



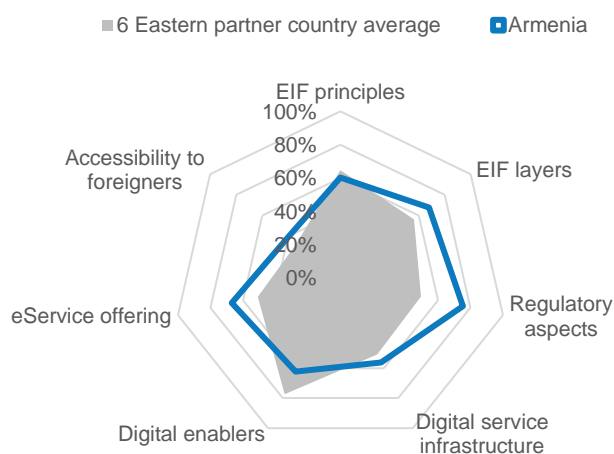
Outline of Cross-border eServices interoperability assessment in Armenia

The eService interoperability across borders is a key element in unlocking the full potential of Digital Single Market to the Eastern partner countries. However, the foreign users accessing eServices across-borders often face blockers. For example, the lack of eServices and related information description in foreign language or certain components necessary to carry out eService might not be adopted to cross-border users (e.g. electronic identification, data exchange with registers, payments) and might require physical interaction with government agencies.

The EU4Digital Facility performed an assessment to capture the state of play and the readiness of Eastern partner countries to enable interoperable eServices across borders. The Eastern partner country readiness for cross-border eServices interoperability was assessed from legal, organisational, semantic and technical aspects. Based on the assessment results, the regional guidelines on the cross-border eServices interoperability were also developed to facilitate a common approach to enabling interoperability between eServices across borders in the Eastern partner countries. These guidelines highlight the importance of common region-wide actions to support and further accelerate the interoperable cross-border eServices development.

The interoperability and harmonisation level of cross-border eServices interoperability in Armenia

The assessment was performed to evaluate the state of play and the readiness to cross-border eServices interoperability. The assessment was based on seven important elements: European interoperability framework principles and layers¹, regulatory aspects, digital service infrastructure, digital enablers, eService offering, and accessibility to foreigners.



- Armenia is leading by the **regulatory aspects** (75% Armenia, 50% EaP average) due to **legal frameworks supporting interoperability**, e.g. requirements on public websites ([Decree no. 1521-U](#)), electronic identification ([Decree no. 192-U](#)), public information system requirements ([Decree No. 1093-U](#)).

- The **EIF layers** (legal, organisational, semantic, and technical interoperability, integrated public service, interoperability governance) score higher than EaP average (68% Armenia, 57% EaP average), due to well-defined **public service governance** and established **semantic interoperability** (e.g. metadata management in Government interoperability platform).

Overall scores for eService offering² in Armenia

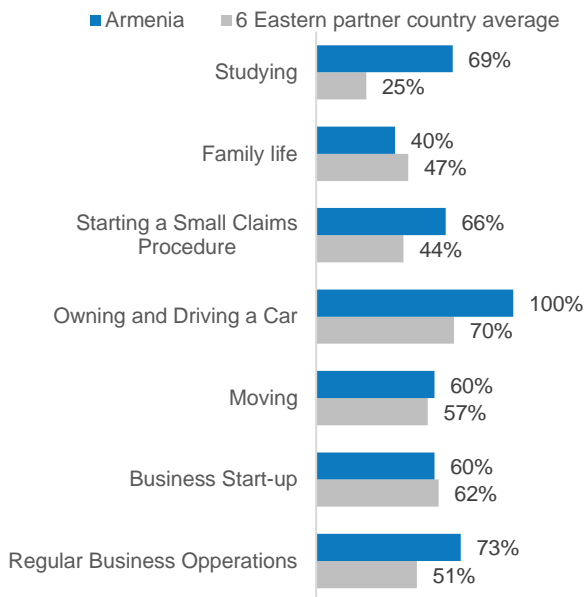
The assessment evaluated the level of eServices online availability in Armenia within seven different life areas. The services were evaluated for businesses (regular business operations, business start-up) and citizens (moving, owning and driving a car, starting a small claims procedure, family life, studying). Evaluation is based on European Commission's eGovernment benchmark study, where the services with the highest online availability level are automated services, which are performed without user intervention and services available online through the related government portal. In cases when the service itself is not available online, it's evaluated whether the information about the service is available online through a portal/outside a portal. The services with the lowest score are available only offline.

¹ European Commission, New European Interoperability Framework, <https://op.europa.eu/en/publication-detail/-/publication/bca40dde-deee-11e7-9749-01aa75ed71a1/language-en>

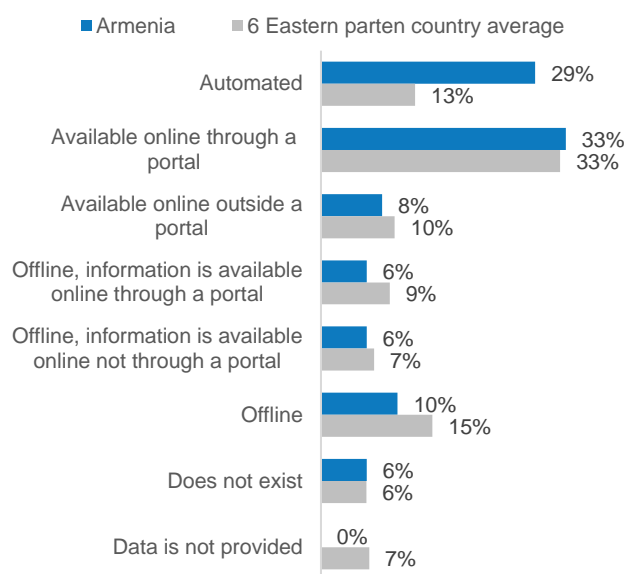
² The value is calculated as a sum of the relative scores by the level of automation of each public service available under such categories. The higher the score, the more digitalized and available online the public service is



Online availability score by priority eServices



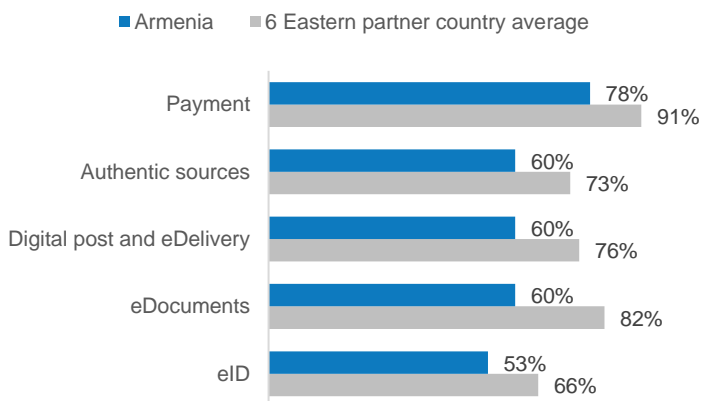
eService offering split by maturity level³



- The **services** assessed are **mostly automated** (29%) or provided **online through a portal** (33%) resulting in moderately high overall score for eService offering. Overall score is 67% in Armenia versus 51% EaP average.
- Armenia is significantly above the EaP average in service areas of **regular business operations, owning and driving a car, as well as studying**. These areas are almost fully automated.
- However, the services within the area of family life score lower than EaP average, because they are only available offline (physical encounters with government authorities needed).

Overall scores for digital enablers in Armenia

The assessment based on a questionnaire evaluated digital enablers supporting different stages of digital service delivery, such as eID, eDocuments, digital post and eDelivery, authentic sources (information pre-filling from registers) and payments.



- Users can authenticate through **eID and Mobile ID**. However, accessing another eService within the same life event (provided by different service provider) without re-authenticating is not possible / possible only to some extent.
- Only some government services allow to **submit documents** online. The eVerify allows users to verify authenticity of **obtained documents**.
- The eNotify is being developed which would allow for **electronic letters** to be delivered and have the same legal standing as paper-based letters.
- Information pre-fill from **authentic sources** (e.g. registers) is possible only for some eServices.
- The **ePayments** portal accepts payment methods such as online banking, credit/debit cards and e-wallets. The system is being modernised.

³ Doesn't exist - the public service does not exist in the country. Data not provided - the data was not provided in the assessment



Strong points

Legal interoperability:

- The interoperability is supported by common public electronic system interoperability requirements ([Decree No. 1093-L](#)) and public website requirements ([Decree no. 1521-L](#)).

Organisational interoperability:

- There is a body responsible for interoperability governance (CJSC EKENG) and ensuring government standard / specification implementation (Digitalisation council).

Technical interoperability:

- The **catalogue of information systems** CatIS has data on information systems (IS), websites, registers, data, and services. It serves as guideline in the decision-making process on the architecture and interoperability when developing new information systems.
- The **government interoperability platform** GIP enables data exchange between state entities. Information systems are developed to enable data sharing through APIs.

Semantic interoperability:

- The management strategy of metadata is standardised. Specific metadata register exists in the GIP.

User-centricity:

- The Citizens feedback portal allows to **provide feedback** on more than 75 public services (e.g. Business register agency, Civil act register agency, Road police, Ministry of foreign affairs). The data received is analysed and used to improve service provision.

Challenges

Legal interoperability:

- No long-term **preservation policy** for records and information in electronic form. Therefore, long-term accessibility of electronic records and information is not sufficiently ensured.
- The legal **interoperability checks** are not performed, therefore formal processes to screen legislations aiming to identify barriers to interoperability are not in place. However, technical interoperability checks are performed to some extent.

Organisational interoperability:

- The commonly accepted business process modelling notations (BPMN, UML, etc.) are not customarily used in national level.

Technical interoperability:

- Some services are **not accessible** across all devices (i.e. in terms of end-user OS compatibility, the eSignature is not supported on Mac OS).
- The **guidelines for digital public service development and management** are not in place, which might hinder unified digital service development across government agencies.
- The **portal fully enabling single point of access to eServices** is still under development and will be based on www.e-gov.am portal. Current version of the www.e-gov.am provides limited number of eServices and directs users to some public information sources and public websites.

Semantic interoperability:

- There are no operational standards on mapping, transcoding and translation activities nor data quality assurance plans for base registries and related master data.

User-centricity:

- The eServices are often provided in Armenian only, which creates language barriers when accessing public services across borders.
- The minimum requirements for official government websites are described, but no provisions define the requirements for the **inclusion and accessibility**.



Conclusions and next steps

Area	Key directions	Outcome
Legal interoperability	<ul style="list-style-type: none"> Perform ‘interoperability checks’ – screen existing legislations to identify interoperability barriers (i.e. sectoral/geographical data restrictions, over-restrictive requirements to use specific delivery modes / technologies, outdated security / data protection needs). Adopt a long-term preservation policy for information related to cross-border eServices to guarantee the long-term preservation of electronic records, and support it by processes for data and information management lifecycle following EU best practices. 	Countries operating under different legal frameworks, policies and strategies work together to deliver interoperable cross-border eServices
Organisational interoperability	<ul style="list-style-type: none"> Align business processes in agreed way and common modelling notations (BPMN, UML, etc.) so that government agencies delivering cross-border eServices can understand overall (end-to-end) business process and their role in it. Formalise organisational relationships as part of service provision (i.e. mutual assistance, joint action, interconnected business processes) in service-level, multilateral or bilateral agreements. 	The responsibilities, business processes and expectations aligned to achieve commonly agreed and mutually beneficial goals
Technical interoperability	<ul style="list-style-type: none"> Use formal technical specifications (open specifications, where available) to ensure technically interoperable cross-border eServices. Develop guidelines for digital public service development and management to ensure unified digital service development across different government agencies. Enable secure and protected cross-border data exchange in public services by using trust services according to the eIDAS Regulation and GDPR technical requirements. Improve accessibility to services by complying to e-accessibility specifications (e.g. AAA or AA in ISO/IEC 40500:2012). 	Cross-border information exchange capabilities built between hardware/software components, systems and platforms
Semantic interoperability	<ul style="list-style-type: none"> Ensure meaningful interpretation of the exchanged data elements by following reference data, in the form of taxonomies, controlled vocabularies, thesauri, code lists and reusable data structures/models which describe data exchanges. Develop operational standards for cross-border data-flows on mapping, transcoding and translation activities. 	Meaningful interpretation of the exchanged data between different government agencies across borders
User-centricity	<ul style="list-style-type: none"> Ensure consistent mechanisms to involve users in analysis, design, assessment and further development of public services. Develop multilingual public services (e.g. with translations performed through a machine translation component or service such as EC Translation Machine). Establish possibilities for users to seamlessly transition from one service to another without re-authenticating. 	Ensured consistent, high-quality user experience for seamless cross-border eServices delivery