

## Technical specifications for Lot no. 2

[This table shall be filled in by the tenderer in columns 2, 3, 4, 6, 7, and by the contracting authority - in columns 1, 5]

<b>Procurement procedure number: ocds-b3wdp1-MD-1641280612921, Lot no. 2 Specialized equipment and program product for personalization of identity documents of the National Passport System, driving licences and registration certificates f35200f4-534e-43c7-ae1-e7f1c1de7a66</b>						
<b>Purpose of the purchase:</b> <i>Blanks (booklets) of identity documents from the National Passport System, driving licences and registration certificates, including specialized equipment and program product for their personalization for the period 2022-2025</i>						

Name of goods/ services	Name of the model of goods/ services	Country of origin	Producer	Full technical specification required by the contracting authority	Full technical specification proposed by the tenderer	Reference standards
1	2	3	4	5	6	7
Goods/services						
<b>Lot no. 2 - ID: f35200f4-534e-43c7-ae1-e7f1c1de7a66:</b> <b>Specialized equipment and program product for personalization of identity documents of the National Passport System, driving licences and registration certificates</b>						
Travel passports' blank forms personalization equipment with polycarbonate-type data page	Travel passports' blank forms personalization equipment with polycarbonate-type data page - SwiftPass 24HP High Performance laser printer for passport laser engraving system for single face with an automatic loader of 20 passports	Japan	Kanematsu Corporation	Specialized equipment and program product for personalization of identity documents from the National Passport System, driving licences and registration certificates, based on the documents: "Requirements for travel passports' blank forms personalization equipment with polycarbonate-type data page" and	Specialized equipment and program product for personalization of identity documents from the National Passport System, driving licences and registration certificates, based on the documents fully complies with the following requirements specified in the documents: "Requirements for travel passports' blank forms personalization equipment with polycarbonate-type data page" and	SMV ISO/IEC 7501 (Doc 9303) Identification cards. Machine readable travel documents and associated devices. Part 1. Machine readable passports and associated devices. Volume 1 and 2 SM ISO 1073/11 OCR Alphanumeric character sets. Part 2. Character Set OCR-B. Shapes and sizes of the printed image. SM ISO/IEC 14443-1:

	inserted in a frame (cassettes) and lockable by a key.			<i>"Requirements for the personalisation information system for Identity Documents of the National Passport System, Driving Licenses and Registration Certificates"</i> .	<i>"Requirements for the personalisation information system for Identity Documents of the National Passport System, Driving Licenses and Registration Certificates"</i> .	2004 Identification cards. Contactless integrated circuit cards. Proximity cards. Part 1: Physical characteristics SM ISO/IEC 14443-2: 2004 Identification cards. Contactless integrated circuit cards.
Specialized program product for personalization equipment with polycarbonate-type data page	Program solution for integrating special equipment into the National Passport System, driving licences and registration certificates	Ukraine	State Enterprise "Polygraph Combine "Ukraina" for securities' production", Polly-Service LLC as a subcontractor	Specialized equipment and program product for personalization of identity documents from the National Passport System, driving licences and registration certificates, based on the documents: "Requirements for travel passports' blank forms personalization equipment with polycarbonate-type data page" and "Requirements for the personalisation information system for Identity Documents of the National Passport System, Driving Licenses and	Specialized equipment and program product for personalization of identity documents from the National Passport System, driving licences and registration certificates, based on the documents fully complies with the following requirements specified in the documents: "Requirements for travel passports' blank forms personalization equipment with polycarbonate-type data page" and "Requirements for the personalisation information system for Identity Documents of the National Passport System, Driving Licenses	2004 Identification cards. Contactless integrated circuit cards. Proximity cards. Part 2: Radio frequency power and signal interface ISO/IEC 15444-1: 2004 Information Technology. JPEG 2000 image coding system: Core coding system Requirements of the ICAO standard, document DOC 9303, including requirements for EAC access management. "Specification of Kanematsu SwiftPass 24HP Desktop laser engraver".

				<i>Registration Certificates”.</i>	<i>and Registration Certificates”.</i>	
Training	Training of employees of the customer in Moldova.	Ukraine	State Enterprise “Polygraph Combine “Ukraina” for securities' production”	Specialized equipment for personalization of identity documents from the National Passport System based on the document “Requirements for travel passports’ blank forms personalization equipment with polycarbonate-type data page”.	The information regarding training is set forth in the document "Specification of Kanematsu SwiftPass 24HP Desktop laser engraver".	"Specification of Kanematsu SwiftPass 24HP Desktop laser engraver".
SDK Support SMA	SDK Support SMA, provided to the technical team of the customer with 12 hours of Telephone & Web based support.	Ukraine	State Enterprise “Polygraph Combine “Ukraina” for securities' production”	Specialized equipment for personalization of identity documents from the National Passport System based on the document “Requirements for travel passports’ blank forms personalization equipment with polycarbonate-type data page”.	The information regarding the Service Maintenance Agreement for the equipment and SDK support is set forth in the document "Specification of Kanematsu SwiftPass 24HP Desktop laser engraver".	"Specification of Kanematsu SwiftPass 24HP Desktop laser engraver".

The table below contains a detailed description on how the basic functionalities from the technical specifications are fulfilled:

2.1	Requirements for basic functionalities	Comply
2.1.1	The system shall contain the interaction modules with the components necessary to ensure the production cycle (reception, transmission and temporary storage of data) capable to interact with the existing PSA information systems, as well as with the specialized equipment for the creation and personalization of documents.	The system contains the modules to ensure the production cycle. The modules support HTTP, HTTPS, FTP, SFTP protocols.
2.1.2	It is necessary to use a SIA and DBMS development environment that does not require licensing, or, in case of impossibility, the supplier company shall deliver the program product with the paid licenses in the required quantity and provide maintenance for the entire period of operation.	SIA and DBMS development environment do not require licensing.
2.1.3	The system shall provide the interaction with the certification center and ensure the processing of data in accordance with the provisions of the standards for the production of biometric travel documents or those with digital certificates.	The system communicates with Public Key Infrastructure to produce biometric travel documents.
2.1.4	The system shall provide jobs for direct production operators of documents, for engineers who manage the process of documents production, checking the quality of documents produced, ensuring the record keeping of materials in the warehouse. The details of the production technology requirements will be presented in Section II	The system supports jobs and batches for document production according to Section II.
2.1.5	The system shall have an administration outline that will provide the access rights management for the users operating in the system and auditing the activities in the system.	The system provides the access right management.
2.1.6	The system shall provide the user authentication and login via digital signature using the security token or other carrier.	The system supports the access right management via digital signatures.
2.1.7	The system shall ensure that the user (operator, engineer, administrator, etc.) has an access to the system interface, the system and functional data, based on the right of access and the roles assigned in the system.	The system manages users and client hosts in production realm from one central location with CLI, Web UI or RPC access. Enable Single Sign On authentication for all production systems, services and applications.
2.1.8	The system shall provide loading of the necessary data from the external systems in the indicated formats and ensure the processing of data, the production of documents and maintenance of the audit data sufficient for the creation of reports regarding the executed orders, the transmission to external systems of information about the execution of orders.	The system provides mentioned functionality.
2.1.9	The system shall provide the interaction with the existing production equipment of the Beneficiary.	The system support existing production equipment.
2.1.10	The system shall provide the creation of statistical reports about the performed work, as well as the detailed reports on the activities performed in the system. The forms and contents of the statistical reports will be determined and presented at the implementation stage of the system.	The system has flexible reporting subsystem which can be configured to meet requirements.
2.1.11	The system shall have the document type configuration mechanisms for production, as well as mechanisms for managing the document types for personalization.	The system allows to manage personalization flow depending on the document type.

2.1.12	For the electronic identity card, the system shall provide the process of renewal, suspension, revocation of digital certificates, as well as unlocking the pin codes or renewing them. The Cert Renewal Service element interacts with the territorial offices of the PSA and the Public Key Certification Center.	The system communicates with Public Key Infrastructure to provide the process of renewal, suspension, revocation of digital certificates etc.
2.2	Requirements for interaction with the PSA systems	Comply
2.2.1	The system shall provide the data retrieval from the PSA systems regarding the list of documents orders and the nominal data per order.	The system supports the requirements.
2.2.2	The system shall ensure that the information in the PSA systems is updated after the production of the documents.	The system supports the requirements.
2.2.3	The system shall provide the registration of passport blank forms in the Beneficiary's systems, including the chip for each separate passport card.	The system supports the requirements.
2.2.4	Interaction with the existing information system needs to be carried out only, when necessary, without making periodic inquiries.	The system supports the requirements.
2.2.5	Technical requirements for interaction with the information resources and PSA systems are set out in the document technical requirements for software interaction during the production of documents of the National Passport System of the Republic of Moldova (according to annex). This document will be presented in addition to the request.	The system supports the requirements.
2.3	Requirements for interaction with technical personalization equipment	Comply
2.3.1.	The system shall interact in the process of personalization of the Beneficiary's documents, including the equipment provided by the Beneficiary.	The system supports the requirements.
2.3.2.	The beneficiary shall offer for the personalization process for some types of passport blank forms the Diletta 800i technological equipment the product of the company «Diletta» with contactless reader for chip programming in the passport SCM SCL011 Contactless Reader and uTrust 3700 F Contactless Smart Card Reader.	The system supports Diletta 800i and can work with any PC\SC compatible reader.
2.3.3.	The system shall automatically detect the type of reader and perform the blank form personalization. When producing a passport, the system shall first compare the number of the passport chip with the data in the system.	The system supports the requirements.
2.3.4.	For personalizing the ID I-format blank forms based on polycarbonate Desktop Card Personalization System SCP 60 equipment of Muehlbauer company product is used. The system shall provide for the possibility of installing no less than 5 work complexes to ensure the necessary production capacity. There must be the possibility to expand the number of jobs if necessary. The production complex is equipped with the modules necessary for a complete document production cycle, including textual, graphic and electronic customization. For personalization, it is necessary to formulate and send an XML file type to the personalization complex. The data structure and XML file model will be presented at the system implementation stage	The system provides the necessary number of installations. The system supports files, jobs and batches in XML format.
2.3.5.	The system should provide for the possibility of installing no less than 10 jobs to verify the quality of production of electronic documents, electronic identity card, travel documents of all types and which shall interact with the existing equipment, the visible area reader and the contactless reader of the electronic chip. There must be the possibility to increase the number of jobs if necessary.	The system provides the necessary number of installations. The system has the interface for Elyctis ID Box One 151.

	The verification of the information in the document must be performed by recognition of mechanizable areas of the visual area and comparing it with the information recorded in the electronic chip and with the primary information in the database, respectively. The beneficiary offers Elyctis ID Box One 151 multifunctional readers.	
2.4	Requirements for interaction with Public Key Infrastructure (PKI)	Comply
2.4.1.	The personalization system shall be compatible in information and interoperable in the PKI that already exists in the PSA and ensure interaction with it.	The system is compatible with existing in the PSA PKI.
2.4.2.	The personalization system shall be compatible with the EJBCA software package (manufacturer - PrimeKey Solutions AB, Sweden) used as a CryptoProvider.	The system is compatible with ejbca software and support the technological stack.
2.4.3.	In the production of passports and electronic identity cards (eCA), the personalization system shall use cryptographic keys and Document Signer (DS) certificates that are stored on existing cryptographic equipment (HSM Thales).	The system supports HSM Thales.
2.4.4.	When producing biometric passports, the personalization system shall accept two branches of cryptographic and certified keys:	
	(a) Basic Access Control (BAC), CSCA-DS keys and certificates, in accordance with ICAO PKD Doc 9303 normative documents Chapter 12.	The system supports the requirements.
	(b) Extended Access Control(EAC), CVCA-DVCA-IS keys and certificates, in accordance with BSI TR - 03110 normative documents	The system supports the requirements.
2.4.5	. When issuing electronic identity cards (eCA), the personalization system shall accept two types of cryptographic keys and certificates:	
	(a) Basic Access Control (BAC), CSCA-DS keys and certificates, in accordance with ICAO PKD Doc 9303 normative documents Chapter 12.	The system supports the requirements.
	(b) Advanced qualified electronic signature and (MSign) authentication.	The system supports the requirements.
2.4.6.	To obtain qualified advanced electronic signature and authentication certificates, the personalization system shall provide remote communication with the HTTP Certification Center using the Certificate Management Protocol (CMP), RFC 4210.	The system supports Certificate Management Protocol (CMP), RFC 4210.
2.4.7.	When producing electronic identity cards (eCA), the personalization system shall be able to perform all procedures related to the management of the certificate status with a public key of a qualified advanced electronic signature: issuing the certificate, suspending and renewing the certificate, revoking the certificate.	The system supports the requirements.
2.4.8.	Certificate status management procedures shall be performed at the following workstations (operator workstations):	
	(a) Documentation Office - issuing a certificate, suspending and renewing a certificate, revoking a certificate;	The system supports the requirements.
	(b) Production unit - Issuance of the certificate	The system supports the requirements.
	(c) Technical control area (inspection) – Revocation of the certificate.	The system supports the requirements.
2.4.9.	When producing biometric passports, at the stage of technical control, there shall be ensured the procedure of verification of the used certificates (CSCA-DS and CVCA-DVCA-IS certificate chains).	The system supports the requirements.

2.4.10.	When producing electronic identity cards (eCA), at the stage of technical control, there shall be ensured the procedure of verification of the used certificates (CSCA-DS chain and qualified advanced electronic signature certificate).	The system supports the requirements.
	When replacing the qualified advanced electronic signature certificate in the Documentation Office, it must be possible to verify it.	The system supports the requirements.
2.4.11.	When producing electronic identity cards (eCA) or when the qualified advanced electronic signature certificates used in them are replaced (suspended, revoked), the personalization servers must automatically generate and submit to the PSA Registration Authority (PSA RA) reports on the procedures performed to change the status of the certificate.	The system supports the requirements.
2.5	Requirements for Information Security	
2.5.1.	The system must provide for the delimitation of users' rights. Delimitation of the user rights shall be done in the authentication process, using certification profiles registered on each employee's personal mobile devices, used for authentication.	The system manages users and client hosts in production realm from one central location with CLI, Web UI or RPC access. Enable Single Sign On authentication for all production systems, services and applications.
2.5.2.	Logging in the system shall be based on personal mobile devices. As a personal mobile device, the SafeNet usb token (or similar and compatible FIPS 140-2 L2) is used in which the public key, the private key and the authentication certificate for each user separately are registered. The device with the key pair and the authentication certificate are provided to the beneficiary.	The system supports any PKCS#11 usb tokens and smart cards.
2.5.3.	The user management interface shall be provided in the system:	The system supports the requirements.
	a) user creation;	yes
	b) role assignment;	yes
	c) temporarily blocking the user;	yes
	d) modification of user rights;	yes
	e) user disconnection.	yes
2.5.4.	There shall be ensured the mechanism for the permanent storage of the system users' data. System users are not deleted, only the status changes: active or inactive.	The system supports the requirements.
2.5.5.	The user access to the application server interface shall be protected by the SSL encryption.	The system supports the requirements.
2.5.6.	In case of using the program insurance outside the closed production contour, the confidentiality of the data must be provided.	The system supports the requirements.
2.5.7.	The system shall maintain audit data for all actions. Data uploading, technological steps, actions of the system operators including connection and disconnection to the system.	The system supports the requirements.
2.5.8.	Generation of reports on the production of documents by period, document type and user shall be allowed.	The system supports the requirements.
2.5.9.	The access to audit data and reports shall be restricted and accessible only to the authorized employees.	The system supports the requirements.
2.5.10.	There shall be provided the mechanism for downloading logs and reports in accordance with the presented model.	The system supports the requirements.
2.5.11.	It is necessary to ensure the possibility to set the deadline for keeping the audit data.	The system supports the requirements.
2.6	Requirements for scalability and recovery	

2.6.1.	The proposed solution shall allow for high scalability - adding of space, interconnection components, performance acceleration modules shall be performed online without interruption of services.	The system supports the requirements.
2.6.2.	The provider company shall present to the PSA the disaster recovery plan (Disaster Recovery plan) which will provide:	Disaster Recovery plan will be provided:
	a) minimizing the downtime of the system;	yes
	b) rapid restoration of the system functionality;	yes
	c) exclusion / limitation of the extension of faults within the system;	yes
	d) minimizing the negative impact on the economic activity of the PSA;	yes
	e) establishing alternative means of operation.	yes
2.6.3.	The system shall provide the full system backup service (BackUp) for operational continuity in the event of an incident at the main location and to restore the continuity of the activity in time < 2 hours without loss of data.	The system supports the requirements.
	2.6.4. Mechanisms for creating backup copies of databases and information system configurations shall be provided in the system.	The system supports the requirements.
	2.6.5. The complete recovery of the system shall not exceed 2 hours, the restoration of the databases shall not exceed 1 hour.	The system supports the requirements.
2.7	Requirements for system implementation	Comply
2.7.1.	The list of basic artifacts needed. The provider company shall ensure the presentation of the artifacts:	The documents will be provided
	a) The technical task of the document personalization system;	yes
	b) Administrator's Guide;	yes
	c) User's Guide;	yes
	d) technical development project;	yes
	e) Disaster recovery plan;	yes
	f) Test plan;	yes
	g) The Qualification Test Protocol;	yes
	h) Experimental Commissioning Certificate;	yes
	i) Training plan;	yes
	j) Commissioning Certificate.	yes
2.7.2.	Requirements for the system launch process	Comply
	The Supplier shall install the system on the technical infrastructure provided by the Beneficiary (according to the Technical Development Project), adjustment/configuration of all system elements including production complexes for data personalization.	The system will be installed on the Beneficiary technical infrastructure
	All work required for the interconnection of the Documents Personalization System in the existing PSA infrastructure shall be performed at the Supplier's expense.	yes
	The system launch process shall include the following steps:	
	- System testing	yes



	Testing of the system is to be performed according to the scenarios described in the Test Plan and involves testing of all characteristics of functionality, performance, security, reliability and continuity of the system.	
	The testing process shall be completed by drawing up:	yes
	a) The Qualification Test Protocol;	yes
	b) Experimental Commissioning Act.	yes
	- Experimental exploitation	yes
	During the experimental operation process, the capacity of operating the system in real conditions according to the requirements of the technical tasks is to be verified. The process ends with the signing by the parties of the Commissioning Certificate.	
	- Commissioning	yes
	On the basis of the Commissioning Certificate the Documents Personalization System shall be deployed at work / production sites (according to the deployment plan).	
2.7.3.	Requirements for training	Comply
	During the implementation process, it is necessary to train the administrators of the documents personalization system and the users for each automated workplace	
2.8	Requirements for the system maintenance	Comply
2.8.1.	The provider company shall ensure the maintenance of the system for the entire period of operation.	yes
2.8.2.	The system maintenance shall include:	
	a) adapting the system in case of modification of the legislation or modification of the requirements for the issued documents;	yes
	b) necessary adjustments in conjunction with the beneficiary's systems	yes
	c) adjusting the SIA modification to optimize the production processes, including the development of new components;	yes
	d) removal of errors detected in the operation of the system;	yes
	e) restoring the operation in case of the system crash.	yes

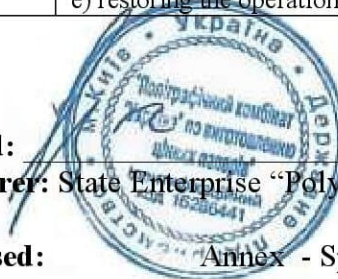
**Signed:**

Name, Surname: Tetiana BONDARENKO As: Director

**Tenderer:** State Enterprise "Polygraph Combine "Ukraine" for securities' production" Address: 38-44 Dehtiarivska Str., 04119, Kyiv, Ukraine

**Enclosed:**

Annex - Specification of Kanematsu SwiftPass 24HP Desktop laser engraver on 3 pages



**SPECIFICATION OF KANEMATSU SWIFTPASS 24HP  
DESKTOP LASER ENGRAVER**

- 1. Technical Specification**
- 2. Professional Services**
- 3. Service Maintenance Agreement for the equipment and SDK support**

**1. TECHNICAL SPECIFICATION**

SwiftPass 24HP High Performance laser printer for passport laser engraving system for single face with an automatic loader of 20 passports inserted in a frame (cassettes) and lockable by a key.

- HP High Performance Fiber Class 1 laser system (safety), certified for office installation
- Laser type: fiber laser 20 W 1064 average life > 50.000 hours
- Throughput: 100 Booklets per hour (layout depending)
- Laser engraving of photo, personal data, tactile engraving on the front side of the polycarbonate data page
- Signature image and photo image with 256 shades of grey scale, and 1200 dpi (ICAO specs).
- MLI performed by mirror kit
- Size (mm.): 630x430x550(h)
- Weight: < 50 Kgs.
- Power supply 100-240 VAC 300 VA 50-60 Hz.
- Filter system to filter fumes
- Temperature of premises: 18-30° C, humidity: 45-70 percent not cond.
- Ethernet Connection, Telnet protocol and WEB interface
- 20 trays input hopper, allowing tray insertion during operation, output bin for 20 trays (option)
- 5 Mega Pixels positioning and inspection camera with dedicated software library
- Onboard laser control system, Ethernet LAN and USB

- Status display, graphics LCD colour. Touch screen RGB graphical, user interface, system status, diagnostic
- Graphical laser layout software Handling of common Windows True Type or Unicode Fonts, resolution from 300 to 1200 dpi
- Cross-platform software integration by SDK (embedded)
- The contactless coding module Ethernet RFID KIT ePC-CORE meet the following requirements:
  - Open platform system for the integration of any coding software.
  - Multifunctional coding system for contactless chip cards for 13.56 Mhz transponder
  - Protocols supplied in accordance with ISO 14443 of type A and B, ISO 15693, Mifare, Mifare +
  - Compliance for radio inlet: EN 300 330, EMV EN 301 489
  - Compliance with safety regulations: EN 60950
- The personalization of visual and electronic elements is carried out within a technological process, without using separate steps of the personalization procedure.
- Unique process of integrated circuit and visual personalization, quality verification.
- The verification of the quality of the visual data page before personalization and adjustment of the location of the data (including text and graphics in the MRZ area) depending on the parameters of the document. Preparation of blank forms for the visual and electronic personalization process - to ensure that the quality of the visual page (excluding dirt) and integrated circuit is checked before the personalization.
- The video inspection system perform recognition of the alphanumeric series (OCR capability) as well as reprinted elements on the blank forms and provide inspection of each blank form individually. OCR readability ensure the possibility to transfer the read data and their inclusion in the personalization process.
- The video inspection system is able to read bar codes of type ID and 1D.
- Verification of date after laser engraving.
- The correct personalization of the integrated circuit, with creation of the verification report and presentation of information concerning the operation carried out.
- Secure feature touch laser engraving

- The equipment management software is able to interact with external information systems with the ability to load text and graphic data (pictures and other graphics) for integrated circuit programming.
- Possibility to present the Report concerning the blank forms drawn up with the result's personalization.
- Possibility to adjust the data page, the location of the text data, the holder's photo, the user's interface for creation of the data placement sample on the visual page. Graphic layout editor. Graphical operation interface (GUI) - to ensure easy and intuitive operation.
- Control of the personalization machine, by displaying the degree of the machine's loading in the personalization site, including the possibility of activating and deactivating jobs, etc.
- The software solution contains all the necessary licenses and hardware equipment for proper operation.

## **2. PROFESSIONAL SERVICES**

The equipment is delivered, installed and put into service in the customer's room by the qualified representatives of equipment supplier. The qualified representatives of equipment supplier will create one template for real passport.

The qualified representatives of equipment supplier provide training of customer's employees on site during one working day after installation of the equipment.

## **3. SERVICE MAINTENANCE AGREEMENT FOR THE EQUIPMENT AND SDK SUPPORT**

The warranty covers any manufacturing, mechanical, electronic failure, and labour costs not including wearing parts. Starting from the delivery date of the equipment to customer's room, warranty lasts after 12 months.

Maintenance service of equipment could be granted for the customer for a period of 10 years.

SDK support is provided by the qualified representatives of equipment supplier during European work week, Monday – Friday, 09:00-18:00, 9 hours per day, by Telephone & Web based support.