



B R I E F

# POLICY BRIEFS ON GOOD E-GOVERNANCE

## Policy Brief #4: Building New Architecture for E-services in Ukraine



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*The use of new technologies for strengthening good governance and democracy in Ukraine is increasingly gaining importance. This Policy Brief was co-written by the Ukrainian-Swiss E-Governance for Accountability and Participation (EGAP) Program and the State Agency for E-Governance in Ukraine as part of the EGAP Policy Brief Series on Good E-Governance which serve as pragmatic, evidence based briefs that seek to inform policy makers and practitioners about key policy issues related to the mainstreaming of good electronic governance in Ukraine. The Policy Briefs Series are distributed quarterly and electronically; they are also available on EGAP Program's website [www.egap.in.ua/natsionalna-polityka](http://www.egap.in.ua/natsionalna-polityka).*

Development of e-services is one of the policy priority areas for the Government of Ukraine (GoU). Transfer of public and social services into electronic form does not merely facilitate more efficient access to public services, but e-services also provide opportunities for mitigating corruption risks, increasing citizens' trust in government, raising Ukraine's position in international e-governance rankings while promoting confidence for foreign direct investment. Given the notable developments in the area of e-services since 2015 in Ukraine, this fourth Policy Brief on Good E-governance is devoted to this important e-governance topic.

### DEFINITION OF E-SERVICES

In 2016 the Cabinet of Ministers approved the Concept on E-Services System Development<sup>1</sup> (Concept on E-Services here onwards) in Ukraine. The Concept on E-Services is one of the key regulatory acts that ensure the sustainable development of e-government in Ukraine. It introduces a clear definition and classification of 'e-services' and outlines the policy coordination mechanisms for the implementation of e-services. Former absence of these policy dimensions prevented Ukraine's advancement in global e-governance development rankings. The Concept on E-Services further identifies key policy directions, instruments and timelines for the implementation of e-services in Ukraine that meet the needs of citizens, businesses and support a transparent, safe, non-corrupt, inexpensive, quick and convenient access to e-services.

The Concept on E-Services defines e-service as an administrative public service provided to a subject in an electronic form through the use of information and telecommunication technologies. The Concept further outlines existing gaps and reforms needed for the effective development of high-quality electronic services, these include:

- lagging regulatory and legal framework in e-services provision;
- absence of common standards and criteria for the

1 On Approval of the Concept of E-Services System Development in Ukraine: Order of the Cabinet of Ministers of Ukraine; Concept, The List dated November 16, 2016 No. 918-p // Database 'Legislation of Ukraine' / The Verkhovna Rada of Ukraine. URL: <http://zakon.rada.gov.ua/go/918-2016-%D1%80>.

implementation of e-services;

- lack of regulation pertaining to electronic identification and authentication of persons and legal entities for the purpose of e-service provision;
- absence of electronic interoperability systems between government departments for the provision of administrative e-services;
- ineffective complexity and over-regulation of administrative service procedures;
- lack of clarity in e-document formatting within administrative service procedures;
- absence of standardized information and telecommunication infrastructure ensuring provision of e-services in compliance with established requirements;
- citizens' and legal entities' low trust in electronic interaction;
- low level of readiness among civil servants, officials of local self-government authorities, natural persons and legal entities for the introduction of e-services.

In addition, the Concept identifies a list of priority services to be introduced in electronic format. Under the Government's Priority Action Plan for 2018<sup>2</sup>, it is envisioned that by December 2018 about 100 priority public services will be introduced in electronic form. Cabinet of Ministers' two-year Action Plan<sup>3</sup> 2017-

2 <https://www.kmu.gov.ua/ua/npas/pro-zatverdzhennya-planu-prioritetnih-dij-uryadu-na-2018-rik>

3 On Approval of Action Plan as to Implementation of the Concept of E-Services System Development for Ukraine for 2017 — 2018: Order of the Cabinet of Ministers of Ukraine; Plan, Activities dated June 14, 2017 No. 394-p // RLA / The Government Portal. URL: <http://www.kmu.gov.ua/ua/npas/250069939>.



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2018 for the implementation of the Concept on E-Services System Development further outlines priority services that should be provided in electronic format by the end of 2018.

## E-SERVICES CLASSIFICATION

The Concept of E-Services Development further classifies four developmental stages for e-services :

- First stage – citizens gain access to information about services online, without any interactive functions.
- Second stage – enables citizens to download and print government application forms electronically.
- Third stage – provides interactive opportunities to submit applications and documents electronically, to make e-payments for services and to receive automated updates about the status of e-service requests but services still being finalized offline in administrative service centers.
- Fourth stage – offers maximum online interaction where all the stages of servicedelivery are conducted fully in electronic form.

The suggested classification is close to the e-services maturity model used by the European countries in the analysis of the status of e-services and e-governance development.

## E-SERVICES CONCEPT STRUCTURE

The conceptual model of standardised information and telecommunication infrastructure for e-services provision is presented in Figure 1 below and consists of three levels:

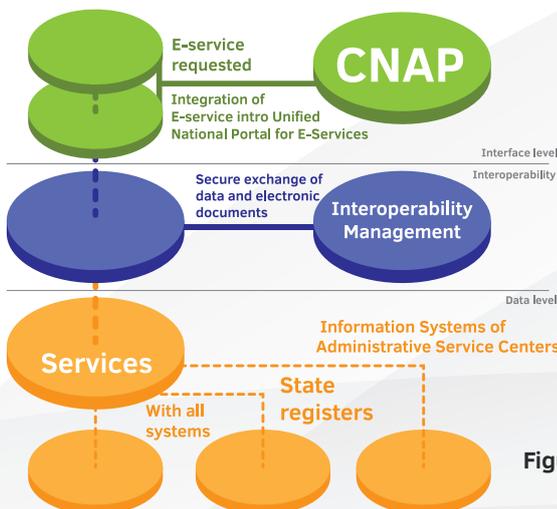


Figure 1

The first, data level, is the most basic level in the development of e-services, comprising basic data and information in the form of:

- state registers – that store information/ data used in the course of service provision;
- information systems and software used for the automatization of administrative services;
- external systems – information systems of third parties (e.g. providers of housing and communal services) data of whom may be used for the provision of e-services.

At the second interactive level, data and documents are shared and exchanged between different registers providing basic 'one-way' interactions, typically enabling only the 'downloading of forms and information'. The third, integrated level is the most advanced in e-services provision and involves fully integrated administrative service portals at national or local level where different state authorities and government departments interactively share data based on established standards and provide a full range of e-services.

In addition to government hosted e-service portals, Ukrainian law also allows citizens to access e-services through external mediators such as designated libraries, banks, telecommunication providers, customized centres for e-service provision or mobile applications with interoperable access to state administrative service portals.

## CURRENT E-SERVICES STRUCTURE IN UKRAINE

Ukraine's Law On Administrative Services<sup>4</sup> further stipulates that citizens' access to online information and provision of administrative services in electronic form is administered through the State Administrative Service Portal (poslугy.gov.ua). The State portal acts as the official gateway and source of information for administrative service provision in Ukraine and is administered by designated GoU procedures<sup>5</sup>.

4 On Administrative Services : Law of Ukraine dated September 06, 2012 No. 5203-VI // Database 'Legislation of Ukraine' / The Verkhovna Rada of Ukraine. URL: <http://zakon.rada.gov.ua/go/5203-17>.

5 On Approval of the Procedure of Maintaining the Unified State Administrative Service Portal : Resolution of the Cabinet of Ministers of Ukraine; Procedure, Typical Document Form, Information as of January 03, 2013 No. 13 // Database 'Legislation of Ukraine' / The Verkhovna Rada of Ukraine. URL: <http://zakon.rada.gov.ua/go/13-2013-%D0%BF>.



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Competence to develop and implement policies on administrative services rests with the Ministry of Economic Development and Trade.

Ukraine's Concept for E-Services Development additionally stipulates that services may be also offered through other online administrative service websites. However, these must be accessible through the Unified State Service Portal. According to the law, information systems of local self-government authorities must be also compatible and integrated with the Unified State Service Portal according to approved procedures<sup>6</sup>. In practice, however, this approach proves to be challenging. Due to the high variation in local authorities' IT systems and software, the national platform's limited architecture is unable to effectively integrate such diversity yet.

Taking this reality into account, a Ukrainian pilot was launched based on UK's e-services portal (portal.gov.uk) where previously fragmented e-services provided by different institutions and legal entities were seamlessly integrated in a central e-services catalogue hosted by the State. Seamless inter-institutional integration is essential when users access e-services from different online entry points.

In late 2017, the first step taken to implement this approach in Ukraine was the launch of the new Government portal (www.kmu.gov.ua) with a centralised catalogue of e-services. Updates to the portal were implemented in cooperation with the State Agency on E-Governance of Ukraine and East Europe Foundation within the 'E-Governance for Accountability and Participation' (EGAP) funded by the Swiss Agency for Development and Cooperation. The Government's new catalogue for e-services enables:

- filtering of e-services by user target groups - 'citizens' and 'business'
- service sector classification ('construction and housing', 'transport', 'social protection', etc.)
- alphabetized service index to facilitate easier navigation within the portal.

The portal also describes specific requirements and procedures for obtaining listed e-services, the respective state departments responsible for various

e-services and other useful information. Nonetheless, the state portal does not 'provide' e-services but it rather acts as a 'gateway' for re-directing users to relevant state bodies' and authorities' sites responsible for requested services.

In addition to creating a centralized catalogue of e-services, the next step undertaken was the development of a standardized design code for public portals design.gov.ua which comprises a set of templates and recommendations to ensure that all sites meet modern requirements for accessibility and ease of use standards. The new State portal thereby became the first state website with a standardised design code system. Based on this system, users looking for online-services in the national catalogue are seamlessly navigated to the respective government website(s) without the e-services needing to be technically integrated within the central catalogue. To introduce and maintain new e-services, however, changes to the regulatory framework are needed; obliging all new e-services providing websites and those already in use to comply with the design code standards.

The next step to advance electronic public services in Ukraine is the establishment of an integrated system for electronic identification (e-ID) by the State Agency on E-Governance (id.gov.ua). This website will list all available formats for electronic identification in Ukraine and will ensure the safe transfer of identification data via a standardized single sign-in. The use of this service for available and new public services will thereby simplify electronic identification modalities and their maintenance.

According to analytical data obtained from the US-AID funded Transparency and Accountability in Public Administration and Services (TAPAS) program, as of August 2018, in Ukraine there were about 138 electronic public services, over 50 of which were already listed on the State portal. These included:

- Registration and termination of sole entrepreneur
- Childbirth subsidy provision
- Housing subsidy provision
- Submission of notice on construction works commencement
- Criminal record certificates.

<sup>6</sup> On Approval of the Procedure of Integrating Information Systems of State Authorities and Local Self-Government Authorities into the Unified State Administrative Service Portal: Order; The Ministry of Economic Development and Commerce of Ukraine as of September 08, 2016 No. 1501/248 // Database 'Legislation of Ukraine' / The Verkhovna Rada of Ukraine. URL: <http://zakon.rada.gov.ua/go/z1315-16>



## NON-GOVERNMENTAL PORTALS FOR E-SERVICES

In the current electronic service structure in Ukraine, non-state portals for electronic services also exist. iGov igov.org.ua is one example of a non-state portal for the provision of e-services in Ukraine. This non-state portal was developed and maintained by volunteers since 2015. Without any regulatory foundation it enabled citizens to receive a select number of services based on navigation and transfer of applicants' information to respective administrative service centres. The portal was hosted by a cloud in a foreign location which meant that applicants' personal data using the portal – were transferred and stored abroad. As the portal did not have official (state recognized) status, it could not be integrated with other public information systems and state registers, portals or administrative service provision centres. However, in the absence of a state portal (at the time), the quick development of the iGov portal acted as a notable precursor for the eventual establishment of legal and official electronic services provided by government authorities in Ukraine.

## KEY ASPECTS IN E-SERVICES IMPLEMENTATION

### Re-Engineering Legislation for E-services Provision.

In most cases, in order to effectively introduce public services in electronic form, wide-ranging changes to the regulatory framework are still needed. Setting interoperability standards and data sharing protocols, determining procedural and data protection standards for e-services are some examples of the needed changes. Re-engineering and optimizing business processes linked to e-service provision – including the removal of redundant procedural steps and paper trails to optimize time and procedural efficiency are also essential. However, this is not always easy.

For example, a common challenge faced when introducing new e-services is to shift from the formerly paper based into full electronic document format of required forms. One solution to facilitate this process is to sign the required documents to obtain electronic services by using an electronic digital signature. However, this is often not possible without the introduction of an eID system and making significant changes to the existing legislation in Ukraine.

### CASE STUDIES: Creating a Way to Digitally sign Legal Documents with the Use of BankID

To transfer the social housing subsidy into electronic format, amendments needed to be made to the Resolution of the Cabinet of Ministers of Ukraine No. 848 dated October 21, 1995 on the Simplification of the Procedure of Providing Subsidies to Reimburse the Costs of Housing and Municipal Service Bills, Acquisition of Liquefied Gas, Solid and Liquid Stove Domestic Fuel to Residents. Changes made included:

- Added new provisions for the application and declaration for housing subsidy allocation may be sent to the resident's social security unit electronically (tenants – at the place of residence) via the official webportal with electronic digital or electronic signature added based on identification data confirmed through an authentication process by using clients' electronic identification system linked to their existing banking ID (BankID).
- This was the first example of digitally signed documents creation without use of digital signature based on applicants' validation via BankID.

### The Risk of Legislative Changes for Implementation of E-Services

Among the risks when implementing e-services are potential legislative changes that can affect the business process of a specific e-service. For example, in 2016, an amendment to the Law on State Registration (No.1666-VIII, 6 October 2016) related to the adding of mandatory documents for registering legal entities added significant complexity to the implementation of e-registration of the legal person. Its implementation required applicants to apply several e-signatures to the same document which required corresponding technical adaptations. While the development of this modality is still ongoing, after the system was operationalized, some additional changes were introduced to the registration process (Decree of the Ministry of Justice No. 1924/5 of June 15, 2017) hence again the need to revise some e-forms in the system.



## ELECTRONIC INTEROPERABILITY

The introduction of high quality electronic services is impossible without an established electronic interoperability system between different state authorities' registers. Most public services cannot be provided by relying only on single electronic system. For instance, business registrations are performed through the Register of Legal Entities, Sole Proprietors and Public Associations of the Ministry of Justice but they also need to interact with the systems of Ukraine's State Fiscal Service, the Pension Fund and the State Statistics Service. Similarly, provision of a childbirth subsidy is impossible without verifying the data with the respective register of the Ministry of Justice. Ensuring safe and reliable data exchange between different state registers is therefore key to high-quality and fully automated electronic service provision.

To facilitate effective interoperability between different state departments' IT systems, Ukraine's State Agency for E-Governance is in the process of implementing an interoperability system called Trembita. Trembita is based on the Estonian 'X-Road' system<sup>7</sup> that was adapted to Ukraine's information protection standards. It is technically supported by the EU funded U-LEAD/EGOV4UKRAINE program. To introduce the system, in May 2018, the Cabinet of Ministers issued a Resolution on the 'Organization of Electronic Interaction of Public Electronic Information Resources'<sup>8</sup> which approved procedure(s) on which and how different public electronic information resources should effectively interact, it also updated and amended other regulatory and legal acts.

As of September 2018, Trembita's base architecture was completed and is now being complemented by the development of a Comprehensive Information Protection System. Once the latter is finalised, Trembita will be fully operationalised. To complete the coordination of public registers and other public information systems in Ukraine, the State Agency for E-Governance of Ukraine has also proceeded to develop a draft law on public electronic registers<sup>9</sup>.

7 <https://e-estonia.com/solutions/interoperability-services/x-road>.

8 Organizing Electronic Interaction of Public Electronic Information Resources: Resolution of the Cabinet of Ministers of Ukraine; Procedure, Typical Document Form dated May 10, 2018 No. 357 // Database 'Legislation of Ukraine' // The Verkhovna Rada of Ukraine. URL: <http://zakon.rada.gov.ua/go/357-2018-%D0%BF>.

9 [http://w1.c1.rada.gov.ua/pls/zweb2/webproc4\\_1?pf3511=64437](http://w1.c1.rada.gov.ua/pls/zweb2/webproc4_1?pf3511=64437)

## ELECTRONIC IDENTIFICATION

Among the most important factors when transferring public services into electronic form is the validation of applicants' identification. To ebed relevant regulatory precedents in Ukrainian law, in 2017 the Law of Ukraine On Electronic Trust Services was adopted<sup>10</sup>. It determined legal and organizational principles of electronic trust provision, legal subjects' rights and duties in the area of electronic trust services, procedure for implementing state's compliance supervision as well as legal and organizational principles for carrying out electronic identification.

As a result, the system of user identification via electronic digital signature is now functioning sustainably (hereinafter referred to as the EDS) but so far only businesses have EDS. Due to this fact, e-services for business are more popular than e-services for citizens.

Citizens' use of digital signatures is still uncommon. One area where citizens may find digital signature useful is when getting a new passport ID-cards. Citizens can obtain the latter with a special chip or token containing the EDS but which needs to be processed by a special reader that costs (the citizen) about 1,200 UAH. Electronic digital signatures on ID-cards can be issued to Ukrainian citizens by the Accredited Key Certification Centre at the Ministry of Interior of Ukraine, but so far no such electronic digital signatures have been issued. To increase the use of e-services it is therefore necessary to develop alternative methods for applicants' identification such as BankID – identification by the bank of which the applicant is the client, or MobileID – identification via mobile communication service provider.

Currently, several BankID technologies are being developed in Ukraine, including:

1. BankID developed by PrivatBank ([bankid.org.ua](http://bankid.org.ua)). This system appeared first on the market and is supported by the following banks: PrivatBank, Bank Pivdennyi, bank Concord, A-Bank and PUMB.
2. BankID of the National Bank of Ukraine ([id.bank.gov.ua](http://id.bank.gov.ua)) supported by OshchadBank and RadaBank.

BankID enables to identify the applicant and get the data about him/her, but does not allow to sign the document in order to provide it with the status of elec-

10 On Electronic Trust Services: Law of Ukraine dated October 05, 2017 No. 2155-VIII // Database 'Legislation of Ukraine' // The Verkhovna Rada of Ukraine. URL: <http://zakon.rada.gov.ua/go/2155-19>.



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tronic document.

MobileID, as an alternative form of eID, has been explored in Ukraine since the late 2017. Now MobileID technology is implemented by mobile communication service providers such as Kyivstar, Vodafone and Life-Cell. MobileID can work with EDS where the telephone SIM-card is the bearer of the signature enabling clients to sign documents with EDS hence assigning them the status of electronic documents.

To further advance the implementation of public e-services and use of electronic digital signatures, a promising step forward will be the introduction of the above-mentioned Integrated Electronic Identification System by the State Agency on E-Governance [id.gov.ua](http://id.gov.ua).

### SUMMARY

In conclusion, Ukraine has built a good foundation for the introduction of new public e-services and for updating the existing ones. In the near future new ID technologies and the unified electronic interaction system Trembita will be implemented which will significantly improve the accessibility of e-services to Ukrainian citizens, their quality and further development.

To establish high-quality e-service provision, it is important to adopt and implement a comprehensive policy on e-services, to establish a standardised design for government websites and to introduce accessible, new ways of electronic ID. In the process of transferring public services into electronic form, it should be noted, however, that technologies are rapidly developing hence the design and introduction of new services should be as flexible as possible so that it can agilely adapt to ongoing IT developments and scaled up rollout.

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THE STATE AGENCY  
FOR ELECTRONIC  
GOVERNANCE IN UKRAINE

The State Agency for E-Governance in Ukraine ([www.e.gov.ua](http://www.e.gov.ua)), established in 2014, is responsible for the implementation of the Government's e-government policy on informatization, development of information society in Ukraine, establishment and use of national electronic information resources, and the digitization of public authorities.