the document instantly and gets it in a digital format, allowing processing such data much faster and easier. Diia QR allows saving from 350 000 to 520 000 trees each year.

Digitalization of enforcement proceedings (court decision obliging a person to pay a certain amount of money) makes it possible for any individual to be convinced of the absence or presence of debts. It also allows to obtain information about the enforcement proceedings to which they are a party, in particular regarding the nature of existing debts and regarding the main legal proceedings committed by the enforcement officer; pay the amount of the fine or obligation within the framework of the relevant enforcement proceedings online in just a few clicks. The estimated economic impact of digitalization of enforcement proceedings could make from 12,492,321 ,000 UAH to 74,953,926 ,00 UAH (from 466 million to 2.8 billion USD). Diia app also increased transparency of the process by 29%, according to the poll conducted for this report.

Electronic petitions in Diia app promote the engagement of citizens in the decision-making process of their community, making the first step towards online democracy. Diia app allows users to create, monitor and support petitions from the user's smartphone.

Mortgage provision for internally displaced persons (IDPs) in Diia app serves up to 680 families or over 1,700 individuals, providing loans of up to EUR 40,000 for 20 years at a 3% interest rate simply and transparently (transparency increase by 16.1% compared to other services for IDPs according to a poll made for this report). The current economic impact of the program amounts to 28 million USD.

During severe quarantine restrictions in 2020 – 2021, Diia app provided a service called **Support 8000** - a special one-time social payment for small private entrepreneurs and workers who were forced to stop or substantially limit their business operations due to COVID-19 quarantine restrictions. Support 8000 allowed thousands of people to keep their jobs and reduce the harmful effects of the COVID-19 quarantine restrictions. Economic effect as of March 2021 amounted to roughly 4 billion UAH (around 149.3 million USD).

Diia app allows users to conduct tax service via the app much simpler and cheaper.

Private entrepreneurs could develop, submit and monitor their tax declarations and pay their taxes right in the Diia app. Diia app resolves many crucial problems related to tax services, reducing the time needed to submit the declaration and pay respective taxes from around 1-2 days to only three minutes. Instead of filling out 30 paragraphs of a complicated tax form, Diia users only need to answer four questions. Diia app also automatically calculates the correct amount of taxes to be paid based on a revenue provided by a user. The service could decrease spending on accounting services and tax consultants and mitigate the risk of getting fined by the tax authority. Diia app increases the transparency of the process by 38.7%, according to the poll conducted for this report.

The overall social impact of Diia mobile app could also be demonstrated on a user growth rate. According to the Ministry of Digital Transformation of Ukraine, from December 2019, when Diia app was launched for beta testing to October 2021, Diia app grew from 0 users to 10 million users in less than two years.

According to the anonymous poll conducted for this evaluation report, 96.8% of respondents stated that Diia app simplified the personal identification process. According to the same survey, 93.5% said that Diia app simplified the process of tax declaration submission and tax payment, while 96.8% stated that they consider Diia mobile app a successful project.

Answering the question of the same poll "How would you evaluate an overall social impact of Diia app?" with 5 options of answers: very positively, positively, neutrally, negatively, very negatively, 64.5% of the respondents answered, "very positively" and 35.5% answered "positively", meaning that 100% of the respondents evaluate an overall social impact of Diia app as positive or very positive.

Based on the analyses done for this report, the recommendations for the next services in Diia app are following:

- Registration of private entrepreneur
- Personal yearly revenue statement
- E-Baby - e-service for mothers with newborns
- Car registration
- Criminal register non-conviction certificate
- Application for subsidized loans for micro and small business
- Push notifications on local road closures and repairs

General background

According to the data of the Government of Ukraine, before the launch of the digitalization reform in 2019, public authorities and local governments provided more than 2,000 various public services. However, 91.5% of the population of Ukraine did not use online public services. Moreover, offline public services were associated with considerable inconveniences, time, financial costs and often a lack of transparency.

Electronic services were offered on a range of Government portals with different interfaces, standards and e-identification methods, found highly inconvenient for the users. Besides, online services before the reform were automated without the proper re-engineering or ensuring good user-friendliness. There was no single approach to re-engineering and launching e-services. Another disadvantage was that e-services were not properly accessible on smartphones.

In 2019 digitalization became one of the key priorities of the Ukrainian Government. With that purpose in mind, a new Ministry of Digital Transformation was created, and the Minister received an additional status of Deputy Prime Minister of Ukraine. On top of it, each Ministry got a Chief Digital Transformation Officer/ Deputy Minister position to steer the digitalization process in each specific domain.

As of that moment, the Ukrainian Government brought a new approach to the digitization of the services and eventually redefined them completely, making them logical, convenient, and understandable for the users.

The Ministry of Digital Transformation mission is to create a digital, human-centred and transparent state without administrative burden for citizens and businesses.

With that vision in mind, the Ministry of Digital Transformation of Ukraine created the Diia ecosystem and Diia application as part of it.

Diia Ecosystem

Diia is an ecosystem uniting most of the services provided by the Government and making them easily accessible online, in one place via mobile app and web portal. Diia ecosystem also includes theme blocks on education (Diia Education), small and medium-size business support (Diia Business), administrative services (Diia website and Diia application), as well as a special project on the legal framework development for the IT industry (Diia City).

There are roughly 10 million users of Diia ecosystem, about one-quarter of the total population of Ukraine.

Diia also enables citizens to have all their important documents in the electronic version in their pocket, not being afraid of loss or damage. In every situation where it is needed, they can just open an app on their smartphone and show/check the document they need. Diia contributes to the reduction of bureaucracy associated with public services, which assists in fighting corruption and increasing government savings. As a result, fewer people are employed in the public sector, and less human interactions occur. With starting the program, 10% of government employees were already reduced, which contributes to hundreds of millions of dollars in savings, but besides this, the initiative also improves the speed, efficiency, and transparency of government services. In addition, the government sector's digitalization helps develop the whole IT industry in the country and, citizens become more digital-aware and educated. This also affects other sectors, increasing the spread of digital infrastructure and fasting the speed of overall digitalization.

In the data published by the UN for the e-government development index in 2020, Ukraine ranked 69th in 193 countries surveyed. This index assesses the Government's capabilities to integrate its functions electronically, such as the use of the internet and mobile devices. Ukraine also made remarkable progress in the e-participation index, ranked 43rd out of 193 countries, with a score of 0.66 in 2018 to 0.81 in 2020. This development shows that the Government and citizens are adapting to the online democracy solutions.

Diia ecosystem key components

Diia online portal

Diia online portal unites the most popular and necessary services provided by the Government on one portal, turning long and complicated bureaucratic procedures into simple, transparent, and fast processes. For example, the portal allows registering the business, new house, getting licenses and construction permits, etc.

Diia Business

The portal provides advice for small and medium-sized businesses and allows entrepreneurs to get free online consultations and even attend free online training.

The portal aims to increase national exports, support enterprises to enter new markets and support foreign companies interested in exporting goods and services from Ukraine.

Diia Business includes an online platform for business information about IT companies, staff members, investors, and the whole tech ecosystem of Ukraine in general called 360 Tech Ecosystem Overview. The mission is to collect and structure the information on the entire IT ecosystem, particularly related to universities, startup-accelerators, techno hubs

and all tech industries, which will open up new opportunities for the market and allow all ecosystem members better cooperate.

Around 800,000 Ukrainians are using Diia Business by the end of 2021.

Diia Education

Diia Education is an online portal with free online courses on digital literacy, uniting teachers, experts, and students. Diia Education also has a special component "Online security for kids," aimed at reducing the risks of the harmful impact of technologies on youths and supporting kids make the best use of the digital tools. There are around 550,000 citizens currently studying by using Diia Education.

Diia City

Diia City is a unique legal framework for the IT industry to make Ukraine the most powerful IT hub in Central and Eastern Europe and support investing, creating jobs and developing new technologies. As a result, both Ukrainian and international entrepreneurs can implement the most ambitious innovative and business ideas quickly and effectively. Types of Activities in Diia City: software development and testing, including games; publishing and distribution of software, including software as a service (SaaS); teaching computer literacy, programming, testing, technical software support; digital marketing and ads using software developed by residents; research and development (R&D) in IT and telecom; cybersport; services related to the virtual assets flow; cybersecurity; robotics.

Diia application
Background

Launched in 2019, the Diia app allows Ukrainian citizens to use digital documents on their smartphones instead of physical ones for identification and sharing purposes. The Diia application provides access to over 50 governmental services. Eventually, the Government plans to make all kinds of government-to-citizens interactions available through Diia.

Diia was firstly presented on September 27, 2019, by the Ministry of Digital Transformation of Ukraine as a brand of the State in a Smartphone project. Vice Prime Minister and Minister of Digital Transformation Mykhailo Fedorov announced the creation of a mobile app and a web portal that would unite into a single place all the services provided by the Government to citizens and businesses.

Diia app was launched as a beta test in December 2019 with real users. On December 4, 2019, the Cabinet of Ministers adopted Decree No 1137 on a Single e-Services Portal, defining the objective, major tasks, and functionality of the Diia portal and the Diia application.

On February 6, 2020, the mobile app Diia was launched officially. During the presentation, Ukrainian President Volodymyr Zelensky stated that 9 million Ukrainians now have access to their driver's license and car registration documents on their phones, while Prime Minister Oleksiy Honcharuk called the implementation of the State in a Smartphone project a priority for the Government.

In April 2020, the Ukrainian Government approved a resolution for experimental digital ID cards and passports, issued to all Ukrainians via the Diia app.

In May 2020, the Government presented Diia City, a large-scale project which would establish a virtual model of a free economic zone for representatives of the creative economy. It would provide a special digital residency with a particular taxation regime, intellectual property protection and simplified regulations.

On October 5, 2020, during the Diia Summit, the Government presented the first major update of the app and web portal, launched in April 2020. Additional personal documents were added to the app and the ability to share documents with others via a single tap on the push message. The web portal expanded the number of available services to 27, including registering a private limited company in half an hour. Furthermore, president Zelensky announced that in 2021 Ukraine would enter the "paperless" mode by prohibiting the civil servants from requiring paper documents.

By 2020, the app had more than 6 million users, while the portal had 50 available services.

In March 2021, the Ukrainian Parliament adopted the bill equating digital identity documents with physical analogues. As a result, starting from 23 August 2021, Ukrainian citizens can use digital ID cards and passports for all purposes while in Ukraine. According to Minister of Digital Transformation Mykhailo Fedorov, Ukraine will become the first country where digital identity documents are considered legally equivalent to ordinary ones.

By November 2021, the app had more than 10 million users.

The Diia platform is a part of the state initiative 'State in smartphone', which aims at transferring all public services into the online format. The Diia platform (which consists of

web-portal and mobile applications) is the single interface for
Ukrainians to access digital public services in the online format, so all citizens can interact with the Government easier, faster, more convenient and without corruption risk. The aim of Diia mobile application is to provide all Ukrainians access to digital documents in a single place, with the same legal power as paper ones. Moreover, the Diia mobile app also provides a range of public online services directly from your smartphone. Launched in testing mode in December 2019, the Diia mobile app has already more than 11 million unique users. As of November 2021, there are 11 digital documents available on Diia mobile application (digital driver's licenses, digital vehicle registration documents, digital car insurance policy, digital student identification cards, national ID cards, international ID cards, digital unique tax numbers, digital Internally Displaced Person certificates, digital birth certificates, internal COVID-19 certificate, international COVID-19 certificate). With digital ID cards, the citizens can identify themselves, open bank accounts, verify bank and post operations etc. The Ukrainian COVID-19 certificate is recognizable by EU countries. Also, the app provides the following online services: notification on citizens' debts feature, notification on traffic violations penalties and payment for them, driver's license replacement, requesting COVID-19 certificate, petitions, and tax related services (i.e., submitting private entrepreneurship declarations etc.) During the strict quarantine restrictions, the digital service on requesting pandemic-related state support for businesses was also available on the Diia mobile application. The application was developed by keeping in mind accessibility, the inclusion of vulnerable groups, broad involvement of users in testing new services and attention to user feedback.

Overview and impact analysis of documents in Diia Application

One of the key features of Diia app is having all the main documents in electronic form on a user's device. Documents in Diia app are officially recognized as legal documents according to the Ukrainian law 1368-IX and respective decisions of the Government. The feature was launched in April 2020, making Ukraine the first state ever to enable the use of electronic passport without the requirement to present a hard copy.

e-passport

e-passport – official passport of a citizen of Ukraine in an electronic form reflecting the information from the state registers, including the permanent residence address. e-Passport also uses electronic identification: unique QR-code which is generated by connecting to the record and works for 3 minutes – time enough to scan the code and check the authenticity of the document.

As of November 2021, there have been 2,695,770 e-passports generated using Diia App.
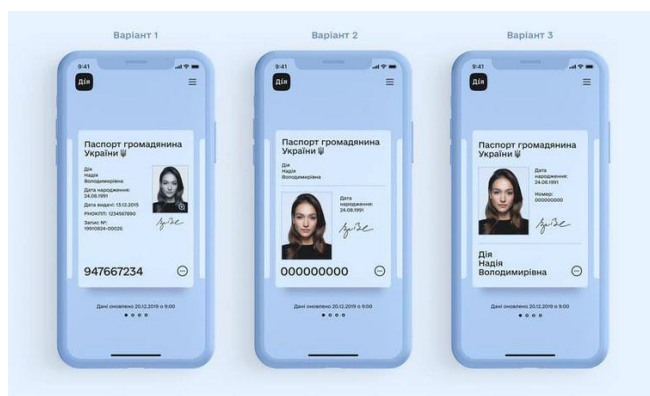

Sample of traditional Ukrainian passport issued until 2016

Sample of traditional Ukrainian passport issued after 2016

Sample of e-passport in Diia App

Social impact

In order to evaluate the social impact of e-passport it is important to comprehend the role of the traditional passport of a citizen of Ukraine first. In Ukraine, passport is the main legal identity document, which is given to every citizen, and a highly used document in everyday life. Ukrainian citizen must present a passport even for buying train tickets for domestic travel, getting medical services, changing, returning bought goods, or purchasing a contract SIM card. A long history of such regulations and bureaucracy stands for the culture of carrying a passport almost anywhere in Ukraine. In 2020 Ukraine became the first country globally to legally recognize the e-passport without the need to present a hard copy. So, the introduction of the e-passport brings with it a shift in the cultural paradigm.

Despite being widely used, passport delivery is a complex process in terms of bureaucratic procedures. When applying for the passport for the first time, a citizen must present seven documents and wait up to 20 days. If applying for the replacement of passport to a new one in case of passport loss, theft, damage, expiry, or marriage (personal data change), it takes nine documents, up to 20 days and 363 UAH (14 USD) makes about 6% of minimal wage in Ukraine (6000 UAH).

E-passport provides a solution to the above problems, as it does not require reissue and can't be lost or stolen. If a user loses a phone or it gets stolen, all the user's documents remain intact and protected in Diia app, as it requires personal identification or password to access the app. So, e-passport in Diia app saves them time and money on getting new documents.

E-passport also makes personal identification much more convenient for both sides: the holder of the e-passport and the one who checks it.

Transparency impact

According to the Head of the State Migration Service of Ukraine, in 2019-2020 there have been around 17 000 opened criminal cases regarding the passport forgery in Ukraine.

Since the launch of e-passport in Diia app there has been no public record of any criminal cases opened for e-passport forgery.

According to the poll conducted for this analysis, 38.7% of the respondents stated that they faced corruption getting the traditional passport of the citizen of Ukraine. Some respondents indicated that they were asked for a bribe from $100 to $300. However, the same poll showed that 100% of the respondents never faced corruption using Diia app.

One of the reasons for better document protection in Diia app is the authentication process: e-passport uses electronic identification when a law enforcement officer or other authorized representative scans a unique QR-code in e-passport, which Diia generates by connecting to the state register holding the information about the passport owner. Such QR-code works for 3 minutes – time enough to scan the code and check the document's authenticity.

The above allows the conclusion that e-passport in Diia significantly decreases the passport forgery risk and the risk of identity theft.

Environmental impact

Paper passport of the citizen of Ukraine was until 2016 produced from 100% cellulose paper, meaning that thousands of tons of paper have been used over the years to produce new, reissue old or lost passports for each citizen of Ukraine, a country of roughly 41 million people. According to an employee of the state entity interviewed for the purpose of this analysis, for the printing of the Ukrainian passports about 60 tons of paper were used each year. According to an employee of the Ministry of Ecology of Ukraine interviewed for this analysis, it takes cutting 25 trees to make one ton of the paper. This means that about 1500 trees were cut each year to produce a traditional paper passports. The production of passports after 2016 has not been requiring paper, but still requires around 45 tons of plastic each year.

E-passport requires no paper or plastic and provides a much more environmentally friendly solution to personal identification documents.

Preventing the spread of COVID-19

The Ukrainian authorities introduced the requirement of permanently carrying an ID when leaving the living premises, to enable the law enforcement agencies check whether a person has or had COVID-19 infection and whether a person is obliged to be on self-isolation or authorized to in a public place. The procedure of ID check by law enforcement officer requires physical handing off a hard copy of the Ukrainian passport, which is the most common ID owned by all Ukrainians older than 16 years. As the traditional passport of the citizen of Ukraine is a paper book, it makes it impossible to disinfect it with liquid sanitisers. So permanently carrying a paper passport which is constantly handed to other individuals for checking and not being able to sanitize it, increases the chance of spread of COVID-19.

Having an e-passport eliminates such risk, as the check of e-passport by law enforcement officers does not require physical handling of the device (mobile phone) with Diia App. The authentication is done by scanning the special digital code in the e-passport by the law enforcement officer.

International e-passport

International e-passport – official passport of a citizen of Ukraine for international travels in an electronic form reflecting the information from the state registers, including the permanent address of residence and taxpayer code. e-Passport also uses electronic identification: unique QR-code, generated by connecting to the register and available for 3 minutes – time enough to scan the code and check the authenticity of the document.

As of November 2021, there have been 7,418,959 unique international e-passports generated using Diia App.

Social impact

One way to evaluate the social impact of international e-passport is to look at the overall number of issued documents in Diia app: around 7.4 million in a country of approximately 41 million, meaning that almost every fifth Ukrainian decided to opt for a digital document. These figures speak for themselves especially loud if one takes into concern that Ukraine is one of the poorest countries in Europe with low personal income.

Environmental impact

The traditional international passport of the citizen of Ukraine is produced from paper, plastic, and has a chip and antenna in it. This means that thousands of tons of paper, plastic, aluminium, and other metals have been used over the years to produce new, reissue old, or lost passports. According to an employee of the state entity printing the international passports, approximately 150 tons of paper are used each year for production. According to an employee of the Ministry of Ecology of Ukraine interviewed for this analysis, it takes cutting 25 trees to make one tone of paper. This means that about 3750 trees were cut each year to produce the traditional international passports.

International e-Passport requires no paper, no plastic, aluminium, or other metals and provides a much more environmentally friendly solution to personal identification documents.

Transparency impact

According to the Prosecutor's Office, more than a hundred criminal cases are opened for international passport forgery in Ukraine each year.

Since the launch of the international e-passport in Diia app there has been no public record of any criminal cases opened for e-passport forgery.

According to the poll conducted for this analysis, 22.6% of the respondents stated that they faced corruption getting international passport of the citizen of Ukraine. Some respondents stated that they were asked for a bribe of 300 USD. The same poll showed that 100% of the respondents never faced corruption using Diia app.

The above allows to conclude that international e-passport in Diia significantly decreases the passport forgery risk and the risk of identity theft.
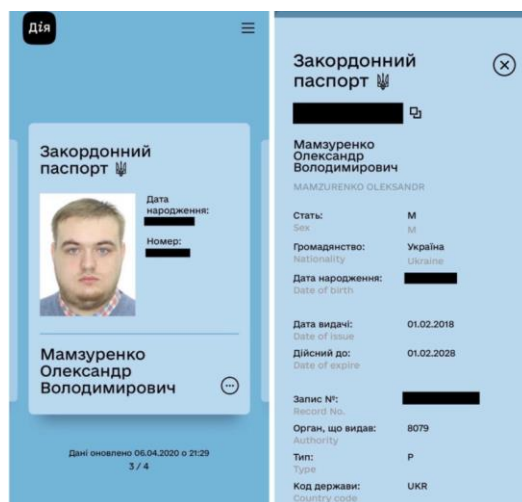
Sample of international e-passport in Diia App

Sample of traditional international passport

Digital Student ID

Student ID – is a document used for identifying students at schools, colleges, and universities. Student ID provides discounts on public transportation, museums, movie theatres, services, and products.

As of November 2021, 654,898 digital student IDs have been provided via Diia app.

Social impact

According to the State Statistics Service of Ukraine, there're about 4 million students in Ukraine. According to the Ministry of Digital transformation of Ukraine, there're 654,898 digital student IDs provided via Diia app, meaning that roughly every eighth student is using a digital student ID. According to the estimations, this figure could potentially triple in 2022. In addition to the constant growth of the number of Diia app users, another stimulus of the increase of use of digital student ID is the popularization of the Diia Education portal. promoting digital literacy primarily among the younger generation, the potential users of student ID.

Economic impact

According to the information employees of Kyiv School of Economics and Taras Shevchenko National University interviewed this report, the price of traditional plastic student ID ranges from 75 to 113 UAH (from around 2.8 USD to 4.2 USD). The cost of the digital student ID is zero for the user as it's issued in Diia app for free. This means that the current economic effect of issuing 654,898 digital student IDs could be from 49,117,350 UAH to 74,003,474 UAH (from 1.8 to 2.8 USD million).

If estimated that 100% of 4 million students currently studying in Ukraine would opt for the digital student ID, the overall economic effect would range from 300,000,000 UAH to 452,000,000 UAH (from 11.2 to 16.9 million USD).

Transparency effect

According to the anonymous poll conducted for this analysis 30% of respondents stated that they faced corruption when getting a traditional student ID. According to the same poll, 100% of the respondents answered that they never faced corruption using any services of the Diia app. The above figures allow to make the conclusion that Diia app has a significant positive anti-corruption and transparency improvement effect.
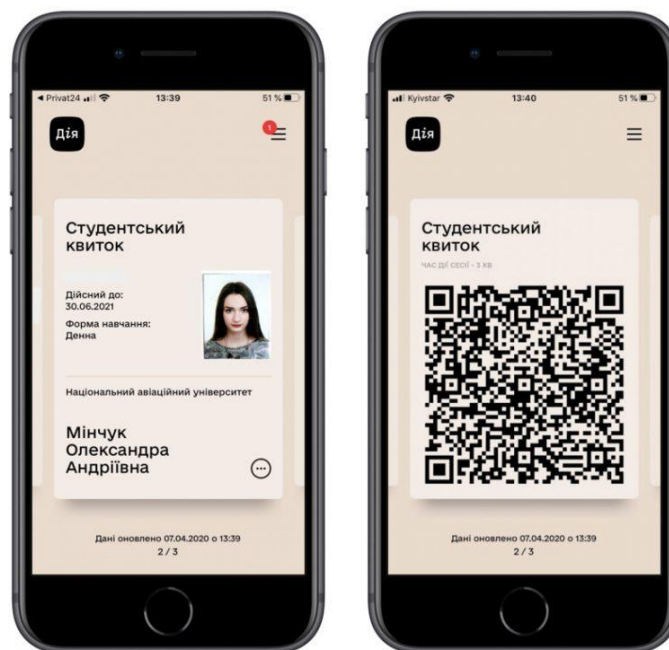
Environmental effect

Traditional student ID is produced from plastic, meaning that tons of plastic is used every year to supply new and reissue lost or damaged student IDs for 4 million students in Ukraine.

Digital student ID requires no plastic and provides a more environmentally friendly solution to the document.
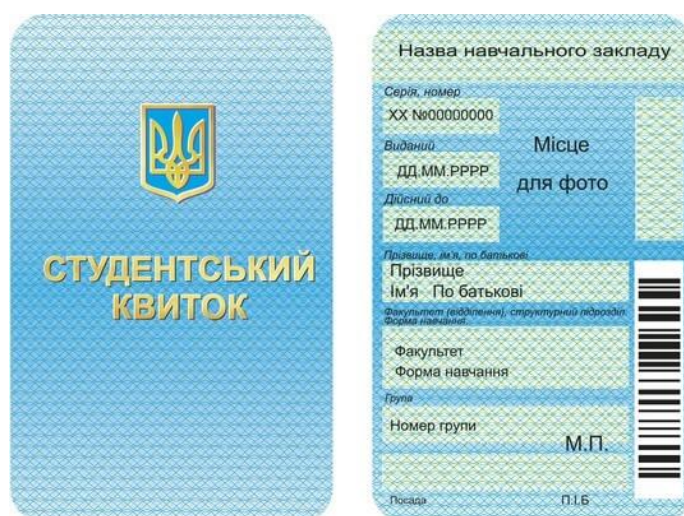
Sample of traditional plastic student ID

Sample of digital student ID in Diia app

Digital COVID-19 certificates

COVID-19 certificate is a document certifying the vaccination from COVID-19. After the arrival of COVID-19 vaccines to Ukraine in the first half of 2020, internal COVID-19 vaccination certificates were issued by family doctors and printed on regular office paper on a standard office printer.

Diia app allows users to generate three types of digital COVID-19 certificates on their smartphone: internal, international and child COVID-19 certificates. Each type of COVID-19 certificate is generated automatically by Diia app by engaging with the state vaccination database.

As of November 2021, there have been 3,816,939 internal and 5,526,888 international COVID-19 certificates generated in Diia app.

Social impact and preventing the spread of COVID-19

Like many other states Ukraine introduced obligatory vaccination for people who like to use public transport, restaurants, and shops. To prove one's vaccination and the right to access public place, one has to present a COVID-19 vaccination certificate.

At the beginning of the vaccination process, there were only paper COVID-19 vaccination certificates. To obtain a paper certificate, a person has to sign up and wait for an appointment with her/his family doctor and physically come to a hospital, wait in a line, and provide three documents to a doctor. This procedure could take days, depending on the family doctor availability. When the vaccination is done, a person receives an A4 sheet of office paper with person's name and vaccination details printed on it. Such a paper COVID-

19 certificate can easily damaged and if so, its holder has to apply for a new one with the same procedure as described above.

Digital COVID-19 certificates solve the above problem, as a digital certificate in Diia app cannot be damaged.

The main social impact of digital COVID-19 certificates is that they dramatically improved the vaccination process in Ukraine. To understand this important to understand the context, as strong anti-vaccination campaigns were rolled out throughout the country and many people were afraid or unwilling to vaccinate. At the same time, people needed to use public transport to get to work and wanted to be able to use public places, but for tis purpose, they needed vaccination certificates. So, such people resorted to forging paper COVID-19 certificates. The number of people willing to forge or buy a forged certificate became so high that police were reporting new forging attempts every day. The situation became even so dramatic that the appeals by the Prime Minister and the highest political leadership didn't stop the inflow on new forged certificates. The picture changed when Diia app introduced the digital COVID-19 certificate, which stopped the forging because the digital certificate has a QR-code. If scanned, it provides a real-time authentication by checking the data in the state vaccination registry. The introduction of digital COVID-19 certificate stopped the forging. It also motivated citizens to get vaccine and a real certificate.

According to the Ministry of Health of Ukraine 10,610,359 persons in Ukraine got fully vaccinated as of November 2021. According to the Ministry of Heath, this amount accounts for 34.2% of the adult population needing vaccination in Ukraine. Data from the Ministry of Digital Transformation states that 3,816,939 persons received digital internal COVID-19 certificate in Diia app and 5,526,888 persons received international digital COVID-19 certificate. This means that about 36% of the fully vaccinated adults got a digital internal certificate and 52% of the fully vaccinated adults got a digital international COVID-19 certificate respectfully.

Another important social impact is that digital international COVID-19 certificates allowed Ukrainians to travel to the EU. Ukraine was one of the first non-EU member state, introducing digital COVID-19 certificates acceptable and legit in the EU.

Transparency impact

A part of transparency impact is described above. At the same time, it is important to provide further details on the issue.

Digital certificates in Diia app stopped the forging because a forged printed certificate had a static printed QR-code while Diia app provides the certificate with a unique QR-code generated upon request in one click. Such a code in the digital certificate provides a real-time authentication of a certificate by checking the data with the state vaccination register. Such a code is valid for only 3 minutes, just enough for the checker to scan in.

According to the Minister of Digital Transformation of Ukraine, without the digital COVID-19 certificates in Diia app every second paper COVID-19 certificate might have been forged. This statement is confirmed by a former Deputy Minister of Heath interview for this analysis.

According to the anonymous poll conducted for this analysis, 41.9% of respondents stated

that they faced corruption when getting a traditional COVID-19 certificate. Some respondents stated that they were asked for 500 UAH (about 19 USD). According to the same poll, 100% of the respondents answered that they never faced corruption using any services of the Diia app. The above figures allow making a conclusion that Diia app has a significant positive anti-corruption and transparency improvement effect.
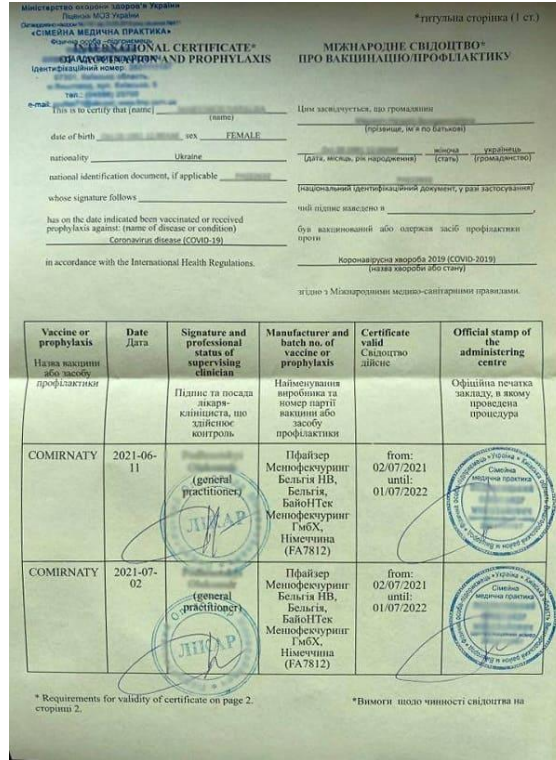
Paper COVID-19 certificate sample
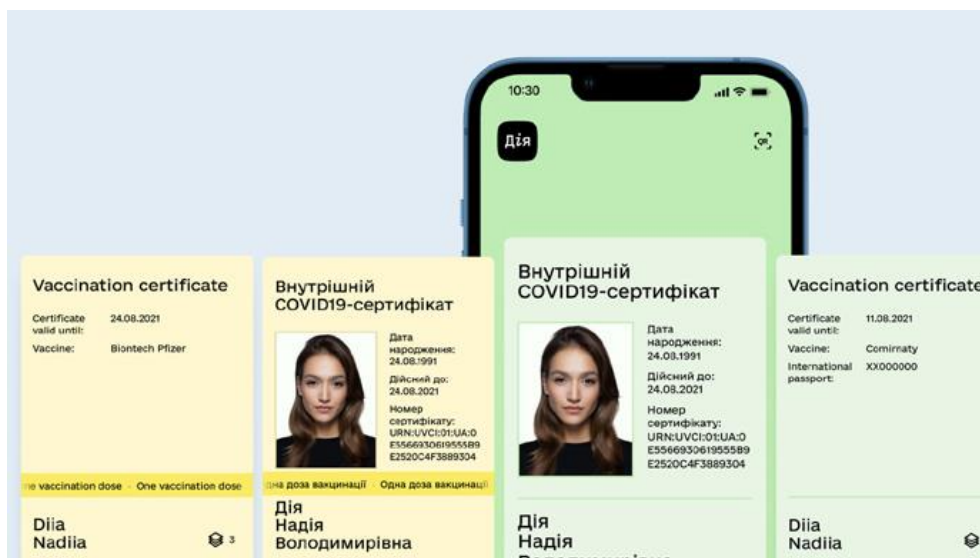
Digital COVID-19 certificate in Diia app sample

Digital taxpayer code

Digital taxpayer code is a unique sequence of digits given to every taxpayer and citizen of Ukraine for executing tax, financial, banking and business operations. The digital taxpayer's code is automatically generated in Diia app by extracting the information about a taxpayer from the state register.

As of November 2021, there have been 10,481,270 digital taxpayer codes generated in Diia app.

Social impact

To better understand the social impact of the introduction of the digital taxpayer's code in Diia app it's important to see the context of using taxpayer's code by an average Ukrainian. The code is given to every Ukrainian with only very few exceptions for religious reasons because the taxpayer's code is essential not only to paying taxes but also to many everyday activities such as paying or receiving a salary, opening a bank account, getting a credit card, getting social payments and so on. Even though Ukrainians have to use the code, the document itself is not very durable nor convenient to use. Traditional taxpayer's code is a sheet of ordinary office paper with the taxpayer's code and information printed on a standard printer. This makes the code very fragile and results in often tearing, which as a result makes it impossible for further use.

When the traditional paper code is torn or damaged, the code's holder has to apply for a new one, and this process requires collecting three documents and waiting five days and, in some cases, up to 10 days.

The digital taxpayer's code in Diia solves the abovementioned problems. Digital taxpayer's code can't be damaged or lost because it obtains information about the taxpayer from the state register. If a person loses a smartphone with Diia, which store the digital code, the person can easily access the code as well as all the other documents by downloading Diia app on a different device and passing the authentication with a face-ID or password. Furthermore, digital code makes its use much easier and convenient.

Transparency impact

The traditional paper taxpayer's code is incredibly easy to forge because the documents a usual sheet of office paper with a taxpayer's data printed on it on the usual printer with no watermark or other protection, but for the regular stamp and signature.

Digital taxpayer's code solves the above problem, as Diia engages with the state register and automatically generates the digital taxpayer's code.

According to the poll conducted for this analysis,12.9% of the respondents stated that they faced corruption getting traditional paper taxpayer's code of the citizen of Ukraine. Some respondents stated that they were asked for a bribe from 100 to 300 USD. The same poll showed that 100% of the respondents never faced corruption using Diia app.

Since the launch of the digital taxpayer's code in Diia app there has been no public record

of any criminal cases opened for e-passport forgery.

Environmental impact

Traditional taxpayer's code is made from 100% cellulose paper, meaning that tons of paper have been used over the years to produce new, reissue damaged or lost codes for each citizen of Ukraine, a country of roughly 41 million people.

Digital taxpayer's code requires no paper and provides a much more environmentally friendly solution to personal identification documents.

Preventing the spread of COVID-19

The traditional taxpayer's code check procedure requires physically handing off a hard copy of the code, which means that the document is in then the hands of dozens of people. As the taxpayer code is printed on a usual office paper, it makes it impossible to disinfect it with liquid sanitizers. So permanently carrying a paper code that is constantly handed to other individuals for checking and not being able to sanitize it increases the chance of spread of COVID-19.

Having a digital taxpayer's code eliminates such risk, as the check of code does not require physical handing off the device (mobile phone) with Diia App. The authentication is executed by scanning by the law enforcement officer of the special digital code in the Diia app.

Sample of traditional paper taxpayer's code
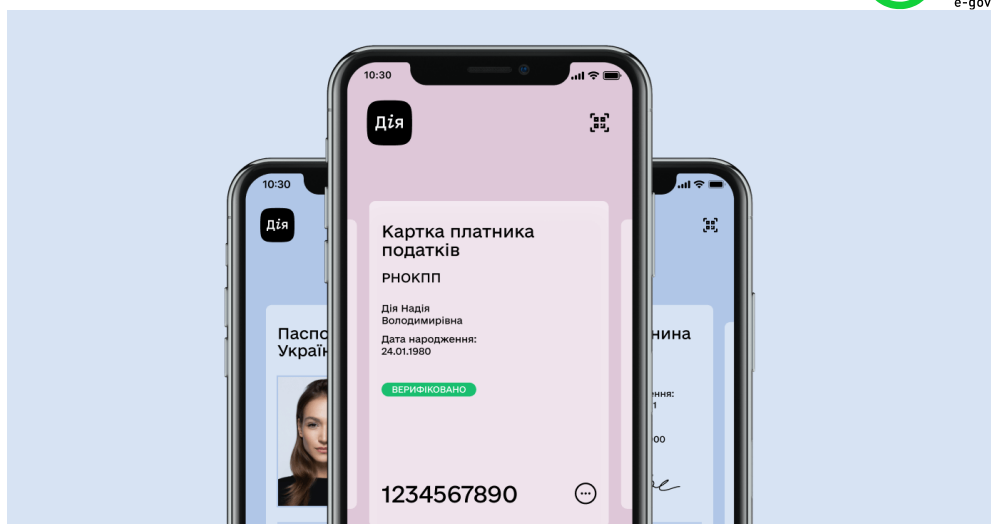
Sample of digital taxpayer's code in Diia app

Digital Internally Displaced Person (IDP) certificate

Internally displaced person (IDP) certificate is a document certifying the status of a person who was forced to leave her/his home due to the Russian aggression in Crimea and the East of Ukraine. IDP certificate is used to receive social benefits such as payments, housing, discounts etc. Digital IDP certificate can be generated in Diia app automatically free of charge.

As of November 2021, there have been 307,500 digital IDP certificated formed in Diia app.

Social impact

There are about 1.5 million IDPs, which were forced to leave their homes due to Russian aggression in Ukraine. For many of these people, the IDP status is critical in order to have a place to live and social payments to support their families. In these circumstances losing or damaging traditional IDP certificate,which is the proof of their IDP status, could lead to complications with getting social housing, social payments, and discounts. Despite the importance of this document, it has the form as a usual sheet of A4-size office paper with the information of IDP printed on it. This makes this document very fragile to tearing and damaging.

In order to reissue a torn, damaged, or lost paper IDP certificate the person needs to collect from three to eight documents and spend up to three days.

Digital IDP certificate resolves the above issues and make its use much more convenient, as well as provides better social protection for those who need it the most by protecting the IDP from losing or damaging a fragile paper certificate.

Transparency impact

The traditional IDP certificate is incredibly easy to forge because the document is a usual

sheet of office paper with the IDP's data, printed on it on the usual printer with no watermark or other protection, but for the regular stamp and signature.

Digital IDP certificate solves the above problem, as Diia engages with the state register and generates the IDP certificate automatically.

According to the poll conducted for this analysis, 35.4% of the respondents stated that they faced corruption getting the paper IDP certificate. The same poll showed that 100% of the respondents never faced corruption using Diia app.

Since the launch of the digital IDP certificate in Diia app there has been no public record of any criminal cases opened for e-passport forgery.

Environmental impact

Traditional IDP certificate is made from 100% cellulose paper, meaning that tons of paper have been used over the years to produce new, or reissue damaged or lost documents.

Digital IDP certificate requires no paper and provides a much more environmentally friendly solution to personal identification documents.

Preventing the spread of COVID-19

The traditional IDP certificate check procedure requires physically handing off a hard copy of the code, which means that the document is in the hands of dozens of people. As the traditional IDP certificate is printed on a usual office paper it makes it impossible to disinfect it with liquid sanitizers. So permanently carrying a paper IDP certificate which is constantly handed to other individuals for checking and not being able to sanitize, it increases the chance of spread of COVID-19.

Having a Digital IDP certificate eliminates such risk, as the check of the document does not require physical handing off the device (mobile phone) with Diia App.

Sample of traditional paper IDP certificate
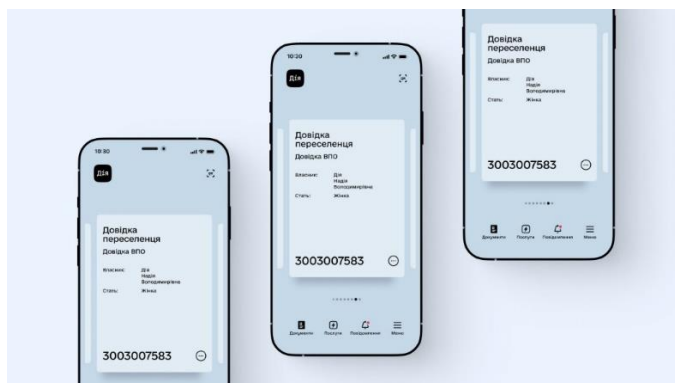
Sample of digital IDP certificate in Diia app

Digital birth certificate

The birth certificate is a document certifying the date of birth and name of a person. Birth certificate is the only legal ID for the citizens of Ukraine, under age of 14. After the age 14, the birth certificate does not lose its force but becomes an additional ID used preliminary as a supplementary document in cases like loss of passport or in the situations when the confirmation of origin is needed.

The Digital birth certificate can be generated in Diia app, using the information from a state register.

As of November 2021, 1,479,772 digital birth certificates were issued in Diia app.

Social impact

A birth certificate must be received within a month after childbirth; otherwise, parents may be fined and refused the children's allowance until a document is received. According to the legislation of Ukraine, it is possible to order a birth certificate in the Civil Registry Office at the place of birth of a child or at the place of registration of its parents (mother and/or father). The place of birth of a child is supported by the medical certificate if a child was born in the hospital or by other evidence if a child was born at home, in transport, etc. The place of registration of the parents is supported by the stamp in the passport.

In order to obtain a birth certificate, the child's parents have to collect five documents and spend about one day.

The birth certificate is printed on blank paper which does not provide protection from tearing or damaging the document. In case of tearing or damaging, the document has to be reissued. In case of reissuing, the process takes 3-4 days and costs around 400 UAH (about 15 USD).

Issuing a digital birth certificate in Diia take minutes and provides a more convenient solution for users, protecting them from the loss and damage of the document and, as a result, saves time and money.

Environmental impact

Traditional birth certificate is made from 100% cellulose paper, meaning that tons of paper have been used over the years to produce new, reissue damaged or lost document for each citizen of Ukraine, a country of roughly 41 million people.

The digital birth certificate requires no paper and, provides a much more environmentally friendly solution to personal identification documents.

Preventing the spread of COVID-19

The procedure of the traditional birth certificate check requires physical handing off a hard copy of the document, which means that the document is being in hands of dozens of people. As the traditional certificate is printed on a usual office paper, it makes it impossible to disinfect it with liquid sanitizers. Permanently carrying a paper certificate, which is constantly handed to other individuals for checking and not being able to sanitize it, increases the chance of spread of COVID-19.

Having a digital birth certificate eliminates such risk, as the check of the document does not require physical handing off the device (mobile phone) with Diia app.

Sample of traditional paper birth certificate

Sample of digital birth certificate in Diia app

Digital driving license

Ukrainian driving licenses are official documents, which authorizing their respective holders to operate various types of motor vehicles on public roads. Driving license is issued for the first time for a period of two years. If for two years the driver has no more than two administrative offences of traffic regulations, the driver's license is subject to replacement for the new term for 30 years without additional passing of examinations. If there are more than three offences, then a person must take an additional theoretical and practical exam when replacing the driver's license. This rule does not apply to the replacement of the old driver's license with a new model or in connection with the change of name or surname, as well as the restoration of the driver's license in case of loss or damage. In this case, the driver's license is issued immediately for 30 years. National driving license is considered to be "European" rights because it is issued in accordance with the international Convention signed by the EU countries. Drivers who have a new type of driver's license can freely drive a car in Europe, as well as rent a car.

Users of Diia app can get a digital driving license, generated automatically by accessing information from the state registry.

As of November 2021, there have been 3,922,555 digital driving licenses issued in Diia app.

Social impact

Driving without a driving license in Ukraine is illegal and results in a fine from 425 UAH (about 16 USD) to 20,400 UAH (761 USD). According to a former police officer in Ukraine

who was interviewed for this analysis, about 80% all the fines for driving without a driving license is a result of a driver forgetting her/his license at home or at a different place.

The introduction of the digital driving license significantly decreases the above problem, as a driver using Diia app can always have hers/his driving license in their smartphone.

From October 2020 to November 2021, the number of digital driving licenses issued in Diia app doubled from about 1.9 million to more than 3.9 million. Such a growth rate provides proof of the social importance of the digital driving license.

Transparency impact

According to the anonymous poll conducted for this analysis, 51.6% of respondents stated that they faced corruption when getting a traditional driving license. Some respondents stated that they were asked for a bribe from 75 to 300 USD. According to the same poll, 100% of the respondents answered that they never faced corruption using any services of the Diia app.

According to a media report, Diia helped identify a Ukrainian who bought a fake driving license for 4000 UAH (about 150 USD) and was unable to certify them in Diia app, attracted the attention of police.

The above figures and cases allow making the conclusion that Diia app has a significant positive anti-corruption and transparency improvement effect.

Environmental impact

Traditional driving license is made from plastic, meaning that tons of plastic have been used over the years to produce new, or reissue damaged or lost document.

Digital driving license requires no paper and provides a much more environmentally friendly solution to personal identification documents.

Traditional driving license sample
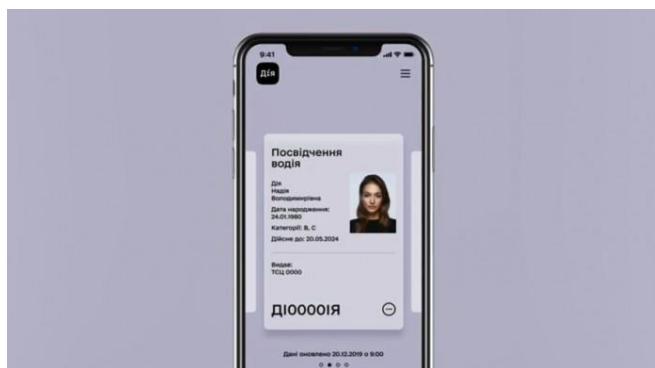
Digital driving license in Diia app sample

Digital vehicle registration document

The vehicle registration document is an official document certifying the technical specifications of a vehicle, the name of its owner and registration details.

Social impact

Driving without a vehicle registration document in Ukraine is illegal and results in a [fine from 425 UAH (about 16 USD) to 850 UAH (](32 USD). According to a former police officer in Ukraine who was interviewed for this analysis, more than 90% of all the fines for driving without a vehicle registration is a result of a driver forgetting her/his registration at home or at a different place.

Introduction of the digital vehicle registration certificate significantly decreases the above problem, as a driver using Diia app can always have hers/his vehicle registration in a smartphone.

From October 2020 to November 2021 the number of digital registrations issued in Diia app grew by around 150%, from about 1.5 million to more than 3.7 million. According to the Auto Consulting Group, there are about 10 million cars registered in Ukraine which means that 3.7 million digital vehicle registrations in Diia constitute about 37% of the vehicles in the country. This result in Diia were achieved in less than two years. Such a growth rate provides proof of the social importance of the digital driving license.

Economic impact

Reissue of vehicle registration [costs the vehicle owner 682 UAH](around 25 USD). Issuing digital vehicle registration is Diia is free. This means that the current economic effect of issuing 3,720,140 digital vehicle registrations in Diia could be 2,537,408,480 UAH (about 94.7 million USD).

If we estimate that 100% of 10 million cars in Ukraine are digitally registered, the overall economic effect will make 6,820,000,000 UAH (around 254.5 million USD).

If we use forecasting with the estimated 100% of digital vehicle registration, we could calculate that overall effect would be 3,200,000,000 UAH (around 119.4 million USD).

Transparency impact

According to public sources, there are numerous cases of traditional vehicle registration forgery in Ukraine. The most common is the forgery of the plastic card of the registration with fraudulent data.

Digital vehicle registration solves the above problem, as Diia engages with the state register and generates the vehicle registration automatically with no possibility by a user to alter any data. The document in Diia vehicle registration has a QR code, which if scanned by a police officer, provides authentication according to the data in the state register.

Up to date, there has been no public record found of digital vehicle registration in Diia forgery or fraud.

Environmental impact

Traditional vehicle registration is made from plastic, meaning that tons of plastic have been used over the years to produce new, or reissue damaged or lost documents.

Digital vehicle registration requires no plastic and provides a much more environmentally friendly solution to personal identification documents.

Traditional vehicle registration sample
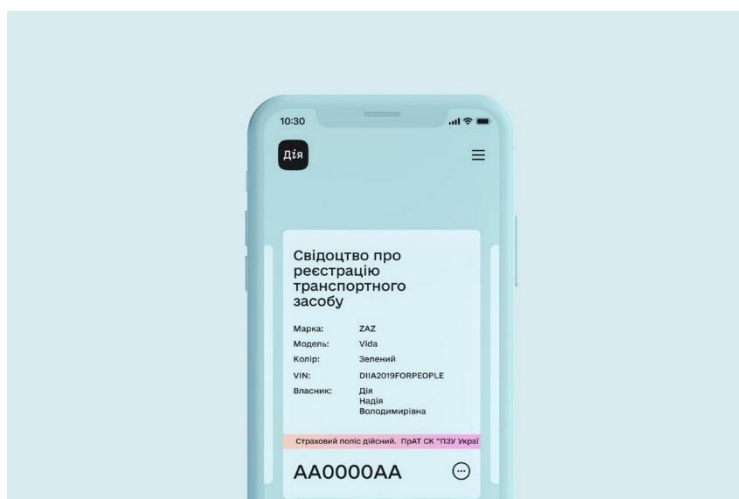
Digital vehicle registration sample

Compulsory third-party car insurance

Compulsory third-party car insurance (CTPCI) is an obligatory document for driving a car, providing insurance for third parties in case of a car accident. CTPCI was introduced in 2005 as a measure to strengthen the protection of car drivers and third parties in case of a car accident. Since 2005 CTPCI policy has been one of three obligatory documents (driving license, vehicle registration and CTPCI) required to drive a car in Ukraine.

Diia app engages with a state register and uploads the CTPCI data automatically, and displays together with the vehicle registration.

Social impact

Driving without a CTPCI in Ukraine is illegal and results in a fine from 425 UAH (about 16 USD) to 850 UAH (32 USD). According to a former police officer in Ukraine who was interviewed for this analysis, more than 70% of all the fines for driving without a vehicle registration is a result of a driver forgetting her/his CTPCI at home or at a different place.

The introduction of the digital CTPCI significantly decreases the above problem, as a driver using Diia app can always have her/his CTPCI in a smartphone.

Environmental impact

Traditional CTPCI is made from 100% cellulose paper, meaning that tons of paper have been used over the years to produce new, or reissue damaged or expired CTPCI for each of 10 million car owners in Ukraine.

We can estimate an approximate impact on deforestation by multiplying the weight of a usual office A4 piece of paper on which traditional CTPCI is printed (around 80 g) by 10 million cars registered in Ukraine. This means that around 800 000 kg of paper is used each year to produce paper CTPCI.

According to an employee of the Ministry of Ecology of Ukraine interviewed for this analysis,

it takes cutting 25 trees to make one ton of paper. This means that about 20 trees are cut each year to produce traditional paper CTPCIs.

Digital CTPCI requires no paper and provides a much more environmentally friendly solution to personal identification documents.

Sample of traditional paper CTPCI
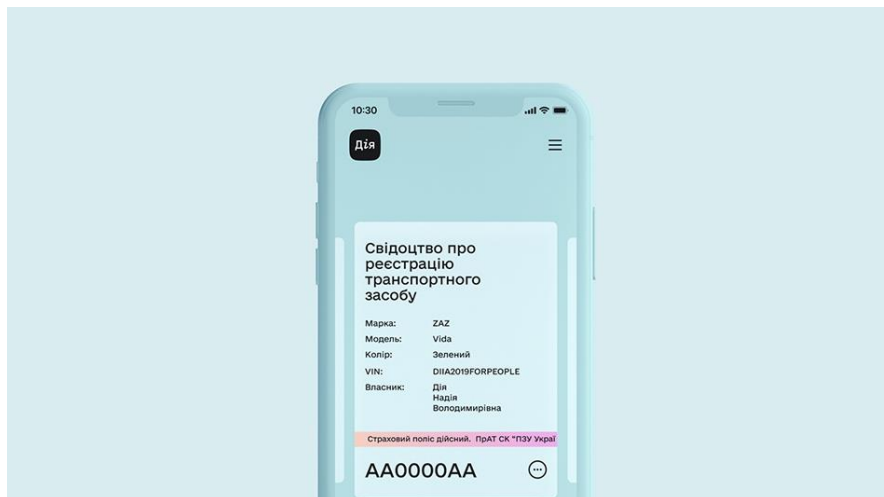
Sample of digital CTPCI in Diia App

Overview and impact analysis of digital services in Diia application

Residence address registration

According to the data of the Ministry of Digital Transformation of Ukraine, every third Ukrainian is not living at the place where she/he is officially registered and, about one million Ukrainians don't have a permanent residence address registration.

Diia app proposes a service of digital residence address registration. The user could apply for registration in owned or rented premises with the permission of the owner. Diia engages with the state real estate register in order to get information about the premises.

Social impact

In order to evaluate the social impact of the introduction of the electronic residence address registration via Diia app, let us take one of the most common examples of change of residence address registration in Ukraine. According to the Ukrainian legislation, every male starting from 18 to 27 is obliged to serve in the army. When a male person in this age is changing the residence address registration, he has to undertake the below process:

> **Step 1:** Visit the military agency of city A where he is initially registered and apply for cancelling the residence address registration and getting the respective stamp in the military document (3 days)
> **Step 2:** Visit the military agency of city B where he is planning to get registered and apply for registration. At this step, the solider is obliged to pass the medical check (7 days)
> **Step 3:** Visit the center of administrative services and apply for a change of residence address registration (7-10 days)
> **Step 4:** Registration is finalized

The above-described process of changing registration takes about three weeks and requires physically being present at all the establishments and waiting in numerous lines for days.

The introduction of digital residence address registration solves the above problem, as it takes only about 15 minutes to apply online and, the new registration will be granted within 24 hours.

Economic impact

If we use forecasting with the estimated 100% of digital residence registration, we could calculate that the overall effect would be around 1 500,000,000 UAH (around 56 million USD) or 93% of expenses if the offline procedure.

Transparency impact

According to the anonymous poll conducted for this analysis, 42.3% of respondents faced corruption when getting residence address registration. However, according to the same poll ,100% of the respondents answered that they never faced corruption using any services of the Diia app. The above figures allow making the conclusion that Diia app has a significant positive anti-corruption and transparency improvement effect.

Driving license replacement

A driving license is issued for the first time for a period of two years. If for two years the driver has no more than two administrative offences of traffic regulations, the driver's license is subject to replacement for the new term for 30 years without additional passing of examinations. If there are more than three offences, then a person must take an additional theoretical and practical exam when replacing the driver's license. This rule does not apply to the replacement of the old driver's license with a new model or in connection with the change of name or surname, as well as the restoration of the driver's license in case of loss. In this case, the driver's license is issued immediately for 30 years.

Driving licenses are replaced in one of the below cases: change on driver's personal data; expiry of previous driving license; loss or damage of previous driving license.

Diia app provides a service of reissuing a driving license electronically.

As of November 2021, there have been 1877 digital licenses reissued using the Diia app.

Social impact

The traditional process of driving license replacement requires a person to register for an appointment at the Ministry of Interior service center, at the day and time of appointment physically get to the premises of the service center, wait in numerous lines, [provide five documents, make a photo at the specially designated place the service center,](#) pay 219 UAH (around 8 USD) and wait for up to five days after all the procedures are done and all the documents applied. Overall, the process could take up to 10 days, depending on the load of the service center.

Applying with Diia app takes up to 10 minutes from one's smartphone, which makes the procedure significantly easier, faster, and more convenient.

Economic impact

A large part of the economic impact of the introduction of the service is saving the expenses related to delays in getting the license due to personal and technical reasons, as well as savings related to expenses on transport needed to physically apply for reissue.

If we estimate that 100% of all applicants for new driving license in Ukraine would reissue them using Diia app, the overall economic effect will make around 1.33 billion UAH (around 50 million USD) per year.

Yet if we take the current rate of online driving license application via Diia
the economic effect would make around 80,000,000 UAH (around 3 million USD)

Transparency impact

According to the anonymous poll conducted for this analysis, 51.6% of respondents faced corruption when getting a traditional driving license. Some respondents stated that they were asked for a bribe from 75 to 300 USD. According to the same poll ,100% of the respondents answered that they never faced corruption using any services of the Diia app.

The above figures and cases allow making the conclusion that Diia app has a significant positive anti-corruption and transparency improvement effect.

Environmental impact

The traditional procedure of driving license replacement requires the submission of at least two statements printed or written on paper, as well as additional fuel consumption and CO_2 emissions due to the necessity to physically get to the premises of the service center.

Digital driving license replacement requires neither paper statements nor the need to physically get to the premises of the service center to provide them. This means that digital application provides a more environmentally friendly solution to the procedure.

Monitoring and paying fines for driving

In recent years the Ukrainian law enforcement agencies have significantly increased the number of cameras on roads aimed at automatically registering traffic violations. When such a camera registers a case of violation, the system identifies the driver by the license plates of a car and sends a fine in the form of a paper letter by traditional mail to the registered residence address of the driver.

After a person receives a fine by mail, she/he has to pay it within 14 days, otherwise, the amount of the fine would be doubled. Usually, payments of such fines are executed physically in a bank, but online payments are also potentially possible.

Diia app launched a service monitoring the state registers and updates the system every hour looking for unpaid fines for driving.

The app also allows paying the fine right away.

According to the Ministry of Digital Transformation of Ukraine, there have been 107,978 fines paid via Diia App, totaling of 51,841,196 UAH (1,9 million USD).

Social impact

Delivery of fines in Ukraine by traditional mail in the form of a letter could result in complications due to two commonly spread reasons: technical mistakes by the post ending up in delays or even undelivered letter with a fine, as well as stealing a letter from a mailbox. If the above happens, a person would not know about the fine and won't be able to pay it

in two weeks after the fine issuing, which would result in doubling the amount of the fine. Moreover, if a large number of unpaid fines pile in a time, the driver's car could be towed away until she/he pays off the full number of fines plus penalties. Also, unpaid fines could block the driver's car from being sold.

Diia solves the above problem by providing 24-hour monitoring of the fine registers and sending push notifications to a user in case of a fine. Diia also allows a user to pay the fine right away in the app. Also, Diia saves money by sending notifications five days before the deadline for paying the fine to make sure a drives pays the fine before the end of the two-week period.

Environmental impact

Traditional fine notifications are being sent in the form of paper letters, meaning that every time a person receives a fine, more trees are cut.

Diia app does not require a paper to issue and monitor fines and in case of one notify a user, meaning that Diia provides an eco-friendlier solution.

Diia signature

Diia signature is an electronic signature used for personal identification and validation of electronic documents. Diia signature is used for public and private services, e-commerce, banking, and financial services.

Diia signature could be used for public services, online banking, electronic document flow services.

One part of the key is stored on the user's phone, while another part is stored at special secure cloud storage.

As of November 2021, according to the Ministry of Digital Transformation, there has been more than 6,140,000 signatures generated by users.

Social impact

Electronic signatures are becoming more popular by the day in Ukraine due to the development of online banking, electronic document flow and public services where e-signature simplifies the identification and validation process. With the growing demand for the above services, a more convenient way of forming an electronic signature was a need, because the traditional offline procedure of getting the electronic signature required the below steps: collecting four documents, registering in one of the certification centers, physically getting to the certification center and finally with the help of the center's staff generating the electronic signature. The whole process usually takes several days.

Diia app provided a much faster and simpler solution of generating an electronic signature in less than 10 minutes on a user's smartphone. Furthermore, Diia provides not only the e-signature generation service, but also a convenient way to apply it by using face recognition instead of usual passwords when signing e-documents and providing validation and

authentication. The usability of this service resulted in more than 6 million generated signatures and 327 000 transactions with 97.54% success rate according to the data of the Ministry of Digital transformation.

Environmental impact

The traditional procedure of getting e-signature requires the submission of at least two statements printed or written on paper, as well as additional fuel consumption and CO_2 emissions due to the necessity to physically get to the premises of the certification center.

Diia signature requires neither paper statements nor the need to physically get to the premises of the certification center to provide them. This means that Diia provides a more environmentally friendly solution to the procedure.

Diia QR

Diia app provides a service of sharing user's documents by scanning a specially generated QR code instead of taking photocopies and physically providing where needed. For the service to work, the entity requiring photocopies of personal IDs should generate a special QR code with Diia. When a person applying to the above entity needs to provide copies of the ID, the person scans the QR code and Diia shares the person's ID with the entity.

Social impact

In order to better understand the social impact of the introduction of the Diia QR it would be beneficial to see broader context in which providing printed photocopies of personal documents is a highly popular request not only from state entities, but from private as well. [Providing printed photocopies of documents is needed in the below cases](#):

- getting administrative services
- checking in at a hotel
- enrolling to educational establishments
- signing utility contracts
- getting tourist services
- getting medical services
- getting a job

This means that every time a person in Ukraine gets one of the above services, she/he is obliged to physically bring a needed document and make a printed photocopy of it and then provide it where needed.

Diia QR simplifies the processes of sharing copies of documents reducing the efforts to some seconds needed to scan the QR code. After that, the copies of the needed documents are shared with the QR code owner instantly.

Furthermore, Diia QR simplifies the document sharing process not only for the person sharing a document, but also for the entity receiving it. When using Diia QR the receiving side does not get the document instantly but also gets it in a digital format allowing processing such data much faster and easier.

Environmental impact

In Ukraine, some of the documents which are needed as copies are one-page documents, but a photocopy of an ID means at least three pages if a person has a paper passport or two pages if a person has a plastic ID card. This means that each time a person is getting one of the services described in the social impact part, she/he provides 2-3 pages in case of providing an ID copy only and four pages in case of proving a taxpayer's code copy.

If we estimate that half of Ukrainians (20 million) get one public service (3-4 pages), one medical service (2-3 pages), one tourist service (2-3 pages) and sign one contact on utilities (2-3 pages) each year, we would get from 180,000,000 to 260,000000 pages of paper per year. This means that from 14,000 tons to 20,800 tons of paper is wasted each year. According to an employee of the Ministry of Ecology of Ukraine interviewed for this analysis, it takes cutting 25 trees to make one ton of paper. This means that from 350,000 to 520,000 trees are cut each year.

Diia QR could help avoid the waste of paper described above, providing a more environmentally sustainable solution.

Enforcement proceeding

Enforcement proceedings are a separate branch of legislation that determines whether the person or organization will achieve the desired outcome, and whether a court decision will be executed.

In order to initiate the enforcement proceedings, the party concerned (the collector) must obtain a writ of execution. The law defines many types of writs of execution, the most typical of which are the executive inscriptions and orders, rulings and decrees of courts, executive inscriptions of the notary, and executive orders.

Upon receipt of the enforcement document, the collector composes an application for the opening of enforcement proceedings, pays an advance payment on the costs of enforcement proceedings, attaches a writ of execution, and submits the package to the state executive service or a private executor.

In case when the documents are in accordance with the current legislation and are submitted correctly, the executor should open the enforcement proceedings. The appropriate ruling is made on the opening of the enforcement proceedings.

Diia introduced a service providing monitoring of enforcement proceedings and the ability to pay them via the app if any proceedings are found.

As of November 2021, there have been 108,913 cases of enforcement proceedings paid in Diia app, amounting 175,225,265 UAH (approximately 6.5 million USD).

Social impact

In order to understand the social impact of the digitalization of the enforcement proceeding, it is important to realize how common enforcement proceedings are. In Ukraine, even minor

car accidents or administrative violations could result in enforcement proceedings.

Digitalization of enforcement proceedings and makes it possible for any individual to be convinced of the absence or presence of debts; obtain information about the enforcement proceedings to which she/he is a party, in particular regarding the nature of existing debts and regarding the main legal proceedings committed by the enforcement officer; pay the amount of the fine or debt within the framework of the relevant enforcement proceedings online in just a few clicks

In property disputes, along with the opening of enforcement proceedings, an arrest may be imposed on the debtor's property. This means that property being under arrest could depend on monitoring and paying enforcement proceedings in time.

Economic impact

According to Article 75 of the [Law on enforcement proceedings](), failure to timely execute the proceeding results in a penalty from 114,700 UAH to 344,100 UAH (from 4,280 to 12,840 USD) which are significant amounts in the country with a minimum wage of 6,000 UAH (around 224 USD) per month. If the proceedings are not executed timely, a new deadline is set and if the proceeding is not executed timely for the second time, the amount of penalty is doubled, making it from 229,400 UAH to 688,200 UAH (from 8,560 to 25,680 USD). Furthermore, failure to execute the proceeding timely for the second time is a criminal offence.

Diia app decreases the chance of the above penalties, as it automatically monitors state register and informs a user in an enforcement proceeding is found proving the user enough time to collect the needed amount and pay it in just a couple of clicks in Diia app. Diia also sends notifications and reminders on the payment deadline.

Based on 108 913 cases of paid enforcement proceedings in Diia app we could estimate that the current economic effect on savings on the above-described penalties could make from 12,492,321,100 UAH to 74,953,926,600 UAH (from 466 million to 2.8 billion USD).

Transparency impact

According to the anonymous poll conducted for this analysis, 29% of respondents stated that they faced corruption regarding enforcement proceedings. Some respondents stated that they were asked for a bribe of 100 USD. According to the same poll, 100% of the respondents answered that they never faced corruption using any services of the Diia app. The above figures allow making the conclusion that Diia app has a significant positive anti-corruption and transparency improvement effect.

Electronic petitions

Appeals are addressed to public authorities and local governments, enterprises, institutions, organizations regardless of ownership, associations of citizens or officials whose powers include resolving issues raised in appeals. The appeal can be submitted by an individual (individual) or a group of persons (collective).

The electronic petition is a special kind of collective appeal, which has a defined range of recipients who must obtain the support of a number of people for a limited time and will be considered in a special manner.

Diia app introduced a service providing users with the ability to create, monitor and support electronic petitions.

Social impact

Electronic petitions are potentially capable of acting as an effective means of challenging illegal decisions, actions, and inactivity of state authorities. In this case, the institution of the electronic petition is a mechanism that creates comfortable conditions for expressing the will of citizens, regardless of their place of residence. Usually, electronic petitions are created on specialized websites and supporting a petition requires first of all being aware of its existence. This means that many social initiatives as petitions fail to get the needed number of supporters in the required time due to the lack of information about the very fact such a petition has been created.

Diia app provides a solution to the above problem by providing its users with an opportunity to create, monitor and support petitions from the user's smartphone. Should a Diia user click on the petitions icon in the app, a list of local petitions would pop up, allowing the user to look through and support them or create one of her/his own. This provides a much better engagement of citizens in the decision-making process of a community. According to the President of Ukraine, electronic petitions in Diia apps is the first step towards e-democracy.

Mortgage for internally displaced persons

Officially registered internally displaced persons (IDPs) who were forced to leave their hometown due to the Russian aggression in Ukraine can apply for benefits from a subsidized mortgage program through the Diia app.

Social impact

The program is aimed at supporting one of the most vulnerable categories of the Ukrainian population: internally displaced persons who were forced to leave their hometown due to the Russian aggression in the East of Ukraine and Russian illegal annexation of Crimea.

The program expects to serve up to 680 families or over 1,700 individuals, providing loans of up to EUR 40,000 for 20 years at a 3 percent interest rate.

The information they provide will then be immediately checked against electronic registries. If all of the data matches, the application form will be securely transferred to the State Fund for the Support of Youth Housing Construction. The fund will then use its methodology to randomly select applications (without human intervention) on a regular basis, compiling lists of pre-selected applications for subsidized mortgage loans. This information is then sent back to Diia and its users' personal online spaces.

Importantly, the selected applicants will not be removed from other waiting lists or programs (including waiting lists for housing) until there is a final confirmation that loan funds have

been allocated, or the registries show the applicant can obtain housing from a different source (through purchase or another mechanism).

Economic impact

The current economic impact of the program is limited by the overall amount of 25.5 million Euro which were allocated for the subsidized mortgage program for IDPs by the Kreditanstalt für Wiederaufbau (KfW) German government development bank. The further economic effect depends on the potential financial expansion of the program.

Transparency impact

According to the anonymous poll conducted for this analysis, 16.1% of respondents stated that they faced corruption when getting different social benefits for IDPs. According to the same poll, 100% of the respondents answered that they never faced corruption using any services of the Diia app.

Also, the transparency and integrity of the program are monitored by representatives from KfW, which provides the funds.

The above allows making the conclusion that Diia app has a significant positive anti-corruption and transparency improvement effect.

Support 8000

In December 2020 and in April 2021, President of Ukraine announced the eService of Support 8000 – special one-time social payment for small private entrepreneurs and workers who were forced to stop or substantially limit their business operations due to COVID-19 quarantine restrictions. Such small private entrepreneurs and workers could apply for the payment in Diia app.

Social impact

COVID-19 pandemic led to the introduction of numerous quarantine restrictions resulting in significant economic and social complications for millions of Ukrainians. The launch of Support 8000 program was aimed at providing assistance to small businesses and workers and mitigating the risks of a business closure.

According to the Ministry of Economy of Ukraine, the Support 8000 program allowed thousands of people to keep their jobs and reduce the negative effects of the COVID-19 quarantine restrictions.

According to the Ministry of Digital transformation, employees who benefited from Support 8000 program cannot be fired by their superiors, providing social guarantees and protection from the state.

Economic impact

According to the Minister of Economy of Ukraine, the overall amount paid from the budget

to small private entrepreneurs and works as of the end of March 2021
was around 4 billion UAH (around 149.3 million USD). The previously mentioned amount accounts only for the economic impact of the first part of the program operational until end of March 2021. The overall economic effect of Support 8000 for 2021 could be calculated after the budget year-end because the law on the expansion of the program does not foresee a cap on funding stating only two sources of funding: state budget and local budgets.

Tax services

Diia app provides a service for private entrepreneurs allowing them to monitor, create and submit their tax declarations as well as pay their taxes right in the Diia app.

Social impact

Private entrepreneurs represent the micro-business in Ukraine and form the basis for small and medium-size business development. There are about 2 million private entrepreneurs in Ukraine who are obliged, according to Ukrainian law, to provide tax declarations and pay respective taxes on a quarterly basis. Before the launch of tax services in Diia app there were only two ways to submit tax declarations: submission of paper declaration and submission of electronic declaration of the website of the State Tax Service.

Submission of the paper tax declaration requires printing out two copies of the tax declaration, filling out two pages of each copy, taking two more documents, physically getting to the local tax authority, waiting in line, and finally submitting the declaration. After that, the taxpayer should physically get to a bank, waiting in line, and pay respective taxes within 10 days after the submission of the tax declaration.

Even though online submission existed before the launch of tax services in Diia app, the process on the website of the State Tax Service was complicated, and the system often was not operational providing the service with errors or not providing it at all, which could have resulted in fines and penalties for taxpayers. Furthermore, online tax declaration submission required an electronic signature which was also complicated to get before the launch of Diia signature in Diia app. The offline process of getting an electronic signature is described in the above chapter Diia signature, social impact. In order to mitigate the risks of fines and to make sure the tax declaration is submitted according to the procedures in a timely manner, many taxpayers still preferred an even more complicated and bureaucratic procedure of physical submission described above.

Both physical and online tax declaration submission processes shared a common problem: a need to fill out two pages or 30 paragraphs of a complicated tax form and to calculate the correct amount of taxes to be paid. As even a technical mistake or a typo in a tax form could result in a penalty and fine many private entrepreneurs, find it cheaper to pay an additional fee to an accountant rather than barring the risk of making a mistake when filling out the tax form and calculating the tax amount on their own.

It is important to underline that all of the above complications a taxpayer has to face every three months, as tax declaration is submitted on a quarterly basis.

Diia app resolves the above problems reducing the time needed to submit the declaration

and pay respective taxes [to only three minutes](). Furthermore, Diia app saves time and money for taxpayers by automatically filling out the needed paragraphs in a tax form based on the user's answers to only four simple questions. So, instead of filling out 30 paragraphs of a complicated tax form, Diia users only need to answer four questions. Diia app also automatically calculates the correct amount of taxes to be paid based on a revenue provided by a user.

Economic impact

Failing to submit a tax declaration in a timely manner resulting in a fine from 340 UAH to 1,020 UAH (from 13 to 38 USD) and a penalty from 51 UAH to 136 UAH (from 2 to 5 USD). Failing to pay respective taxes in a timely manner resulting in a fine from 113.5 UAH to 600 UAH (from around 4 to 22 USD) per each month of delay or a penalty calculated by the tax authority per each day of delay, plus a penalty from 10% to 20% of the unpaid tax amount.

Diia app allows avoiding the above fines and penalties by simplifying the procedures and also sending notifications to a user informing her/him about the approaching deadline for paying taxes.

Transparency impact

According to the anonymous poll conducted for this analysis, 38.7% of respondents stated that they faced corruption when submitting paper tax declarations as private entrepreneurs. Some respondents stated that they were asked for a bribe from 500 UAH (about $19) to 1000 UAH (around $38). According to the same poll, 100% of the respondents answered that they never faced corruption using any services of the Diia app. The above figures allow making the conclusion that Diia app has a significant positive anti-corruption and transparency improvement effect.

Findings and recommendations

Launched in December 2019, by November 2021 Diia mobile application had become the most downloaded app in Ukraine [according to similarweb.com](#) and a frequently used app for more than 11 million users, roughly every fourth Ukrainian according to the Ministry of Digital Transformation of Ukraine.

One of the reasons for Diia app popularity is the simplification of 10 public services and the digitalization of 11 documents.

Ukraine became the first country globally to legally recognize **e-passport** without the need to present a hard copy. E-passport in Diia app significantly simplified the use of a passport. If applying for the passport for the first time, it takes seven documents and up to 20 days. If applying for the change of passport to a new one in case of passport loss, theft, damage, expiry, or marriage it takes nine documents, up to 20 days and 363 UAH (14 USD) and makes about 6% of minimal wage in Ukraine (6,000 UAH). E-passport provides a solution to the above problems, as it does not require reissue and can't be lost, stolen or damaged. Digitalizing of passport increased transparency of getting a passport by 38.7%, according to the poll conducted for the purposes of this report. E-passport also allows to save around 1500 trees and reduce the use of plastic by 45 tons per year.

International e-passport became one of the most popular documents in Diia app accounting to around 7.4 million, meaning that almost every fifth Ukrainian decided to opt for a digital document. Digitalizing of international passport increased transparency of getting a passport by 22.6% according to the poll conducted for the purposes of this report. International e-passport also allows saving around 3,750 trees per year.

Digital student ID became used by roughly every eighth student in Ukraine. Digitalizing of international passport increased transparency of getting a passport by 30%, according to the poll conducted for the purposes of this report. The current economic effect of issuing 654,898 digital student IDs is estimated to be from 49,117,350 UAH to 74,003,474 UAH (from 1.8 to 2.8 million USD).

Digital COVID-19 vaccination certificates played a major role in stopping a massive paper COVID-19 certificates fraud and stimulated a dramatic increase in the number of real vaccinations mitigating the risks of COVID-19 pandemic. Digitalizing of COVID-19 certificates increased transparency of getting a certificate by 41.9%, according to the poll conducted for the purposes of this report.

Digital taxpayer code provided major simplification of the use of the document by, among other things solving the problem of reissuing of a paper version document which requires collecting of 3 documents and waiting 5 days and in some cases up to 10 days. Digitalizing of taxpayer code increased transparency of getting a code by 12.9%, according to the poll conducted for the purposes of this report.

Digital Internally Displaced Person (IDP) certificate provided major usability and transparency improvements for one of the most vulnerable categories of Ukrainians: IDPs

who suffered from the Russian aggression in the East of Ukraine and
Crimea and were forced to leave their homes. Digital IDP certificate resolved the problem
with reissuing of a paper version of the document, which takes from 3 to 8 documents
and takes up to 3 days. Digitalizing of the IDP certificate increased transparency of getting
a certificate by 35.4%, according to the poll conducted for the purposes of this report.

Digital birth certificates simplified the use and reissue of the document. Reissuing the
process of the paper document could take up to 10 days, while in Diia a person gets a
certificate instantly, saving time and money. The digital birth certificate requires no paper
and provides a much more environmentally friendly solution to personal identification
documents.

Due to Diia app Ukraine became one of the first states to recognize the **e-driving license
legally.** E-driving license could prevent up to 80% of fines for driving without a license
which make from 425 UAH (about 16 USD) to 20 400 UAH (761 USD).

Digital vehicle registration could prevent up to 90% of fines for driving without a
registration which makes from 425 UAH (about 16 USD) to 850 UAH (32 USD). The
estimated economic effect of the complete switch from plastic to digital vehicle registration
could be around 3 200 000 000 UAH per year (around $119.4 million per year).

Digital compulsory third-party car insurance (CTPCI) could prevent up to 70% of
fines for driving without a registration which makes from 425 UAH (about 16 USD) to 850
UAH (32 USD). Digital CTPCI could save around 20 trees each year.

Digitalizing the process of **residence address registration** significantly simplifies the
most common public service in Ukraine. Without Diia changing residence address,
registration requires around three weeks of bureaucratic procedures. With Diia it takes
only about 15 minutes to apply online, and the new registration will be granted within 24
hours. The estimated economic effect of the introduction of digital residence address
registration makes be around 1,500,000,000 UAH per year (approximately 56 million USD
per year) or 93% of expenses on the offline procedure. Digitalizing of driving license
increased transparency of getting a document by 42.3%, according to the poll conducted
for the purposes of this report.

Digitalizing the process of **driving license replacement.** Traditional process of driving
license replacement requires a person to register for an appointment at the Ministry of
Interior service center, at the day and time of appointment physically get to the premises
of the service center, wait in numerous lines, provide five documents, make a photo at the
specially designated place the service center, pay 219 UAH (8 USD) and wait for up to 5
days after all the procedures are done, and all the documents applied. Applying with Diia
app takes up to 10 minutes from one's smartphone, which makes the procedure significantly
easier, faster, and more convenient. The current economic effect makes around 80 000 000
UAH (around $3 million), while if we estimate that 100% of all applicants for new driving
licenses in Ukraine would reissue them using Diia app, the overall economic effect will make
around 1.33 billion UAH (around $50 million) per year. Digitalizing of driving license
increased transparency of getting a document by 51.6%, according to the poll conducted
for the purposes of this report.

Diia app provides a solution to **monitoring and paying fines for driving.** Without the

Diia app service, users risk doubling the amount of a fine. Moreover, if a large number of unpaid fines pile in a time, the driver's car could be towed away until the driver pays off the fines in full plus penalties. Also, unpaid fines could block the driver's car from being sold. Diia solves the above problem by providing 24-hour monitoring of the fine registers and sending push notifications to a user in case of a fine. Diia also allows a user to pay the fine right away in the app.

Introduction of **Diia signature** made issuing and using an electronic signature much easier and more convenient. The traditional process of getting an e-signature requires collecting four documents, registering in one of the certification centers, physically getting to the certification center and finally, with the help of the center's staff generating the electronic signature. Diia app takes less than 10 minutes on a user's smartphone. Furthermore, Diia provides not only the e-signature generation service, but also a convenient way to apply it by using face recognition instead of usual passwords when signing e-documents and providing validation and authentication. The usability of this service resulted in more than 6 million generated signatures and 327 000 transactions with 97.54% success rate

Diia QR simplifies the processes of sharing copies of documents reducing the efforts to some seconds needed to scan the QR code. After that, the copies of the needed documents are shared with the QR code owner instantly. Furthermore, Diia QR simplifies the document sharing process not only for the person sharing a document but also for the entity receiving it. When using Diia QR the receiving side does not get the document instantly but also gets it in a digital format allowing processing such data much faster and easier. Diia QR allows saving from 350,000 to 520,000 trees each year.

Digitalization of enforcement proceedings (court decision obliging a person to pay a certain amount of money) makes it possible for any individual to be convinced of the absence or presence of debts; obtain information about the enforcement proceedings to which she/he is a party, in particular regarding the nature of existing debts and regarding the main legal proceedings committed by the enforcement officer; pay the amount of the fine or debt within the framework of the relevant enforcement proceedings online in just a few clicks. The estimated economic impact of digitalization of enforcement proceedings could make from 12,492,321,100 UAH to 74,953,926,600 UAH (from 466 million to 2.8 billion USD). Diia app also increased transparency of the process by 29%, according to the poll conducted for this report.

Launching **electronic petitions** in Diia app promotes the engagement of citizens in the decision-making process of their community, making the first step towards e-democracy. Diia app allows users to create, monitor and support petitions from the user's smartphone.

Providing **mortgage for internally displaced persons (IDPs)** in Diia app serve up to 680 families or over 1,700 individuals, providing loans of up to EUR 40,000 for 20 years at a 3% interest rate in a simple and transparent manner (transparency increase by 16.1% compared to other services for IDPs according to a poll made for this report). The current economic impact of the program amounts to 27,7 million USD.

Diia app provides a service called **Support 8000** - a special one-time social payment for small private entrepreneurs and workers who were forced to stop or substantially limit their business operations due to COVID-19 quarantine restrictions. Support 8000 allowed thousands of people to keep their jobs and reduce the negative effects of the COVID-19

quarantine restrictions. Economic effect as of March 2021 amounted to roughly 4 billion UAH (around $149.3 million).

Diia app provides users with an opportunity to conduct **tax service** via the app in a much simpler and cheaper way. Private entrepreneurs could monitor, create, and submit their tax declarations as well as pay their taxes right in the Diia app. Diia app resolves a number of crucial problems related to tax services, reducing the time needed to submit the declaration and pay respective taxes from around 1-2 days to only 3 minutes. Instead of filling out 30 paragraphs of a complicated tax form, Diia users only need to answer four questions. Diia app also automatically calculates the correct amount of taxes to be paid based on a revenue provided by a user. The service could decrease spending on accountants and tax consultants, as well as mitigate the risk of getting a fine by the tax authority. Diia app increases the transparency of the process by 38.7%, according to the poll conducted for this report.

The overall social impact of Diia mobile app could be demonstrated on a user growth rate compared to the two most popular social networks in Ukraine: Facebook and Instagram. According to the Ministry of Digital Transformation of Ukraine, in the period from December 2019 when Diia app was launched for beta testing to October 2021, Diia app grew from 0 users to 10 million users in less than two years.

According to the anonymous poll conducted for this evaluation report, **96.8%** of respondents stated that **Diia app simplified the personal identification process**. According to the same poll, **93.5%** stated that **Diia app simplified the process of tax declaration submission and tax payment.**

According to the same poll**, 96.8%** stated that they consider **Diia mobile app a successful project**.

Answering the question of the same poll "How would you evaluate an overall social impact of Diia app?" with five options of answers: very positively, positively, neutrally, negatively, very negatively, **64.5%** of the respondents answered, "**very positively**" and **35.5%** answered "**positively**", meaning that **100%** of the respondents evaluate an overall social impact of Diia app as **positive or very positive**.

Based on the analyses done for this report, the below **recommendations** could be provided:

- Introducing registration of private entrepreneur service to Diia app
- Introducing a service of getting personal yearly revenue statement to Diia app
- Introducing e-Baby service for mothers with newborns to Diia app
- Introducing car registration service to Diia app
- Introducing getting a criminal register certificate service to Diia app
- Introducing a service of setting subsidized loans for micro and small business to the Diia app
- Introducing push notification service on local road closures and repairs