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Report No: PAD4651

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

PROJECT APPRAISAL DOCUMENT
ON A
PROPOSED LOAN

IN THE AMOUNT OF
EUR 26.5 MILLION (US$29.9 MILLION EQUIVALENT)

TO THE

REPUBLIC OF ARMENIA

FOR A

FOURTH PUBLIC SECTOR MODERNIZATION PROJECT

February 8, 2022

Governance Global Practice
Europe and Central Asia Region

CURRENCY EQUIVALENTS

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ABBREVIATIONS AND ACRONYMS

AI	Artificial Intelligence
BPR	Business Process Review
CPF	Country Partnership Framework
CSO	Civil Service Office
DA	Designated Account
DV	Domestic Violence
EIRR	Economic Internal Rate of Return
EKENG	E-Governance Infrastructure Implementation Agency
ENPV	Economic Net Present Value
ESCP	Environmental and Social Commitment Plan
EU	European Union
FM	Financial Management
G2B	Government to Business
G2C	Government to Citizens
GoA	Government of Armenia
GBV	Gender-based violence
G-Cloud	Government Cloud
GDP	Gross Domestic Product
GHG	Greenhouse Gas
govID	Government Identification
GRS	Grievance Redress Service
HRMIS	Human Resource Management Information System
IBRD	International Bank for Reconstruction and Development
ICT	Information and Communications Technology
ID	Identification Document
IFR	Interim Financial Reports
IT	Information Technology
M&E	Monitoring and Evaluation
mGov	Mobile Government
MHTI	Ministry of High-Tech Industry
MIS	Management Information System
ML	Machine Learning
MLSA	Ministry of Labor and Social Affairs
MoF	Ministry of Finance
MoI	Ministry of Interior
MoJ	Ministry of Justice
mTax	Mobile Tax Application
NDC	Nationally Determined Contribution
O&M	Operation and Maintenance
PDO	Project Development Objective
PMG	Project Management Group
PMO	Prime Minister's Office
PoC	Proof of Concept
POM	Project Operational Manual
PPSD	Project Procurement Strategy for Development

PSMP	Public Sector Modernization Project
PSRC	Public Sector Reform Commission
SEP	Stakeholder Engagement Plan
SES	Senior Executive Service
SMEs	Small and Medium-Sized Enterprises
SRC	State Revenue Committee
SORT	Systematic Operations Risk-Rating Tool
STEP	Systematic Tracking of Exchanges in Procurement
TAMP	Tax Administration Modernization Project
TOR	Terms of Reference
UN	United Nations
WB	World Bank

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DATASHEET

BASIC INFORMATION

Country(ies)	Project Name	
Armenia	Fourth Public Sector Modernization Project	

Project ID	Financing Instrument	Environmental and Social Risk Classification
P176803	Investment Project Financing	Low

Financing & Implementation Modalities

[ ] Multiphase Programmatic Approach (MPA)	[ ] Contingent Emergency Response Component (CERC)
[ ] Series of Projects (SOP)	[ ] Fragile State(s)
[ ] Performance-Based Conditions (PBCs)	[ ] Small State(s)
[ ] Financial Intermediaries (FI)	[ ] Fragile within a non-fragile Country
[ ] Project-Based Guarantee	[ ] Conflict
[ ] Deferred Drawdown	[ ] Responding to Natural or Man-made Disaster
[ ] Alternate Procurement Arrangements (APA)	[ ] Hands-on Enhanced Implementation Support (HEIS)

Expected Approval Date	Expected Closing Date
03-Mar-2022	31-Mar-2028

Bank/IFC Collaboration
No

Proposed Development Objective(s)

The project development objective is to improve the efficiency of and access to selected public services for businesses and citizens.

Components

Component Name	Cost (US$, millions)
Component 1: Modernization of Public Administration	8.20
Component 2: Digital Service Delivery	16.00
Component 3: Data Management and Digital Infrastructure	4.00
Component 4: Project Management	1.70

Organizations

Borrower:	Republic of Armenia
Implementing Agency:	Prime Minister's Office

PROJECT FINANCING DATA (US$, Millions)

SUMMARY

Total Project Cost	35.90
Total Financing	35.90
of which IBRD/IDA	29.90
Financing Gap	0.00

DETAILS

World Bank Group Financing

International Bank for Reconstruction and Development (IBRD)	29.90
Non-World Bank Group Financing	
Counterpart Funding	6.00
Borrower/Recipient	6.00

Expected Disbursements (in US$, Millions)

WB Fiscal Year	2022	2023	2024	2025	2026	2027	2028
Annual	0.00	3.00	7.00	7.00	7.50	3.00	2.40
Cumulative	0.00	3.00	10.00	17.00	24.50	27.50	29.90

INSTITUTIONAL DATA

Practice Area (Lead)
Governance

Contributing Practice Areas

Climate Change and Disaster Screening
This operation has been screened for short and long-term climate change and disaster risks

SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)

Risk Category	Rating
1. Political and Governance	● Moderate
2. Macroeconomic	● Moderate
3. Sector Strategies and Policies	● Moderate
4. Technical Design of Project or Program	● Moderate
5. Institutional Capacity for Implementation and Sustainability	● Substantial
6. Fiduciary	● Moderate
7. Environment and Social	● Low
8. Stakeholders	● Moderate
9. Other	● Substantial
10. Overall	● Moderate

COMPLIANCE

Policy

Does the project depart from the CPF in content or in other significant respects?

[ ] Yes   [✓] No

Does the project require any waivers of Bank policies?

[ ] Yes   [✓] No

Environmental and Social Standards Relevance Given its Context at the Time of Appraisal

E & S Standards	Relevance
Assessment and Management of Environmental and Social Risks and Impacts	Relevant
Stakeholder Engagement and Information Disclosure	Relevant
Labor and Working Conditions	Relevant
Resource Efficiency and Pollution Prevention and Management	Relevant
Community Health and Safety	Not Currently Relevant
Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	Not Currently Relevant
Biodiversity Conservation and Sustainable Management of Living Natural Resources	Not Currently Relevant
Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities	Not Currently Relevant
Cultural Heritage	Not Currently Relevant
Financial Intermediaries	Not Currently Relevant

NOTE: For further information regarding the World Bank's due diligence assessment of the Project's potential environmental and social risks and impacts, please refer to the Project's Appraisal Environmental and Social Review Summary (ESRS).

Legal Covenants

Sections and Description
Loan Agreement, Schedule 2. Section I. A.3.   Not later than December 31, 2023, the Borrower, through the PMO, shall carry out a survey to measure the current citizen satisfaction on the performance of the selected up to six public services to be digitalized under Part 2.2 of the Project, in a manner acceptable to the Bank.

Conditions

Type	Financing source	Description
Effectiveness	IBRD/IDA	Loan Agreement, Article IV.4.01. (a) The Borrower, through the PSRC, has adopted the Project Operational Manual in accordance with the provisions of Section I.B of Schedule 2 to this Agreement. (b) The Borrower, through the PSRC, has selected up to six public services to be digitalized under Part 2.2 of the Project, and established their respective baseline values, all in a manner acceptable to the Bank.

I. STRATEGIC CONTEXT

A. Country Context

1. **Armenia is an upper middle-income country with a gross domestic product (GDP) per capita (constant 2010 US$) of US$4,364 in 2020.**[1] Following steady economic growth during 2017-2019 (on average 6.8 percent annually), Armenia experienced one of the region's sharpest GDP contractions of 7.4 percent in 2020. Services - trade and the hospitality sector, in particular - were the most affected sectors.

2. **Military conflict and the COVID-19 pandemic had major political, fiscal, and economic implications for Armenia in 2020 and into the first half of 2021.** The escalation of the military conflict in 2020 triggered political tension in the country, forcing the announcement of snap elections on June 20, 2021. At the same time, Armenia has been hit hard by COVID-19.

3. **The COVID-19 pandemic's impact on vulnerable households, which has been severe, was only partially mitigated by the Government's response (about 3.5 percent of GDP, including support through the banking sector to businesses).**[2] The unemployment rate decreased marginally by 0.1 percentage points year over year, reaching 18.2 percent in 2020. Mitigation measures implemented by the Government and the relatively short duration of pandemic-related restrictions prevented a greater increase in the already high rate of unemployment. The poverty rate (measured at the upper-middle-income economy poverty line) increased marginally from 43.9 percent in 2019 to 44.7 percent in 2020.

4. **The Government of Armenia's (GoA) strategy to address these challenges focuses on measures to support the most affected sectors and preserve jobs.** Measures include state financing of the economy using various channels such as the banking sector and state agencies, subsidizing utility payments, and various social payments to households and citizens. These measures pushed the fiscal deficit in 2020 to 5.4 percent of GDP, up from 1 percent in 2019. Stepped up domestic and external borrowing has resulted in public debt rising to 67.4 percent of GDP in 2020, with the Government invoking an escape clause in the fiscal rule allowing it to increase debt during the crisis.

5. **The economy began to recover in 2021 at a faster pace than expected.** The year to end November 2021 data shows that the Economic Activity Index grew by 5.2 percent year over year, supported mostly by rebounded consumption and net export. The GDP growth is projected to recover partially in 2021 and the economy is likely to return to pre-COVID-19 output levels in mid to end of 2022. High post-conflict spending, and ambitious public investment plans will keep the fiscal deficit elevated and the debt-to-GDP ratio above 60 percent in the medium term.

6. **The risks to the outlook are balanced over the medium-term.** The key downside risks are slow progress in COVID-19 vaccinations, waves of COVID-19 cases, geopolitical tensions, and slow economic recovery in main trading partners. On the upside, greater political certainty may enable progress on implementation of structural reforms and faster pace of public investments, which is essential for sustainable growth.

7. **After the snap national election on June 20, 2021, the leading party (with 54 percent of the vote) secured a large parliamentary majority.** The new Government's program aims to fight corruption and improve the business

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[1] World Bank. World Development Indicators. *https://data.worldbank.org/indicator/NY.GDP.PCAP.KD*
[2] The total number of cases as of January 17, 2022 was 347,785 and 8,020 deaths (Source: *https://ncdc.am/coronavirus/*).

environment, as well as make far-reaching changes to the political and judicial systems. As in other post-Soviet transition economies, Armenia's development has often been stalled by the dominance of political elites over businesses. However, Armenia has gained a strong record of tackling corruption in recent years.

8. **The new Government's Development Program for 2021-2026[3] acknowledges the role of digitalization reforms as a key tool for efficient governance, economic development and productivity, and improved service delivery.** It highlights the role of the digitalization of public services in enhancing service quality and helping mitigate corruption risks in the service provision process. Among other initiatives, the Program also spells out the importance of the implementation of the e-identification system, the digitalization of public services at the central and local levels, and, for the diaspora, the introduction of cybersecurity and digitalization standards, and the enhancement of digital literacy of citizens. The Government's new Digitalization Strategy for 2021-2025,[4] elaborates the actions necessary for achievement of the ambitious digitalization goals.

9. **Armenia faces disaster and climate change risks that could impact poverty reduction and economic growth.** Regarding climate change risks, projections suggest that Armenia could experience temperature increases by the 2090s of 4.7°c above the 1986-2005 baseline, significantly above the global average.[5] Expected rises in maximum and minimum temperatures represent major threats to human health, livelihoods, and ecosystems as glaciers disappear, species' range shift, and food production is impacted. Increased drought risk is a particular threat to poorer rural communities dependent on subsistence agriculture, and at the same time poorer rural communities also face increased risk of flood and landslide hazards. Without adaptation and disaster risk reduction, climate changes will exacerbate income and wealth inequalities and hinder attempts to reduce poverty rates.[6] The Project locations country-wide have experienced climate and geophysical hazards in the past and are expected to experience these in the future with higher intensity, frequency, or duration.

10. **In response to the risk that climate change poses to economic recovery, Armenia has adopted a ten year Nationally Determined Contribution (NDC) implementation plan for 2021-2030.[7]** The country's mitigation target by 2030 is 40 percent below 1990 emission levels.[8] Armenia plans to continue growing as a low carbon, modern economy, and to contribute to the long-term global goal of the United Nations (UN) Framework Convention on Climate Change and of the Paris Agreement in line with its capability and capacity.[9] To achieve these goals, Armenia has embarked upon and would require support in implementing an initiative to strengthen its governance structure and systems while mitigating and adapting to climate change.[10]

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[3] Government Development Program for 2021-2026, adopted on August 18, 2021 by Government Decree N1363-A.

[4] Digitalization Strategy for 2021-2025, adopted on February 11, 2021, by Government Decree N183-L.

[5] Climate Risk Country Profile: Armenia, 2021.

[6] World Bank. Macro poverty outlook, April 2021.

[7] Approved by Government Decree N610-L of April 22, 2021.

[8] *NDC Update* Total GHG emissions 1990: 25,855, Gg CO_2eq; Net GHG emissions 1990: 25,118, Gg CO_2eq, (NIR 1990-2017).

[9] Armenia is a land-locked, mountainous country with altitudes ranging from 375 to 4090 meters above sea level and has six climate zones: dry subtropical, semi dessert, steppe, forest, alpine, and cold high mountainous. The climate is rather dry, some regions are arid, with annual precipitation of 592 mm. The highest levels of precipitation are observed in the mountains. The average air temperature has significantly increased compared to the 1961-1990 annual average: the increase was 1.03°C between 1929 and 2012, but 1.23°C between 1929 and 2016.

[10] The World Bank (WB) is initially supporting a series of activities to contribute to NDC implementation through analytical assessment (South Caucasus: Regional Environment and Climate Program (P171738)) and use of available platforms to promote synergies among the activities of all stakeholders.

11. **Sustainable poverty reduction and inclusive growth in Armenia will also be impacted by gender disparities in the country.** Armenia has made progress in recent years in reducing gender disparities[11] and has taken several policy measures to promote gender equality.[12] However, several gaps persist, with a setback from 2020 to 2021.[13] Women's lagging participation in the labor market and entrepreneurship and the gender wage gap result in an economic loss of 14 percent of the country's GDP.[14] Gender-based violence (GBV) is also a critical issue - imposing social and economic costs on the country, society, and survivors[15] – affecting women the most, regardless of their socio-economic background. More than 23 percent of women in Armenia between the ages of 15 and 49 have experienced physical violence.[16] Domestic violence (DV), a widespread form of GBV, is estimated to affect between 14 and 60 percent of women.[17] As GBV affects the survivors' participation in social, economic, and political life, it hinders their empowerment and economic well-being.[18] While Armenia has taken steps to prevent and respond to GBV, including the national law on domestic violence, adopted in 2017,[19] GBV/DV remains a latent and underreported issue.

B. Sectoral and Institutional Context

12. **Establishing an efficient and accountable governance framework to achieve economic growth and sustainable development, is one of the goals of the GoA set forth by the Government's Development Program for 2021-2026.** Current Government initiatives reflect its strong commitment, through comprehensive modernization and digitalization reforms aimed at enabling the public sector to perform its core operations more efficiently, enhance citizen and business centric digital public services, and promote citizen engagement. A strong public sector and productive public services are prerequisites for meeting the country's development objectives and achieving the UN's Sustainable Development Goals. The GoA has prioritized the digital economy as a key pillar of economic growth and GovTech as a critical component of the digital economy. The GovTech is a whole-of-government approach to digital government transformation, that promotes simple, efficient, and transparent government

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[11] On the Gender Inequality Index, Armenia ranked 54th (among 189 countries) in 2020, up from 62nd (among 188 countries) in 2014. Human Development Reports 2015 and 2020: *http://hdr.undp.org/sites/default/files/hdr2020.pdf; http://hdr.undp.org/sites/default/files/2015_human_development_report.pdf*. Armenia ranked 98th (among 153 countries) on the Global Gender Gap Index 2020, up from 105th (among 145 countries) in 2015: The Global Gender Gap Reports 2015 and 2020: https://www3.weforum.org/docs/GGGR2015/cover.pd; *https://www3.weforum.org/docs/WEF_GGGR_2020.pdf*.

[12] For example, the Law on Prevention of Violence within the Family, Protection of Victims of Violence within the Family and Restoration of Peace in the Family (known as the law on domestic violence), adopted in 2017): *https://www.arlis.am/documentview.aspx?docID=118672;*and the Law on Guaranteeing Equal Rights and Opportunities for Women and Men (adopted in 2013): *https://www.ilo.org/dyn/natlex/natlex4.detail?p_lang=en&p_isn=94756*.

[13] Armenia's ranking on the Global Gender Gap Index fell from 98th in 2020 to 114th in 2021: Global Gender Gap Reports 2020 and 2021: *https://www3.weforum.org/docs/WEF_GGGR_2020.pdf;* and *https://www3.weforum.org/docs/WEF_GGGR_2021.pdf*.

[14] World Bank. Armenia Country Gender Assessment. 2016. Available at: *https://documents1.worldbank.org/curated/en/250481491242159715/pdf/113990-WP-P157626-PUBLIC-Armenia-Gender-Assessment-2016.pdf*

[15] It is estimated that GBV costs some countries over 3.5 percent of their GDP and amounts to 2 percent of the global GDP loss. Sources: The World Bank in Gender: *https://www.worldbank.org/en/topic/gender/overview#1*; "Economic Cost of Violence against Women": *https://www.unwomen.org/en/news/stories/2016/9/speech-by-lakshmi-puri-on-economic-costs-of-violence-against-women*

[17] The Statistical Committee of the Republic of Armenia. Women and Men in Armenia 2020. Available at: *https://armstat.am/file/article/gender_2020.pdf*

[17] USAID/Armenia Gender Analysis Report. August 2019. Available at: *https://banyanglobal.com/wp-content/uploads/2019/09/USAID-Armenia-Gender-Analysis-Report-1.pdf*

[18] "The costs and impacts of gender-based violence in developing countries: Methodological considerations and new evidence". Andrew Morrison, Maria Beatriz Orlando. 2005: http://gender.careinternationalwikis.org/_media/morrisonorlandogenderbasedviolence.pdf

[19] The Law on Prevention of Violence within the Family, Protection of Victims of Violence within the Family and Restoration of Peace in the Family: *https://www.arlis.am/documentview.aspx?docID=118672*.

systems and public services**.** The Government's new Digitalization Strategy, which aims for the use of these services by 50 percent of the population and 70 percent of businesses by 2025, sets the foundation for the development and implementation of a GovTech approach. It calls for the public sector to leverage political commitment and contribute to the GoA's digital agenda by working across administrative boundaries, strengthening the digitalization strategy roadmap, and establishing an organizational set-up to deliver faster, better, and more inclusive services to citizens and the private sector. The Judicial and Legal Reforms Strategy for 2019-2023[20] also highlights the significance of having digital solutions in the judiciary in order to eliminate existing paper-based and cumbersome processes and envisages a list of actions aimed at the establishment of an electronic justice system covering all justice institutions. Likewise, the GoA's draft Public Administration Reform Strategy 2030 envisages the establishment of a citizen-centric and accessible state, including municipal, services with modern technology foundations.

13. **The current initiatives represent the next step in the GoA's longstanding commitment and efforts to enhance public sector effectiveness and trust in government through the modernization of its infrastructure and the digitalization of public services and engagement with international development partners on this agenda.** Under the first World Bank (WB) supported Public Sector Modernization Project (PSMP)[21] (2004-2011) and PSMP2[22] (2010-2017) projects, the Government focused on improving efficiency, effectiveness, and performance of public sector management and enhancing the transparency and accountability of public administration, and advanced in areas including the introduction of electronic procurement, and development/upgrading of an electronic document management system, human resource management information system (HRMIS), visa, police and health services.[23,24] Since then, under the ongoing PSMP3[25], the GoA has been working on the implementation of an e-Government portal that will provide online access to around 120 interconnected state digital services, out of a total of around 600.[26] It is also implementing several foundational digital technologies (SmartID, e-Verify, e-Notification, and System for State and Community Services [Public Services, Licenses and Permits]) and a unified system for citizen feedback on public services along with a call center. Together, these advances are expected to significantly strengthen citizen engagement and the accountability of service providers. Likewise, PSMP3 established a more modernized (while still limited in scale) HRMIS for the Civil Service, an e-platform covering an e-competition to enhance the efficiency and transparency of staff recruitment, and a Civil Service training system. In parallel, between 2017 and 2020, the European Union (EU) supported EU4Armenia Project[27] with support for public administration reforms continuing. Additionally, under the WB supported Tax

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[20] Adopted by Government Decree N1441-L of October 10, 2019.

[21] Public Sector Modernization Project (PSMP1, P060786), in amount of US$10.15 million, was approved on May 04, 2004 and closed on February 28, 2011.

[22] Public Sector Modernization Project II (PSMP2, P117384), in amount of US$11.54 million, was approved on March 16, 2010 and closed on January 31, 2017.

[23] Independent Evaluation Group. ICR Review. Public Sector Modernization Project. Report No. ICRR 13785. March 12, 2012. *https://documents1.worldbank.org/curated/en/343421474566229736/pdf/000020051-20140625071111.pdf*

[24] World Bank. Implementation Completion and Results Report (IBRD-78540) on a Loan in the Amount of USD 9.0 to the Republic of Armenia for a Second Public Sector Modernization Project. Report No. ICR00004207. July 28, 2017.
https://documents1.worldbank.org/curated/en/695751509389015868/pdf/ICR-Armenia-P117384-10262017.pdf

[25] Public Sector Modernization Project III (PSMP3) P149913), in amount of US$21 million was approved on September 30, 2015 and is planned to close in November 2022.

[26] Government Decision N1093-N of 2015 established the security, interoperability, and technical standards for electronic systems, and envisaged the establishment of the Government Interoperability Platform, which currently ensures interconnection of 18 state databases and is in the process of expansion to include other databases.

[27] EU4 Armenia: e-Gov Actions, EUR 5.6 million.

Administration Modernization Project[28] (TAMP), simplified procedures for taxpayers were introduced to remove barriers to fulfill their obligations through e-filing and enhanced taxpayer services.[29] The tax project also established a modern risk-based (computerized) audit case management system to improve compliance, and a well-targeted enforcement mechanism.

14. **As a result of its efforts, Armenia's ranking in the UN E-Government Development Index improved by 19 positions in 2020.[30]** However, important challenges remain to be addressed. Earlier digitalization initiatives have mainly covered the existing processes without addressing the need for strong foundational basis and major business process improvements of public sector organizations using a whole-of-government approach critical to achieving efficiency gains and expanding access in the delivery of public services. Below, key access and efficiency challenges are presented, followed by a discussion of the underlying foundational issues contributing to them.

Access Challenges

15. **Accessing many public services in Armenia still requires the physical presence of citizens.** Despite initial progress on digital identification document (also known as national e-ID), including mobile ID, digital authentication is not widespread; citizens often have to navigate through complex bureaucratic processes and physically visit different government offices to access specific services, a time consuming and cumbersome process that further limits access to services by the lowest income groups and vulnerable sectors. This is more apparent in regional and rural areas.

16. **Additional challenges in access are reflected in the low use of existing digital services.** A WB ICT survey[31] found that 96 percent of Armenian households have access to the internet[32] and 83 percent of the population use the internet on an everyday basis but only 5 percent[33] of the citizens and businesses currently uses online government services. Similarly, 94.8 percent of small and medium-sized enterprises (SMEs) have access to the internet, but 55 percent had no online transactions with the public sector except to pay taxes (the main transaction with the public sector for the majority of SMEs). According to the Government's Digitalization Strategy, this is largely due to e-government services lacking user-friendly design, easy accessibility, and mobile adaptability. Digital authentication for government services is not user-friendly, and both e-ID and mobile ID[34] require extra hardware for authentication. To address this challenge, the Government has also launched a new project to develop GovID (Government Identification), a smartphone software solution that, once rolled-out, will help improve access by enabling digital authentication and digital signature with android and iOS smartphones. In addition to these efforts to facilitate digital authentication, structuring accessible digital public services around

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[28] Armenia Tax Administration Modernization Project (P111942), in amount of US$12 million, approved on July 03, 2012, and closed on January 31, 2019.

[29] For example, in 2011, the percentage of total tax filed electronically was 20 percent, by 2021 this reached approximately 98 percent, meeting the levels achieved by most OECD countries in this respect. Taxpayer services have also significantly improved with the establishment of the call center and other internal reforms.

[30] See UN E-Government Survey 2020. The E-Government Development Index includes Online Service Index which has also improved in Armenia – from 0.5625 in 2018 to 0.7 in 2020. The full report is available at https://publicadministration.un.org/egovkb/en-us/Reports/UN-E-Government-Survey-2020

[31] *ICT usage in households and by individuals and in SMEs in Armenia,* World Bank, 2020

[32] However, it is important to note that only 59 percent of households with monthly incomes of less than AMD 100,000 have access to fixed, high-speed broadband internet.

[33] According to EKENG, only 5 percent of population uses online public services.

[34] The currently used e-ID is an ID card which requires an ID-card device to connect to a computer to process a transaction. Mobile ID has very limited coverage. Currently, under PSMP3, a digital/smart ID is being developed and implemented which will be rolled out for access to all digital public services, the tax system, and HRMIS.

citizens' life events–passports, IDs, licenses, permits, starting a business, etc.–will be key to meeting the Government's goal of increasing digital service use.

17. **There are also specific, important access issues related to GBV and the public sector management tools set up to respond to it.** The Ministry of Labor and Social Affairs (MLSA), the government agency leading the gender agenda, operates a "114" general hotline which deals with all social issues under the Ministry's jurisdiction. It also provides delegated GBV/DV services in all regions of the country through support centers, each equipped with a separate hotline, and the Ombudsman's Office and the Police both operate general-purpose hotlines, including for GBV/DV cases.[35] However, the efficacy of these tools is limited by a number of factors related to the latent and underreported nature of GBV/DV, including low levels of public awareness and acknowledgement of GBV;[36] an inadequate level of awareness by GBV survivors of their rights and of the existence of GBV/DV services, especially in remote and small communities; and a high level of social acceptance and justification of GBV.[37] Additionally, there are also challenges associated with current reporting and response mechanisms. The MLSA's general hotline is often overwhelmed, with callers sometimes having to wait on the line before being helped, and some service providers face challenges with ensuring confidentiality. To facilitate access, there is a need for a more effective and streamlined multi-sectoral referral mechanism and a unified protocol for all service-providing structures (including equipping them for citizens with disabilities), as well as a direct, designated nation-wide hotline, and to strengthen the professional capacity of service providers to provide support to beneficiaries. The MLSA is developing a national GBV/DV strategy, the main priorities of which will include legal amendments; improvement of support services and the institutional mechanisms for providing such services; and enhancement of public and beneficiary awareness and capacity building.

Efficiency Challenges

18. **These issues related to access also are associated with important efficiency challenges.** Citizens and businesses must travel long distances to get to public agencies, stand in queues in service centers, or pay several visits to different agencies to collect and submit a wide list of documents (often the same basic documents) to receive basic public services. These cumbersome processes waste time and resources for all users and contribute to clerical errors, irreconcilable data, and siloed data storage within the public sector.

19. **Such challenges are evident, and particularly important in several services that serve a large number of citizens**, including justice services, tax services, customs, and priority life-event related services such as the issuance of driver licenses, vehicle registration and license plates, and services related to passports, visas, migration, and the processing of asylum claims.

   a. **The justice system is overwhelmed with inefficient business processes and paper-based databases**. Manual court processes, a lack of digital interconnection between justice institutions, and the use of postal services for all communications result in massive backlogs in the court system, substantially decreasing its efficiency and ability to deliver justice on time. To tackle these issues, the GoA has

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[35] There are several non-governmental organizations doing advocacy and/or providing GBV/DV support services.

[36] Awareness raising campaigns aimed at combatting domestic violence are carried out by the MLSA in partnership with international development organizations, non-governmental organizations, and other government agencies, however much higher public awareness and acknowledgement of the problem is necessary.

[37] 30 percent of men and 17 percent of women in Armenia's nine regions (Yerevan excluded) justify violence against women, and 45 percent of male and 28 percent of female respondents think that a woman should tolerate violence in order to keep her family together. USAID/Armenia Gender Analysis Report. August 2019: *https://banyanglobal.com/wp-content/uploads/2019/09/USAID-Armenia-Gender-Analysis-Report-1.pdf*

prioritized establishment of a fully digital e-Justice system in the Judicial and Legal Reforms Strategy for 2019-2023.

b. **A tax revenue gap, particularly in income tax productivity and value-added tax collection, remains high with flaws in both tax policy and tax administration**. Higher tax revenue is essential to increase Armenia's public spending, close the gap of public investment in physical and human capital, and generate a higher and a more sustainable growth path. In the last two decades Armenia's tax collection has improved – doubling as a percent of GDP, from 10.8 percent of GDP in 1994 to 22.38 percent in 2019 - due to tax policy reforms and administrative improvements. According to the Medium-Term Expenditure Framework for 2022-2024, it will be possible to further reduce the tax compliance (administration) gap by at least 1.22 percent of GDP in the medium term with new measures to improve the efficiency of revenue mobilization, including digitalization. The state revenue system would benefit from more accessible tax and customs services, including multi-channel self-service applications, upgraded taxpayer tax account system and invoicing system, availability of mobile taxation tools and new software and hardware solutions.

c. **While the implementation of an ICT system in the customs administration allowed for the provision of various electronic services, current services are not operating efficiently, and availability of modern digital solutions based on the improved business processes is a key for reforming the customs.** Trade and services contributed to around 55 percent of GDP in 2020 across economic sectors in Armenia and export rates increased by 23.3 percent in the first six months of 2021. The Government Program envisages further efforts to increase the exports of goods and services, which among others, is expected to be achieved through the modernization of the customs administration and the implementation of new policies directed towards trade openness and trade facilitation.

d. **The existing registers and service processes associated with priority services such as the issuance of driver licenses, vehicle registration and license plates, and services related to passports, visas, migration, and the processing of asylum claims, are either not yet digitalized, or outdated, and non-interoperable.** To address these issues and increase efficiency of those services, the GoA has initiated reforms envisaged under the Police Reform Strategy[38] to establish a Ministry of Interior (MoI) in 2022 with the mandate to deliver a range of priority public services. The reform will move the Migration and Passport Service under the MoI and bring together databases on population, car registrations, drivers' licenses, migration flows, passports, visas, asylum, etc. The efficient and professional operation of the new Ministry will be highly dependent on its technical capacities, triggering a need for development and implementation of a plan for the modernization of relevant databases and services, focusing on digitalization, data protection, and technical capacity building.

Underlying Foundational Challenges

20. **The current access and efficiency challenges are the result of foundational issues associated with data management and underlying ICT infrastructure, and with the public administration more generally.** In spite of the advancements mentioned above in digital government over recent years, efforts to date have lacked a whole-of-government approach. The coverage of digital infrastructure – digital connectivity, e-ID, Mobile-ID, System for State and Community Services (Public Services, Licenses and Permits) disaster recovery data center, digital signatures, digital documents – remains limited. The impacts of these challenges on service delivery are further

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[38] Approved by Government Decision N638-L of 23.04.2020.

compounded by specific needs to enhance the technical skills of public sector staff to support the digitalization process.

21. **Silos (varied and independent technical service solutions) have resulted in fragmented information systems (currently, the catalog of information technology (IT) systems includes around 150 management systems in 34 public agencies), duplication in IT investments, disparate service processing and quality, lost data, difficulties synchronizing information across departments, and a growing burden of technical work to solve problems with information management.** Reforms to date have been more often directed toward improving the efficiency of specific sectoral systems within the Government (a situation which is complicated by limited documentation of current business processes and systems), and existing infrastructure is inconsistent, slow, and dispersed across data centers and desktops, making it prone to spontaneous failures. While a centralized data center and its back-up are in place, they are not systematically synchronized and virtualized. The Government Cloud (G-Cloud) prototype is in place, but neither a systematic assessment or policy on cloud computing exists, and in addition, most agencies have their own server rooms. In terms of security, there is no national cybersecurity strategy or policy, with ICT teams within agencies managing cybersecurity in silos and on an ad-hoc basis. The Government have some staff that monitor and manage cybersecurity attacks, but there is no well-functioning Cybersecurity Emergency Response Team that can manage a cybersecurity emergency response across the Government, prioritize mission-critical infrastructure assets for cybersecurity protection, and identify a response to a cybersecurity emergency. Moreover, agency-specific systems do not share data through interoperability. While a government interoperability platform is in the process of being rolled out, its coverage is still limited for various reasons, including the low quality and lack of completeness of the underlying digital data of various registries, with historical records being mostly still in paper form. Digitalization of public functions and services at the municipal level face additional challenges due to limited technical and financial resources.

22. **Linked to the human resources associated with the reforms, there is a need to support continuing learning, talent management, and an agile culture associated with digital skills and capabilities.** Demand for digital skills in the public and private sectors is high. The GoA is actively seeking talent for the public sector, including basic digital skills, project management, and related soft skills, and while some institutions (such as the State Revenue Committee (SRC), Cadaster Committee, National Center of Educational Technologies, Nork Foundation, E-Governance Infrastructure Implementation Agency (EKENG), etc.) have developed a strong cadre with experienced and qualified digital skills, others lag behind. As such, public administration reforms aimed at implementing a GovTech approach need to provide staff with opportunities to enhance technical skills, accompanied by the development of change management skills to create an agile, technical culture in the public sector.

23. **More generally, the public service system faces issues due to inefficient regulations, an absence of smart policies for human resource management, merit-based recruitment, promotion, and performance evaluation which in turn contribute to delays and a lack of accountability that leads to poor service delivery.** To address these challenges, the GoA through the Civil Service Office (CSO) plans to establish a Senior Executive Service (SES) which will recruit and promote a team of high caliber civil servants to lead key public sector entities.[39] The SES will significantly enhance the decision-making process and thereby achieve the much-needed operational efficiency and lead the efficient organization of service delivery processes.

Government Response to the Challenges

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[39] The establishment of SES was initially envisaged under PSMP3. However, its implementation was postponed by the Government.

24. **Reflecting its commitment to address these issues and improve the efficiency of and access to selected public services for businesses and citizens, the Government Program and Digitalization Strategy identifies several critical areas for further improvement.** In particular, the GoA plans to simplify complex administrative mechanisms with service portals; modernize business processes; increase transparency and access to service information; and accelerate innovation with continuous integration of learning and development processes. The plan also intends to develop more effective GovTech infrastructure with standards of interoperability that ensure inter-agency data exchange without compromising flexibility of systems design; and to enhance cybersecurity to protect mission critical systems and private information from exploitation. Mobile government services are also highlighted as an emerging priority, aimed at increasing access to digital services by the poor, alter-abled, and marginalized members of society. Likewise, adopting advanced technologies like cloud computing and artificial intelligence (AI) are identified as high priority areas for improving the quality of service and increasing capabilities of government bureaucracy. Overall, these improvements will benefit the Armenian population by offering enhanced accessibility, convenience, and serviceability, while reducing total costs of ownership for the GoA in the long term.

25. **To support the digitalization program, the GoA has developed the associated institutional and policy framework and taken steps to ensure coordination and institutionalization of all digitalization efforts following a whole-of-government approach.** These steps include the establishment of the Digitalization Board chaired by the Prime Minister, and establishment and strengthening of the Ministry of High-Tech Industry (MHTI) and the state-owned EKENG, with the latter being the central agency under the Prime Minister's Office (PMO) to coordinate work at the operational level, including implementation and maintenance of digital public services. Located at the center of government, EKENG has a broad enough mandate to develop and support a comprehensive program. The MHTI is responsible for ICT policy in infrastructure, including broadband, cybersecurity, government central data center/G-Cloud, and digital skills and capacity. Line ministries implement sector-specific digital initiatives.

26. **The proposed Project (PSMP4) builds on the gains of the previous three WB-supported PSMPs by promoting the GovTech "whole of government" approach to modernization of public sector functions and services in Armenia, with the application of technology for more efficient and accessible government services.** Leveraging past advances, the proposed Project aims to support a national and substantial broadening of efficiency gains in the provision of key public services, providing further support to the sectors covered under PSMP3, as well as engage in new areas that the Government has identified to be in need of urgent reforms (detailed linkages between previous engagements and PSMP4 is provided in Table 1). The "whole-of-government" approach will ensure the availability of an integrated digital government platform, single entry of data, interoperability of all government portals and systems, and a harmonized approach to digitalization across the whole government. This involves significant business process reviews and simplification of core government functions and services, placing citizens and businesses at the center of systematic digital reforms.

Table 1. PSMP4 linkages to PSMP3, TAMP, and other Bank operations

PSMP3 and TAMP activities	PSMP4 activities	Expanded/ discontinued/ new
Component 1: Modernization of the public administration		
Not available (N/A)	Establishment of a SES	New
HRMIS with several modules developed (*civil service information platform is developed*)	Business process review of human resource management processes: enhance the HRMIS, including the modules/functions related to the SES	Expanded
Initial support to build capacity of CSO (*CSO training organized*)	Modernization of the CSO	Expanded
Limited digitization of archives to support digital service delivery (*e.g. online verification of documents*)	Digitization of National Archive documents and business processes: establish a comprehensive digital archive.	Expanded
e-criminal Case management implementation (*Faster transmission of information/messages relevant for the pre-trial proceedings between prosecutors' offices in different regions*)	Digitalization of each phase of the criminal justice process and procedures. Integration of e-criminal cases to e-Systems on court procedures and sanctions and ensuring the interoperability of all those systems (including with e-court system integration)	Expanded
Police operational management system software implementation. (*Reduced time for police dispatch in emergency situations*)	Support to modernization of the MoI systems including management and integration of its large databases	Expanded
Support to consolidation of government financial statements	N/A	Discontinued
Component 2: Digital Service Delivery		
Improvement of the digital infrastructure of the SRC (TAMP), development of the mobile tax (mTax) business processes and system requirements specification (Quality Investment Infrastructure funding), improvement of customs administration and redesign of the key business processes (Good Governance Fund financing) (*Reduced time and higher efficiency in receiving tax and customs services*)	Central government digital public service delivery of the tax and customs administration systems, including implementation of mTax, business process reengineering, and digitalization of customs processes	Expanded
Central government digital public service delivery (around 120 services, out of total 600), *with resulting increased access to and reduced average time for processing public services, including through availability of e-consular services, e-verify, e-cabinet, e-notify, etc.*	Central government digital public service delivery (extending further services, as there are more than 400 still to be digitalized following PSMP3)	Expanded
N/A	Establishment of a direct hotline designated for handling GBV/DV-related calls.	New
N/A	Local government digital public service delivery: digitalization of a number of local public services, and upgrade of computers and other hardware	New
Component 3: Data management and digital infrastructure		
Procurement of servers for G-Cloud (*Server center upgraded*)	Hybrid cloud – technical assistance to enhance the efficiency and security of digital infrastructure	Expanded
Limited procurement to improve cybersecurity	Cybersecurity: technical assistance to improve the resilience to cyber threats of the Government's digital infrastructure and assets	Expanded
Dashboard and limited data analytics (*Statistics Dashboard implemented*)	Technical assistance on Data science, machine learning (ML), and Artificial Intelligence (AI) in GovTech: generation and use of data for decision making and service delivery	Expanded

C. Relevance to Higher Level Objectives

27. **The Project is highly relevant to the GoA's Development Strategy 2021-2026 and the 2021 Economic Response Plan on Recovery.** PSMP4 will support the Development Strategy goals of modernizing public services and the HRMIS and reforming public service provision mechanisms, thereby contributing to technology-intensive business initiatives. Activities included under the Project are among those outlined as high priority actions in the GOA's Development Strategy.

28. **The Project is consistent with the World Bank Group Country Partnership Framework (CPF) for the Republic of Armenia for the period FY19–FY23 (Report No. 123902-AM, discussed by the Executive Directors on March 28, 2019),** specifically relating to Focus Area 1- Export enablers and firm competitiveness and Objective 4 - Improved public spending efficiency and increased private financing for development. CPF Annex 5, "Can Armenia Leverage Digital Opportunities?" highlights the importance of the smart use of ICT infrastructure for boosting the economy. PSMP4 addresses Objective 4 and Focus Area 1 by supporting the use of digital solutions for public sector service delivery to citizens and businesses, strengthening management of data and digital infrastructure, modernizing the civil service, reducing regional service delivery gaps, and enhancing revenue collection.

29. **PSMP4 will contribute to the achievement of the twin goals of enhancing shared prosperity and reducing poverty by improving governance, public sector performance, and citizens' ease of access to public services**. A wide range of government services with significant roles in building a productive economy will be modernized. Businesses and citizens may leverage digital tools to promote integration and connectivity and enhance productivity. Modernization of the public administration and efficient delivery of public services can improve equality of opportunities. Innovative business processes will promote resource efficiency and higher productivity across the full array of public services. Equal access to and timely delivery of services will contribute to inclusive development. A more effective public sector capable of delivering more efficient and accessible services to individuals and private enterprises will foster inclusive economic growth and reduce inequalities.

30. **The Project is also aligned with the World Bank Group COVID-19 Crisis Response Approach Paper Pillar 4 - Strengthening Policies, Institutions and Investments for Rebuilding Better.** PSMP4 will help the Government to implement a more resilient, inclusive, and sustainable recovery through more efficient and accessible public services using e-governance and mGov (mobile government) approaches and strengthened institutional capacities.

II. PROJECT DESCRIPTION

A. Project Development Objective

PDO Statement

31. The Project Development Objective (PDO) is to improve the efficiency of and access to selected public services for businesses and citizens.

PDO Level Indicators

32. The PDO Level Indicators are:

Two indicators will measure "Improved efficiency of selected public services":

a) Decrease in time to obtain selected central government and local level services (target: 50 percent improvement).

b) Increase in citizen satisfaction with selected public services disaggregated by gender (target 20 percent increase from baseline).

One indicator will measure "Improved access to selected public services":

c) Increased use of selected digital public services, disaggregated by gender (target 25 percent of service users from a baseline of 5 percent).

33. The Project will be funded by an IBRD loan of EUR 26.5 million (US$29.9 million equivalent) and a GoA contribution of EUR 5.3 million (US$6 million equivalent). The GoA contribution will only fund taxes.

34. The Project is intended to support the GoA's approach to public sector modernization through four components anchored in the key elements of public administration, data management, and digital service delivery systems. Section D presents the Project's Theory of Change. It underscores the foundational ICT elements like cloud computing, cybersecurity, and interoperability and the Project will support technical assistance activities on ICT-related foundational elements under Component 3.

B. Project Components

35. **PSMP4 will focus on core reforms related to the operation of the public sector which have the potential for significant impact on the efficiency of and access to selected public services for businesses and citizens, benefitting both the public administration and the general public.** The areas to be supported are significant for promoting innovation and competitiveness and have the potential to create substantial positive externalities by supporting more equal access to important GovTech initiatives and facilitating access to services provided by the public sector.

36. **The Project follows the GovTech approach and has three technical components and a project management component**. The GovTech concept encompasses the development of a dynamic system of infrastructure with a technological platform for a gradual expansion of service digitalization, delivery, and deployment to a wide range of citizens throughout the country. Such a system allows for growth through the standardization of commodity technologies, including hardware, software, and personnel. Component 1 will focus on modernizing the public administration, providing an essential underpinning of improved management capacity which will anchor the reforms to be introduced under the Project and the larger development agenda of the GoA. Component 2 will support enhanced digital service delivery by central and local governments to citizens and businesses to increase access, expand service offerings, and provide more efficient user experience for the target beneficiaries. Component 3 will support the underlying technological foundations needed for the successful implementation of Components 1 and 2, by improving and strengthening data governance/management, cloud computing, cybersecurity, and AI. Component 4 will support project management to ensure timely and successful implementation. Together, the three technical components encompass an integrated change set that resolves outstanding issues of accessibility and efficiency and promotes ongoing innovation within a broadly interoperable GovTech infrastructure. All components of the Project will finance goods (primarily IT software and hardware) and management information systems (MIS), technical assistance/advisory services (i.e., hiring of consultants), training and workshops, and operating costs. A more detailed description of the Project components and sub-components is available in Annex 2.

Component 1: Modernization of the public administration (US$8.2 million)

37. **The objective of this component is to improve the overall efficiency of public administration.** The component
will support improving the productivity of the CSO, public service administration, the Ministry of Justice (MoJ),
and the newly established MoI, including the efficiency and accessibility of respective services. The component
will have three sub-components that are focused on improving the internal efficiency of the public
administration. Specifically, sub-component 1.1 on the civil service is expected to increase the efficiency of public
administration. Sub-component 1.2 and sub-component 1.3 are focused on improving internal capacities to
increase the efficiency and accessibility of citizen service delivery in the justice and police sectors respectively.

38. The specific activities to be financed by the Project are:

    1.1.   Improve the efficiency of the civil service administration through:
        a.   development and implementation of a model of a senior executive service based on
            international best practices;
        b.   enhancement of the Borrower's human resource management information system and
            processes; and,
        c.   modernization of the civil service office through promoting leadership and data-driven
            decision making.

    1.2.   Improve the efficiency and compliance of justice services and judicial processes through:
        a.   digitization of documents and business processes, through establishing an electronic
            archive and supporting digitizing key services;
        b.   digitalization and integration of select justice services and judicial processes and
            procedures ensuring interoperability between systems.

    1.3.   Support the modernization of systems of the new Ministry of Interior, through:
        a.   acquisition of software and hardware based on a review of the capacities and systems of
            the Police of the Republic of Armenia; and
        b.   digitalization and modernization of internal operations and capacity building, including
            development and implementation of a plan for the modernization of databases and
            services.

Component 2: Digital service delivery (US$16 million)

39. **Component 2 will support enhanced digital service delivery by central and local governments to citizens and
businesses to increase access, expand service offerings, and provide more efficient user experience for the
target beneficiaries.** This component focuses on improvements of frontline service delivery which is core to the
achievement of the PDO. Digitalization of selected services will be undertaken mainly after the completion of
business process reviews, including re-engineering of business processes. This component will also promote the
development of a common data structure to ensure interoperability of the various public service delivery systems
and channels in the long-term. On tax and customs, the Project will focus on improving service delivery
mechanisms to all taxpayers and customs clients which will help facilitate more efficient and easier access to
services, which is expected to translate into a more satisfactory experience with the tax and customs
administration. Likewise, the component will support digitalization of selected services by central agencies,
including the establishment of systems to make GBV support systems more efficient, accessible and responsive
to GBV victims/survivors. Prioritization of digital services will be based on impact (e.g., targets a large number of

potential service users/beneficiaries) and readiness (e.g., agencies with existing back-end digital systems, leadership commitment to improved business processes, interoperable data, etc.) The detailed criteria for specific services will be defined in the Project Operational Manual (POM). The Project will also explore opportunities for supporting local governments to build or enhance their capacities to deliver public services in their purview using digital approaches and in alignment with central agencies. Due to capacity limitations of local governments, this support will be implemented on a pilot basis. In terms of results, sub-component 2.1 is expected to achieve more integrated and efficient tax administration systems, and enhance the availability, efficiency, and use of citizen-friendly mTax services. Sub-component 2.2 and sub-component 2.3 are expected to increase the availability, efficiency, and use of digital public services and reduce the time and costs of r service provision at the central and local levels of government.

40. The specific activities to be financed by the Project are:

2.1. Modernization of the tax and customs administration systems aimed at improving the efficiency of revenue mobilization through:
   a. enhancing and upgrading of a web-based taxpayer tax account system;
   b. implementation of accessible tax services through multi-channel self-service applications;
   c. upgrading of the e-invoicing system to a web-based version using modern information technology architecture, including the development of progressive web applications for desktop, tablet and mobile phone environments that enable self-service;
   d. upgrading the tax self-declaration system by engineering a mobile application; and
   e. digitalizing and modernizing the existing software and hardware computing systems.

2.2. Strengthening of central government service delivery through:
   a. digitalization of selected public services in the central government, including:
      1. re-engineering of databases and reviewing of policies, regulations and business processes to promote long-term interoperability of data based on a common data document-based structure;
      2. roll-out of a coherent concept of national digital identity;
      3. enhancement of data processing and computational infrastructure;
      4. development of progressive web applications for multi-channel mobile and desktop service delivery;
   b. strengthening of the Ministry of Labor and Social Affairs' capacity to respond to GBV/DV, through establishment of a hotline designated for handling GBV/DV-related calls, capacity building and training for staff, and carrying out a communications campaign.

2.3. Support of local governments through the piloting of activities related to re-engineering databases, data infrastructure and computing systems aimed at aligning business processes with central government agencies' business processes and digitalization of local public services, including:
   a. development of progressive web applications for multi-channels;
   b. implementation of modern digital infrastructure technologies, including the design of an early warning system to gather data enabling timely alerts of climate-related disasters and disseminate such information within municipalities; and
   c. digitalization of selected local public services including business progress review of back-office processes with a mobile government approach to public service delivery.

Component 3: Data management and digital infrastructure (US$4 million)

41. **Component 3 will support the underlying technological foundations needed for the successful implementation of Components 1 and 2, by improving and strengthening data governance/management, cloud computing, cybersecurity, and AI.** Support will primarily be in the form of technical assistance and not the implementation of the identified technological enablers. Sub-component 3.1 will focus on informing a policy and an action plan for a hybrid cloud. Sub-component 3.2 will focus on improving the GoA's resilience to cybersecurity threats. Sub-component 3.3 promotes utilizing the benefits on AI. Specifically, this component will contribute to the increased use of cloud computing, strengthened cybersecurity for select systems, increased use of AI for cybersecurity, and improved service delivery and analytics.

42. The specific activities to be financed by the Project are:

   3.1. Enhance the efficiency and security of digital infrastructure through:
   a. preparation of a cloud readiness assessment and roadmap to inform policy on a hybrid cloud;
   b. preparation of a data classification report to guide the policy on hosting government data on the Borrower's cloud and the public cloud;
   c. development of a cloud assessment framework to screen, authorize and license cloud service providers suitable for hosting government data; and
   d. technical assistance on the establishment of a disaster and climate change resilient data recovery center and backup sites.

   3.2. Improve the resilience to cyber threats of the Borrower's digital infrastructure and assets through:
   a. carrying out of a cybersecurity assessment of existing hardware and software in selected areas;
   b. preparation of an institutional assessment of cybersecurity functions' coordination within the Borrower's agencies and institutions;
   c. organization of knowledge exchanges on cybersecurity arrangements;
   d. technical assistance on strengthening data infrastructure, threat management and cybersecurity.

   3.3. Improve the application of data science, machine learning and artificial intelligence in GovTech through:
   a. technical assistance on the development of an integrated data fabric architecture concept for the whole-of-government approach to artificial intelligence;
   b. technical assistance on piloting artificial intelligence concepts in selected areas; and
   c. capacity building on artificial intelligence, including iterative innovation, research and development.

Component 4: Project management (US$1.7 million)

43. Component 4 will support project management to ensure timely and successful implementation. The specific activities to be financed by the Project including but not limited to the provision of administrative support to the Project Management Group (PMG) in relation to Project implementation, such as procurement, financial management, monitoring and evaluation, capacity building, Project management, coordination, and development of institutional capacity and absorption of the Project-supported reforms.
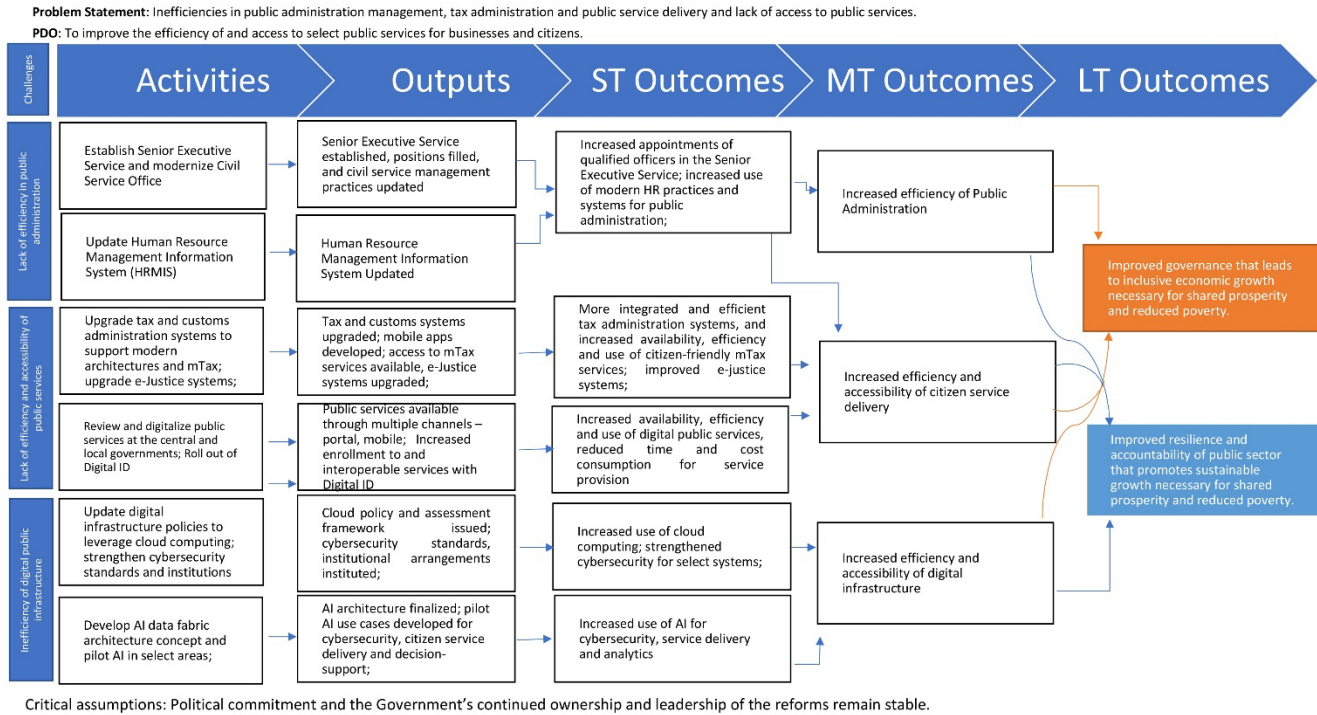
C. Project Beneficiaries

44. **Citizens and businesses will be the primary direct beneficiaries of this Project.** Implementation of the Project will allow businesses and citizens to have broader access to more efficient public services, benefiting from time and resource efficient, smart, and secure processes. Digital access to streamlined processes will provide a more fertile environment for business operation, competitiveness, and market growth. The availability of a productive public service system will help improve citizens' trust towards the public administration, encouraging more active social and economic initiatives. In addition, the modernization of the public administration and core systems in the identified areas, development of digital service delivery capacities at the central and local levels, and widespread improvements of data management and digital infrastructure will improve the efficiency of the whole government, resulting in better service delivery for society.

45. **The secondary group of beneficiaries are public entities,** including PMO, CSO, MoJ, SRC, MOI, MHTI, Ministry of Territorial Administration and Infrastructure, MLSA, selected public service providers at the central level, and the pilot municipalities. The Civil Service reforms implemented in the scope of Component 1 will level up the quality and productivity of the civil service, bringing benefits across the Government, including to the state institutions operating with the civil service, and civil servants themselves. Implementation of e-justice and e-criminal court in the scope of the same component will facilitate justice service processes, supporting the operations of the judiciary, MoJ, and prosecution services and benefitting all participants in the justice system through speedier, more consistent processes. MOI will be supported in operationalizing its mandate as a new institution. Component 2 will support the modernization of the tax and customs administration, resulting in more efficient and effective operation by the SRC Public entities that provide the selected public services supported by the Project will benefit from more efficient business processes. Local governments, who will be part of the pilots, will also benefit significantly from the digitalization and capacity building activities. Component 3 will ensure availability of better cybersecurity, data management policy, and key AI and ML tools, thus raising the quality of services provided by EKENG and by MHTI. Strengthened data governance, cloud computing, cybersecurity, and AI will feed the digitalization strategy developed by the MHTI.

D. Results Chain

Figure 1. Theory of Change

Problem Statement: Inefficiencies in public administration management, tax administration and public service delivery and lack of access to public services.
PDO: To improve the efficiency of and access to select public services for businesses and citizens.

Critical assumptions: Political commitment and the Government's continued ownership and leadership of the reforms remain stable.

E. Rationale for Bank Involvement and Role of Partners

46. **The WB's support to the GoA under the proposed Project builds upon more than a decade of assistance to the Government's public sector and digital government reforms** (including under the previous PSMP1 and 2, TAMP, and the ongoing PSMP3 operation). During this period, the WB has been the GoA's key development partner in the modernization and digitalization of the public administration, and it was the first organization in Armenia to adjust its program and support efficient COVID-19 responses. The experience gained, together with the Bank's global knowledge base and its leadership in "whole-of-government" approaches, make the WB a key development partner in the area of GovTech, and help to ensure that the support through PSMP4 complements the GoA's other ongoing reform activities and is well-suited to the country's needs. The WB's ability to convene expertise from other countries with advanced GovTech agendas, including in domestic revenue mobilization, will also be important for this operation, ensuring access to the latest information on good practices and the potential for their incorporation in Project activities.

47. **The EU is an active partner in supporting Governance reforms.** The EU is supporting the Government's digitalization reforms though EU4Armenia and EU4Digital. Those include regional initiatives to promote key areas of the digital economy and society (Telecom Rules, Trust and Security, eTrade, ICT Innovation, eHealth, and eSkills), and implementation of universal e-Justice system.

F. Lessons Learned and Reflected in the Project Design

48. Lessons learned from e-Government projects[40] in different WB-financed operations in Armenia and elsewhere have been incorporated in the Project design. Key lessons relevant to the Project are summarized below:

    - *Leadership, policies, and institutions are critical enablers to achieve optimal outcomes from digital investments.* Recognizing this (and the risks posed by frequent changes in key counterparts), their institutionalization has been significantly factored into the design of this operation. Key elements supportive of the Project's implementation include: The Prime Minister has established and chairs a Digitalization Board, with the participation of both Deputy Prime Ministers, to ensure institutional coordination of digitalization processes at both the central and municipal levels. The Board's high-level involvement facilitates the efficient coordination of digitalization. In addition, the Public Sector Reform Commission (PSRC), which has been in charge of oversight of PSMP1-3 projects, proved to be significant in engaging all the key stakeholders and coordinating project activities. The GoA has also established an institutional coordination mechanism, EKENG, as the central agency under the PMO to oversee implementation of the digital agenda and has adopted several information and data-related laws – for example, the Law on Identification Cards (2011) and the Law on Personal Data Protection (2015) which provide the basis for Project activities. EKENG's position close to the center of government is important for project design, ensuring that the investment is being undertaken by an entity with a sufficiently broad mandate to develop and support such a comprehensive program.

    - *Experience from other countries demonstrates that the availability of a professional Digital Reform support group with capacity and authority (e.g. PMG) is a key factor for success.* In Armenia, the PMG has been involved in the implementation of public sector modernization reforms since the launch of PSMP1. It has significant experience in and a deep knowledge of the complex features of the project implementation process, and efficiently coordinates cooperation with counterparts as a central management team and will continue to play a key role within the proposed Project.

    - *A tendency to not conduct business process reviews (BPR) in the implementation stage of previous projects has limited the potential positive effects of activities*. The need for BPRs is now specified in the Government's strategic documents and derives from the relevant policies. The proposed Project design leverages this commitment in order to ensure that the BPRs are duly implemented before digitalization.

    - *Formalized division of work between donors supporting GovTech reform, including the Bank and EU, is crucial to avoid possible overlapping activities and ensure harmonized, sustainable support.* The Digitalization Board and team in the PMO, as well as close coordination with the EU and other donors, helps to overcome this challenge.

    - *Digital ID and interoperability are the foundations of digital services.* Digital systems have little benefit if they are not readily accessible to users or have poor interoperability. The Project will leverage key digital ID investments which Armenia has already developed, including two digital identification solutions based on National ID cards (electronic national ID card) and mobile phones with uSIM cards (mobile ID). It will also build upon a new solution for smartphones (GovID), which is planned to be implemented from the beginning of 2022 and the XRoad interoperability solution which has already been procured through EU funding and is being implemented. Access to open data provides opportunities for it to be used in innovative ways beyond government and will further promote transparency and enhance public sector integrity.

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[40] PSMP1-3, TAMP.

- *Uptake of digital services is high when the design is user-centric.* Promotion of end-to-end integrated services, based on business process review, is already being adopted under PSMP3 and will be continued under the new operation.
- *To ensure the achievement of tangible results and deepen support for the broader reform, prioritization of digital services should be based on impact and readiness.* Under the Project, services that touch the lives of the greatest number of citizens – for example, COVID-19 related services – will be prioritized subject to confirmation of their readiness.
- *Mobile-based digital services are pro-poor, as they improve accessibility.* Based on the lessons learned from EU countries on digital service take-up, a major focus of the Project will be on promoting mobile services, since 72 percent of total population (or 78 percent of internet users in the last 3 months) use mobile devices to access the internet.

III. IMPLEMENTATION ARRANGEMENTS

A. Institutional and Implementation Arrangements

49. The institutional and implementation arrangements for the Project will largely remain the same as those for PSMP3.

50. The Project will be implemented under the leadership of the PSRC, which has been in place since PSMP1 and will continue to serve as the Project's management board or steering committee. The PSRC will be responsible for ensuring satisfactory implementation of the overall project and achievement of the PDO. The PSRC will be headed by the Deputy Prime Minister or Chief of Prime Minister's Staff who is also the Project Director. PSRC members include senior officials from the Prime Minister's and Deputy Prime Minister's Offices, different ministries directly involved in the Project, and the Project Manager. The PSRC will provide political support and strategic guidance for project activities; approve important financial management (FM) and procurement documents; ensure that adequate provisions for the Project are made in the national budget; resolve inter-agency coordination issues; and assist in building support for and overcoming resistance to reforms. Any changes to the Project governance arrangements required during Project implementation will be reflected in the POM.

51. Day-to-day project implementation will be carried out by a small PMG headed by a Project Manager, who will report to the Project Director. The PMO, with the support of PMG will be responsible for: 1) technical and administrative support for project implementation, 2) FM, 2) procurement, 3) compliance with environmental and social safeguards requirements, 4) monitoring and evaluation (M&E), 5) support/guidance on development of technical requirements and specifications for procurement documents based on inputs provided by the Project's stakeholders, and 6) advisory services to agencies that implement project activities. EKENG will be in charge of supporting the PMG and beneficiary entities in shaping the terms of reference (TOR) and specifications for all ICT related procurement (hardware, software, systems). EKENG will also support/advise in the acceptance of all the deliverables under ICT contracts. In many cases EKENG will also act as a member of bid evaluation committees.

52. The Project Manager will be selected by the PSRC and will be financed by the Project. The PMO will provide office space for the PMG, and upon necessity the Project will cover its operational costs. PMG staff will be composed of consultants hired to work full-time or part-time on the Project's implementation. Aside from the

Project Manager, the current staff under PSMP3 include a procurement specialist, and part-time FM specialist and accountant. An additional procurement specialist and an additional ITC specialist position will be added for PSMP4.

53. A number of specialized agencies will participate in project implementation as clients/beneficiaries. Their roles will be to provide technical requirements and specifications for the systems or other activities to be financed through the Project, to review consultant and vendor outputs, to organize acceptance testing of IT software and hardware, and to utilize the project outputs that correspond to them. These entities will not directly manage project funds, with FM and procurement functions being carried out by the PMG. However, they will be accountable for the expected results of their respective activities to ensure ownership of the goals of the reforms beyond getting their activities funded.

54. A Project Operational Manual will be prepared for the project to clarify responsibilities and accountabilities and its adoption by the PSRC is a condition for effectiveness.

B. Results Monitoring and Evaluation Arrangement

55. The PMG will be responsible for overall monitoring of the Project. The PMG will hire a M&E consultant, who will prepare annual reports to be shared with the PSRC and the WB by March 1st of each year. The M&E reports will be developed based on the Project results framework. The reports will include information on the progress of Project implementation, analysis of new Project activities to be launched in the current year, and disbursement projections. The template of the report will be proposed by the WB. The PSRC will hold each of the concerned beneficiaries accountable for their respective implementation status and achieved results as reported during the M&E activities and, as necessary, require them to identify proposed corrective actions.

56. For purposes of reporting on the indicators referring to selected services, the PSRC will identify up to six public services to be digitalized under Component 2.2 of the Project and their baseline values as a condition for effectiveness. On the other hand, the PMO will carry out a survey to measure the current citizen satisfaction on the performance of the selected up to six public services to be digitalized under Component 2.2 no later than December 31, 2023 to set the baseline for citizen satisfaction.

C. Sustainability

57. The Borrower's ownership of the Project is evident from the GoA's commitment to public administration reforms and GovTech as established in the recent policy and strategy documents and communicated clearly by the highest-level government officials, as well as the successful implementation of PSMP3. PSMP4 is rooted in the Government Development Strategy of 2021-2026 and sectoral strategies, including the Digitalization Strategy, Judicial and Legal Reforms Strategy, draft Public Administration Strategy, and other high-level documents. Specifically, the new Government Development Strategy refers to digitalization of services and modernization of public service as priority areas. The new GoA administration team has reconfirmed the priority of the activities planned under PSMP4, through the Digitalization Strategy, draft Public Administration Reform Strategy, and the Development Program, demonstrating the continuing prioritization of the Project's objectives. These strategies have channeled the demand coming from citizens and businesses, which are pushing the Government to ensure more efficient public services, as well as from the Government's ambition to remain aligned with the global trends in digital transformation. The Project is designed to support the review and re-engineering of a wide range of public services, including business processes, which will ensure long term efficiency of digitalization efforts.

IV. PROJECT APPRAISAL SUMMARY

A. Technical, Economic and Financial Analysis (if applicable)

Technical Analysis

58. The Project is designed as a GovTech project. The GovTech concept encompasses the development of a living system of infrastructure that supports long-term growth with a technological platform for service digitalization, delivery, and deployment to a wide range of citizens throughout the country. A living system allows for such growth through standardization of commodity technologies, including hardware, software, and personnel. GovTech is a whole-of-government approach to public sector modernization using digital platforms and leveraging technologies to improve public services and contribute to increased efficiency, effectiveness, transparency, and accountability.[41] Overall, improvements and additions to existing services and infrastructure will provide several core benefits: 1) better access to government services for marginalized and disadvantaged citizens using progressive web standards and service delivery technologies; 2) a more cost effective, economical, and efficient infrastructure for provisioning and improving services and computing infrastructure over the long run; 3) interoperable data collection, storage, infrastructure, and access control to allow for larger information pooling, digitization of paper records, and higher security standards; and 4) better analytical, academic, and commercial insights leading to a more appropriate response to patterns revealed by the implementation and application of ML, data science, and AI. By adopting the technologies that enable the preceding outcomes, the Project can contribute to reducing corruption, improve fiscal and financial stability, and create a repeatable model for the ongoing expansion of government services to the Armenian population in the long run, thereby increasing the overall participation and demand for government services that benefit the citizens of Armenia.

59. The Project has been designed taking into account the reform options recommended by the WB's recent GovTech snapshot assessment[42] which aimed to strengthen Armenia's whole-of-government approach to GovTech. The assessment's recommendations were structured around four main components: (i) a whole-of-government GovTech framework; (ii) disruptive technologies and data governance; (iii) digital platforms and services; and (iv) G-Cloud infrastructure and cybersecurity. Specific recommended actions focus on the introduction of a comprehensive, equitable, user-centric, whole-of-government conceptual GovTech framework, including institutional architecture, coordination, and delivery mechanisms, and performance M&E arrangements, based on the principles of "once-only", "digital by default", and "mobile by default", customized to Armenia's context.[43]

60. The "whole-of-government" nature of digitalization and modernization reforms will make routine and essential state and piloted local services more convenient, cost and time efficient, and responsive to citizens and businesses. Reduced administration and higher quality public services will increase citizens' trust towards public institutions and build a better business environment. Enhanced efficiency of public institutions will have a

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[41] https://openknowledge.worldbank.org/bitstream/handle/10986/35852/South-Caucasus-GovTech-for-Armenia-A-Whole-of-Government-Approach-as-a-Key-Foundation-for-the-Digital-Economy-in-Armenia.pdf?sequence=1&isAllowed=y

[42] *GovTech: A Whole-of-Government Approach as the Key Foundation for the Digital Economy in Armenia,* Governance Global Practice, The World Bank, *May 26, 2021*

[43] The "digital by default" principle envisages that Governments make active use of the possibilities provided by information technologies and each newly designed public service is offered in digital format in parallel to its physical analogy, thus increasing the variety of service provision channels, while leaving the selection of the channel up to the user. The principle also obliges Governments to gradually transform their existing services into electronic format, to increase customer choice, attend to the specialized needs of users, and reduce the costs and time of public service delivery. The same logic applies to the "mobile by default" principle.

positive impact on the service provision process, thus also benefiting the final users of those services – citizens and businesses.

61. The GovTech assessment noted that common user-centric approaches within the Government could be further developed, with a greater focus on user research and user design. This entails efforts to increase access, promote business processes reengineering to operationalize digital services implementation, and enhance digital skills and dissemination to increase uptake by users.[44] Greater customization to users' needs will help to enhance the end-to-end customer journey. It can also promote the life-events approach to service delivery, which designs and delivers digital services around citizens' life events as the central theme of the user-centric design of public and private sector digital platforms.

62. The implementation of the Project will require iterative improvements across an array of GoA's service delivery infrastructure to improve trust among agencies, citizens, and businesses. Accordingly, the Project design approach is as follows:

   a. Local inventories of existing resources must precede the design and implementation of services. This will ensure a proper multi-phase approach to the transition between the current infrastructure and a government cloud infrastructure.

   b. A phased approach will ensure protection against downtime between systems.

   c. Subject to confirmation that it complies with international good practice, not every service and system must be rewritten. In some instances, relocating existing services to the data center will suffice.

   d. Agencies, citizens, and businesses benefit from infrastructural service capabilities, with improved timelines and reliability of service provision.

   e. The subsequent challenge of developing a 100 percent government cloud infrastructure policy is separated in three major phases: on-premises cloud, hybrid-cloud, and remote cloud services.

   f. Along the journey to a totally remote domestic government cloud, following the policy proposed under the Project, agencies will require assessments of data security, domicile, and geographical surveys to determine the long-term survival capabilities of potential data center locations vis-à-vis disaster and climate risks, such as seismic, geothermal, and topographic vulnerabilities to flooding, fire, and land instabilities.

63. The automation and modernization of traditionally paper-based services will require interoperability, transparency, and cybersecurity. New technologies offering simplified processes with the assistance of AI will eliminate human intervention and on-site participation at government offices. An explanation of the processes that identify AI-assisted technologies will improve transparency and trust in AI-dependent technologies. The Project will support proof of concepts (PoC) in this regard. To make the most of the systems, interoperability between data systems is an important foundational component of service design. Semi-structured data storage systems and databases will ensure that rapid inter-agency communication can occur with a clear separation of concerns and security domains between agencies, all without compromising the utility of interoperable information. Furthermore, service implementation with high standards in cybersecurity will vastly improve confidence in government systems among citizens and businesses by reducing the risk of financial losses and identity theft due to ransomware, denial-of-service, or malware attacks. By hardening infrastructure, with an

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[44] According to a survey in 2019, 35.5 percent of participating citizens that interacted with public authorities did not submit online applications simply because they did not know how to use the website. More research needs to be done to gain a clearer picture and understanding of why citizens do not use the digital services available to them.

ethical hacking component in the GoA's toolkit, the entire government can comply with the latest standards of protection and preemptively defeat third parties by simulating aggressive cyber-protection violations "in-house".

Economic analysis

64. **The proposed Project is expected to result in a number of benefits for citizens, businesses, and the Government, some of which can be quantified.** The first group of expected benefits includes areas that are not easily quantifiable, such as the Project's contribution to the prevention of tax evasion by facilitating tax processing and raising the tax paying culture and discipline among Armenian citizens and businesses. Such benefits also include positive impacts upon the quality of policy formulation processes through the increased analytical focus and capacity of public servants. It will also result in improved integrity and security of data used in the process of public service delivery, which over the medium to long term should enable significant efficiency gains through increased citizens trust and enhanced public administration competency. Quantifiable benefits include improved operational efficiency of public sector institutions through the reduction of operation and maintenance (O&M) costs, and service delivery optimization of Government-to-Citizens (G2C) and Government-to-Businesses (G2B) services. Apart from the investment outlays, economic costs include an estimate of GoA staff time required for project implementation and increased O&M costs of installed ICT equipment.

65. **The economic net present value (ENPV) of the Project is estimated at US$46.3 million while the economic internal rate of return (EIRR) stands at 61.6 percent.** (See Table 1 below)[45] Calculation of the economic performance indicators was based on development of cost and benefits input in real terms using a 7 percent discount rate over a 10-year horizon typical for digitalization projects. The reduction of operational costs was estimated through reduction of current cost materialized by digitalizing the National Archive, introducing the HRMIS, achieving substantial printing and storage cost reduction, and reducing cost of compliance by taxpayers. Benefits linked to optimization of the service delivery mechanism in both G2C and G2B services are calculated based on the gradual change of mix in the service delivery mechanism in favor of a more efficient and less costly digital channel. The cost reduction estimate is based on assumptions on transactions in public service delivery and expenses linked to delivery of public services by the GoA and their use by citizens and businesses.

Table 1. Estimated economic costs and benefits by year

	Year 1 2022	Year 2 2023	Year 3 2024	Year 4 2025	Year 5 2026	Year 6 2027	Year 7 2028	Year 8 2029	Year 9 2030	Year 10 2031
Economic outflows										
Project investment	3,000,000	4,500,000	7,500,000	9,000,000	6,000,000					
Staff time expense for project implementation	92,500	185,000	277,500	277,500	277,500					
O&M cost (IT)	0	0	750,000	750,000	1,125,000	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000
Front end fee	75,000									
Commitment fee	67,500	56,250	37,500	15,000	0					
Total economic costs	3,235,000	4,741,250	8,565,000	10,042,500	7,402,500	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000

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[45] Detailed Economic Analysis is available in Project files.

Economic inflows										
Improved operational efficiency	0	470,000	705,000	705,000	940,000	940,000	940,000	940,000	940,000	940,000
Service delivery optimization (G2C)	0	0	4,856,250	9,712,500	14,568,750	7,770,000	7,770,000	7,770,000	7,770,000	7,770,000
Service delivery optimization (G2B)	0	0	231,250	462,500	693,750	925,000	925,000	925,000	925,000	925,000
Reduced compliance costs for taxpayers	0	485,034	1,474,311	2,972,573	5,454,035	5,563,116	5,674,378	5,787,866	5,903,623	6,021,696
Total economic benefits	0	955,034	7,266,811	13,852,573	21,656,535	15,198,116	15,309,378	15,422,866	15,538,623	15,656,696
Total economic costs	3,235,000	4,741,250	8,565,000	10,042,500	7,402,500	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000
Total economic benefits	0	955,034	7,266,811	13,852,573	21,656,535	15,198,116	15,309,378	15,422,866	15,538,623	15,656,696
Net benefits	-3,235,000	-3,786,216	-1,298,189	3,810,073	14,254,035	13,698,116	13,809,378	13,922,866	14,038,623	14,156,696
IRR	61.1%									
NPV at	7%	46,342,797								

B. Fiduciary

(i) Financial Management

66. PSMP4 will follow the same FM arrangements as the ongoing PSMP3. The PMO, with the support of PMG, will fulfill the Project's FM function. The FM arrangements in place at the PMG, including planning and budgeting,[46] accounting, financial reporting, external audits, funds flow, and organizational and staffing arrangements, are satisfactory and acceptable to the WB. The internal controls of the PMO are adequate and capable of safeguarding assets, recording transactions, ensuring effectiveness and efficiency of operations and compliance with applicable laws/regulations, and providing reliable information on the Project. There are no overdue Interim un-audited Financial Reports (IFRs) or audits under PSMP3. The Project FM risk and combined fiduciary risk at this stage is rated as Moderate.

67. The Project will produce a full set of semi-annual IFRs to be submitted to the WB within 45 days of the end of each calendar semester, from the first disbursement and throughout the Project life.

68. The PMG's FM staff is fully familiar with the WB's disbursement procedures. The PMO will establish a Designated Account (DA), in EUR, specifically for this Project, in the Single Treasury Account of the Ministry of Finance at the Central Bank of Armenia, which holds almost all the DAs for the ongoing WB-financed projects in Armenia. The Project's DA will be managed by the PMG. The level and timeliness of GoA counterpart funding is assessed to be adequate.

69. There are no pending audits under the ongoing PSMP3 project. The auditor has issued unmodified (clean) opinions on the financial statements of the PSMP3, with no recommendations raised in the management letters. The audits of the PSMP4 will be conducted by independent private auditors acceptable to the WB, using TOR)

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[46] PMO supported by PMG is responsible for planning and budgeting based on the inputs provided by the project's stakeholders.

acceptable to the WB and procured by the PMG, and according to the International Standards on Auditing issued by the International Auditing and Assurance Standards Board of the International Federation of Accountants. The annual audits of the Project's financial statements will be provided to the WB within six months from the end of each fiscal year, and also after the Project closing date. The Borrower will disclose the audit reports for the Project within one month of their acceptance by the WB by posting the reports on the Government's/Cabinet website[47] or other official websites of the Borrower. Following the WB's formal receipt of these reports from the Borrower, the WB will make them publicly available according to WB Policy on Access to Information.

(ii) Procurement

70. Procurement under the Project will be subject to the WB's Procurement Regulations for IPF Borrowers-Procurement in Investment Project Financing Goods, Works, Non-Consulting and Consulting Services", (Fourth Edition November 2020) (Procurement Regulations). The Project will also be subject to the WB's anti-corruption Guidelines, dated October 15, 2006 and revised in January 2011 and on June 1, 2016.

71. Procurement activities will be carried out by the PMO with the support of PMG. The technical staff of the EKENG and relevant stakeholder agencies will be responsible for the preparation of the technical parts of the procurement documents (i.e. technical specifications, TORs) as well as technical evaluation of the required and delivered ICT goods and consultants services. The PMG comprises the following staff: Project Manager, FM Specialist, and Procurement Specialist and full-time/part-time consultants. An additional procurement specialist and an additional ICT specialist position will be added for PSMP4.

72. The PMO with support of PMG is also responsible for procurement under the ongoing PSMP3 project. The procurement performance under PSMP3 was assessed as satisfactory. It is expected that the same Procurement Specialist will continue her services under PSMP4. The Project Procurement Strategy for Development (PPSD) and the initial Procurement Plan of the Project were prepared and submitted in October 2021 and found acceptable by the Bank. The PMG procurement specialist will provide guidance to the beneficiary agencies on the development of TORs/technical specifications, as well as in evaluation of the bids/proposals and acceptance of the supplied goods and other deliverables/reports in line with the WB procurement regulations and practices.

C. Legal Operational Policies

	Triggered?
Projects on International Waterways OP 7.50	No
Projects in Disputed Areas OP 7.60	No

D. Environmental and Social

73. **The WB is supporting a series of activities to contribute to NDC implementation through analytical assessment, most notably** the South Caucasus: Regional Environment and Climate Program (P171738) and using available platforms to promote synergies among the activities of all stakeholders including development partners. PSMP4 aims to contribute to the climate change agenda in Armenia by ensuring that every individual, business, and government agency is provided with digitally-enabled access to services, processes, and opportunities through a

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[47] *https://www.gov.am/en/PSMP3/*

nationwide digital service infrastructure over the internet. The digital transformation will reduce the demand for printing/copying and transmission of paper and reduce demand for travel to government offices for services, which will enable a transition towards a "paperless" and "green" economy. Digitalization of government services will also help to ensure business continuity and service delivery during climate related disasters. The Project activities will also contribute to the climate agenda by establishing an energy-efficient data center and backup sites and the procurement of IT equipment that uses globally accepted energy efficiency standards. The potential risks of overheating of ICT infrastructure due to extreme temperatures is greatly reduced by installing cooling technologies. However, lack of emergency response systems to bring back connectivity and critical supplies for operations in case of extreme weather events moderately increases such risk.

74. **The environmental and social risks** of the Project are assessed as Low. The Project does not support any new construction or renovation works, and physical activities are associated with the installation of computers and other hardware in core government offices and centers. Dismantled electronic equipment may cause risks to human health and the environment if not disposed of in an environmentally sound and safe manner. As the country lacks electronic waste recycling/disposal facilities, obsolete equipment shall be safely stored before its reuse or until the licensed facilities are established in the country or before exporting abroad. Labor and Occupational Health and Safety risks will be limited and can be easily mitigated. Potential social risks relate to the inclusiveness of digital services provided and/or enhanced with the support of the Project. Potentially vulnerable and disadvantaged persons may include the elderly, persons with disabilities and limited mobility, persons living in rural, remote, or mountainous areas, ethnic minorities who lack proficiency in the national language, displaced persons, or persons and households lacking connection to high-speed internet and/or the required skills to use digital services. The Project will mitigate these risks by undertaking inclusive consultations and enabling the extension of digital services and skills training to remote and rural locations in order to ensure broader and more inclusive access to the Project benefits.

75. **To address environmental and social risks, PMG has prepared an Environmental and Social Commitment Plan (ESCP) and a Stakeholder Engagement Plan (SEP).** Labor Management Procedures will be elaborated as part of the POM. The draft ESCP and SEP were translated in Armenian and were disclosed by the PMG on November 24, 2021 and subsequently conducted consultations with stakeholders on December 13, 2021. The final version of the ESCP approved by the Bank is dated January 25, 2022 and is likewise disclosed. Likewise, the final version of the SEP will be incorporated into the POM.

76. **PSMP4 supports the goals of Green, Resilient and Inclusive Development for job and economic transformation.** PSMP4 investments in digital-ID and associated mGov will promote inclusive access and pandemic readiness. The data architecture will support open access to public data, which private sectors, including start-ups, can use, for example, to develop apps for value-added services. The cloud assessment framework will identify the cybersecurity requirements of the government, which local cloud service providers can use to improve their services for government. The Project will support the establishment of the SES, which, among other benefits, will help enhance the capacities of agencies involved in climate risk management, including training. The digitization of government services will promote better management of business continuity during extreme weather events. Increased access to digital public services will ensure citizens can access services during disasters like COVID-19. E-Government services will also have a causal link to greenhouse gas (GHG) emission reductions in road traffic.

77. **Citizen engagement:** The Project has been designed to support mechanisms for citizen engagement. Citizens representing different ages, regions, and backgrounds are involved in the service design to ensure a user-centric approach, and feedback from citizens will inform Project activities through an already established citizen

feedback platform that was developed under PSMP3. The platform will facilitate dialogue with citizens, providing them an efficient and comfortable channel for communication. A unified system for citizen feedback on public services and a call center are expected to significantly strengthen citizen engagement and accountability of service providers. The Project will also finance periodic annual taxpayer satisfaction surveys to facilitate independent feedback from a wide range of taxpayers on their experience with services, specifically including more vulnerable groups (e.g., people with disabilities and the elderly). The surveys will gauge the satisfaction level of citizens, the quality of interaction between taxpayer and tax official, challenges faced by businesses and citizens, and seek suggestions of how to improve services. The respective interventions financed by the Project will be revised or fine-tuned accordingly. Survey results will be published and publicly discussed. Subsequent focus group discussions will support participatory planning of digital reform and ensure that vulnerable groups are empowered to voice their needs. This in-depth feedback from citizens will help to understand the obstacles they face and feedback information into the digital service system design, enhancing the trust necessary for the ultimate success of these initiatives. An online feedback mechanism will also function as a grievance redress mechanism, allowing data users to provide comments or lodge complaints. The Project will measure citizen engagement and its effectiveness through a beneficiary feedback indicator in the results framework: % increase in the citizen satisfaction (disaggregated by gender) with select services.

78. **Climate co-benefits:** Armenia is vulnerable to climate change. Increasing climate resilience through the efficient use of water, land, and energy resources is among the development priorities of the GoA. The country's international climate change commitments under the Paris Climate Agreement set out mitigation pledges and adaptation priorities in detail and indicate measures to achieve them. Armenia's NDC foresees mitigation measures to increase energy efficiency in various sectors of the economy, including increases in renewable energy and decreases in losses in gas and electricity systems, the development of financial support schemes from the GoA for mitigation action, and educational and training activities.

79. **Per the assessment of the Bank's Climate Co-Benefit team on November 13, 2021, the total climate co-benefits of the Project are estimated at around US$0.32 million (1.06 percent).** Modernizing public services—while requiring the procurement of equipment and hardware—will lead to automation, streamlined procedures, and the utilization of electronic services, among other changes. All new equipment/hardware will correspond to the highest standards of energy efficiency. The modernization will reduce the use of paper, decrease the country's carbon footprint, and reduce time spent on tax-related activities by both the taxpayer and the administration (that is, less energy use and more time allocated to other productive tasks). All infrastructures will be designed considering the anticipated climate change impacts and risks, to support adaptation measures and increase the climate resilience of relevant systems. Upgrading the infrastructure by investing in the establishment of a resilient disaster recovery center will help to minimize the impact of disaster-induced (for example, floods and earthquakes) interruptions and data losses. The energy efficiency performance of the data center and backup sites will comply with internationally recognized best practice. The new IT equipment will be energy efficient, and the data center and backup sites will have enhanced insulation and improved efficiency of cooling systems and cooling agents with lower global warming potential.

80. **Processes will be designed for gathering comprehensive data from early warning systems** for prompt notification to authorities and affected populations of climate-related disasters and to trigger early warning responses to avoid or reduce their impact and prepare for an effective response. Systems will be implemented in the municipalities devoted to disseminating information to raise public awareness and to allow immediate mobilization of resources and personnel during climate-related risks.

Gender

81. **GBV remains a challenge in Armenia**.[48] The COVID-19 pandemic negatively impacted the GBV situation in the country, as it did across the world, with people confined at home for long periods of time during lockdowns. There was a 30 percent increase of DV cases reported to member organizations of the "Coalition to Stop Violence Against Women" during the state of emergency in Armenia in March 2020 and a 50 percent increase in April.[49] The latent nature of GBV/DV[50] in the country slows down response, prevention, and mitigation efforts.

82. **The Project will seek to help address some of the underlying reasons behind underreporting of GBV and to improve the response**. Under Component 2, it will support: a) the implementation of a direct and designated nation-wide GBV/DV hotline under the MLSA; b) updating and improvement of the existing protocol, c) training of the MLSA designated staff and staff of the regional support centers; and d) conducting of a nation-wide awareness and communication campaign.

83. **Operated by the staff of the 114 line under the umbrella of the MLSA, the new stand-alone hotline will be a nation-wide, confidential, and free-of-charge reporting and support mechanism** to help provide improved information and services to GBV/DV survivors. The line will also service human trafficking victims, who are mostly women. The hotline will be easy to access. [51] It will operate during business hours, however the MLSA will consider extending its services beyond business hours in the future, as possible and based on beneficiary needs assessment.

84. **The MLSA will appoint designated staff to operate the hotline**. The Project will support the MLSA with training of designated staff to ensure the necessary knowledge and skills. Training will ensure MLSA staff have the professional capacity to answer calls, share information, ensure confidentiality, anonymity, and data protection, and to be able to refer survivors to available specialized services (health, psychological, shelter, etc.) per the protocol for interacting with and servicing vulnerable groups, particularly survivors of GBV/DV and human trafficking.[52] The Project will also support the training of the respective staff of the regional support centers.

85. **The existing protocol will be revised and improved** with the support of the Project for designated staff to follow. This can then help the MLSA to develop, together with other relevant structures, a unified multi-sectoral referral protocol.

86. **The Project will also support the MLSA to develop a communications and outreach strategy** and conduct a robust, targeted and nation-wide awareness raising campaigns to inform the public and specifically the target groups of women about GBV/DV, and the availability of the nation-wide GBV hotline.

87. **Hotlines and awareness raising interventions tend to increase demand for services**. In the presence of a direct, accessible, and specialized nation-wide hotline, trained (by the protocol) and designated staff, and robust nation-wide communications and outreach campaigns, there will be adequate potential for an increased

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[48] According to a survey conducted by World Vision Armenia, more than half of male respondents reported having used emotional violence (towards their partner); use of physical violence was reported by 20 percent of men "more than once" and by 35 percent "in the last 12 months".

[49] Rapid Assessment of Government Response to Domestic Violence During COVID-19 Pandemic. June 2020. Available at: https://armenia.unfpa.org/en/publications/rapid-assessment-government-response-domestic-violence-during-covid-1⊡9-pandemic.

[50] Elimination of Discrimination against Women, 2018 annual report of the Human Rights Defender of Armenia. Available at: *https://ombuds.am/am/site/WomenLegalDocuments*.

[51] The MLSA will be the primary owner of the hotline, hosting and operating it, as the lead responsible agency for the gender equality agenda in Armenia. The hotline will have linkages to the lines operated by other state agencies, such as the Police, Ministry of Emergency Situations, and Ombudsman's Office.

[52] Training will ensure MLSA staff have the professional capacity to answer calls, share information, ensure confidentiality, anonymity, and data protection, and to be able to refer survivors to available specialized services (health, psychological, shelter, etc.) per the protocol.

number of reported GBV cases and for improved and more timely service provision to GBV survivors.[53] Higher rates of reported cases can help lower the latent nature of GBV, as more cases will be brought to the attention of relevant state authorities for prevention and mitigation.[54]

88. **The proposed main intervention of establishing a hotline will be monitored by an indicator in the results framework**: the number of calls annually handled effectively as per the GBV protocol.

V.   GRIEVANCE REDRESS SERVICES

89. **Communities and individuals who believe that they are adversely affected by a WB supported project may submit complaints** to existing project-level grievance redress mechanisms or the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the WB's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the WB's attention, and WB Management has been given an opportunity to respond. For information on how to submit complaints to the WB's corporate GRS, please visit http://www.worldbank.org/en/projects-operations/products-and-services/grievance-redress-service.   For information on how to submit complaints to the WB Inspection Panel, please visit www.inspectionpanel.org.

VI.   KEY RISKS

90. **The overall risk for the operation is rated as Moderate**. Two specific risk categories—Institutional Capacity for Implementation and Sustainability and Other concerning COVID-19—are assessed as Substantial. All other risks are rated as Moderate.

91. **Relatively weak institutional capacity of beneficiary public institutions poses a Substantial risk.** While the PMG has performed satisfactorily over the previous PSMPs, frequent staff turnover in the public sector can have adverse effects on the capacities of beneficiary public institutions for proper implementation of the Project. Also, new technologies will be implemented for successful achievement of Project objectives, and new actors including MoI will be engaged in the implementation process. PSMP4 will support large scale digitalization reforms, which require high levels of cybersecurity and data protection measures. Digitalization and modernization of processes and databases require adequate cybersecurity policies and capacity within the responsible state institutions. Absence of those safeguards may cause cyber and data vulnerability, jeopardizing the reliable operation of digital systems and public access and trust in service delivery. To ensure sustainability of digitalized systems and safety of sensitive data, the Project will provide advisory services to assess, monitor and address cybersecurity and data protection risks during planning, implementation, and the subsequent operation phase. Based on the advisory, EKENG will implement this function using government's own resources. The use of project funds will be limited to mostly advisory services in this area due to limited funding available under this component. Capacity building

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[53] Also, survivors who are less willing to refer to the Police or to the general-purpose 114 line of the MLSA, may prefer contacting the specialized hotline for direct support.

[54] A standalone GBV hotline under the MLSA will also help ease the burden of calls to the Ministry's 114 general-purpose helpline. Trust and communication between the state and citizens, namely the survivors, could also be improved as the state will be better equipped to provide access to information and professional and timely support to vulnerable citizens. Having a unified system for handling GBV reporting is also expected to help improve the overall coordination of dealing with GBV cases within the MLSA as well as among all state agencies involved, and improve the identification of victims' needs, leading to an overall enhancement of the referral mechanism.

activities will help to maintain sustainable cybersecurity and data protection measures and share relevant skills and knowledge. The capacities of the PMG will be enhanced through hiring two additional staff members (procurement and IT specialists) to ensure efficient handling of complex implementation arrangements. At the same time, capacities at the local government level are weak. Accordingly, the implementation approach is to support digitalization of public services within the purview of local governments through piloting that will start supporting to digitalization activities in municipalities with higher implementation capacity.

92. **The risk of negative impacts from COVID-19 on Project implementation is rated Substantial**. Though the reported rate of positive tests has decreased, the vaccination program is proceeding slowly, and there is poor observance of mask wearing and social distancing measures. The Government is implementing robust actions to raise vaccination rates. Still, increased numbers of COVID-19 cases may limit travel and ban meetings, with its adverse effect on project implementation. The risk will be mitigated through ongoing collaboration with the PMO and providing hands-on support during implementation, similar to the current mode of operation under PSMP3.

93. **A separate risk assessment has been conducted relating to the support to the criminal justice sector** under the Project (Sub-components 1.2. and 1.3). The risk assessment resulted in low risk of intervention in criminal justice.

VII.   RESULTS FRAMEWORK AND MONITORING

Results Framework
COUNTRY: Armenia
Fourth Public Sector Modernization Project

Project Development Objectives(s)

The project development objective is to improve the efficiency of and access to selected public services for businesses and citizens.

Project Development Objective Indicators

Indicator Name	PBC	Baseline	End Target
Efficiency of Public Services			
Decrease in time to obtain central government and local level services (Text)		current duration (in days) to obtain selected public services, for each service and average for the sample (current duration (in days) to obtain selected public services, for each service and average for the sample to be measured upon selection of five or six essential services by effectiveness of the project)	50% (the target considers 50% increase of time efficiency of public services related to their baseline status)
Increase in citizen satisfaction with selected public services supported by the project, as measured by surveys and embedded feedback mechanisms, disaggregated by gender (Text)		current level of citizen satisfaction (the current state of citizen satisfaction by select five or six public services to be measured through a survey within the 1st year of the project).	20% (the target considers 20% increase of citizen satisfication related to their baseline status)

Indicator Name	PBC	Baseline	End Target
Female (Text)		N/A	20%
Access to Digital Public Services			
Increase in use of digital public services, disaggregated by gender (Text)		5% current level of use of accessible digital public services	25%
Female (Text)		2%	10%

Intermediate Results Indicators by Components

Indicator Name	PBC	Baseline	End Target
Component 1: Modernization of Public Administration			
Number of Senior Executive Service Positions filled (Number)		0.00	20.00
HRMIS digital modules relating to Senior Executive Service (Text)		N/A	Digital modules relating to Senior Executive Service developed and harmonized with the HRMIS system
Component 2: Digital Service Delivery			
Percentage of tax payers (disaggregated by gender) accessing tax service electronic systems via mobile (Percentage)		0.00	20.00
Of which female (Percentage)		0.00	20.00
Percentage of public services available digitally at the central government, disaggregated by channel – mobile, portal (Percentage)		20.00	50.00
Mobile (Percentage)		0.00	20.00
Portal (Percentage)		20.00	50.00

Indicator Name	PBC	Baseline	End Target
Percentage of public services available digitally at the local level, disaggregated by channel – mobile, portal (Percentage)		0.00	20.00
Mobile (Percentage)		0.00	10.00
Portal (Percentage)		0.00	20.00
Percentage of eligible citizens enrolled on digital ID (Percentage)		0.00	10.00
Number of service delivery systems interoperable with digital ID (Number)		0.00	5.00
Number of calls effectively handled through GBV hotline per the protocol (Number)		0.00	550.00
Component 3: Data Management and Digital Infrastructure			
Study on cloud readiness assessment and roadmap developed (Text)		N/A	Study on cloud readiness assessment and roadmap developed.
Findings of the cybersecurity assessment addressed and implemented (Percentage)		0.00	80.00
AI piloted in Government System/s (Text)		0.00	3 AI Proof-of-concepts piloted in Government System/s

Monitoring & Evaluation Plan: PDO Indicators					
Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
Decrease in time to obtain central government and local level services	% decrease in time to obtain central government and local level services (target	Annual	Government Portal/Mobile Apps	PMO (supported by PMG) will coordinate with EKENG to produce	PMO (supported by PMG)

	50%)			systems generated reports	
Increase in citizen satisfaction with selected public services supported by the project, as measured by surveys and embedded feedback mechanisms, disaggregated by gender	% increase in citizen satisfaction with selected services supported by the project, as measured by surveys and embedded feedback mechanisms, disaggregated by gender	Annual	Surveys	PMO (supported by PMG) will coordinate with EKENG to carry out the surveys	PMO (supported by PMG)
Female	% increase in female citizen satisfaction with selected services supported by the project, as measured by surveys and embedded feedback mechanisms.	Annual	Surveys	PMO (Supported by PMG) will coordinate with EKENG to carry out the surveys	PMO (Supported by PMG)
Increase in use of digital public services, disaggregated by gender	% increase in use of digital public services, disaggregated by gender, and channel (mobile, portal, target 25 %)	Annual	Government Portal/Mobile Apps/Walk-in centers	PMO (supported by PMG) will coordinate with EKENG to produce systems generated report on the number of users enrolled on in digital platforms (portal, , mobile)	PMO (supported by PMG)
Female	% increase in use of digital public services by female users (mobile and portal) (target 25 %)				

				Monitoring & Evaluation Plan: Intermediate Results Indicators	
Indicator Name	**Definition/Description**	**Frequency**	**Datasource**	**Methodology for Data Collection**	**Responsibility for Data Collection**
Number of Senior Executive Service Positions filled	Public servants in executive or managerial positions that have attained full tenure.	Bi-annual	Civil Service Office (CSO)	PMO (supported by PMG) will coordinate with CSO to submit a report	PMO (supported by PMG)
HRMIS digital modules relating to Senior Executive Service	New modules of HRMIS for Senior Executive Service available in the HRMIS system.	Annual	HRMIS	PMO (supported by PMG) will coordinate with CSO to produce HRMIS report	PMO (supported by PMG)
Percentage of tax payers (disaggregated by gender) accessing tax service electronic systems via mobile	% of tax payers accessing tax service electronic systems via mobile.	Annual	Tax Systems of SRC	PMO (supported by PMG) will coordinate with SRC to produce system generated reports	PMO (supported by PMG)
Of which female	% of female tax payers accessing tax service electronic systems via mobile	Annual	Tax Systems of SRC	PMO (Supported by PMG) will coordinate with SRC to produce system generated reports	PMO (Supported by PMG)
Percentage of public services available digitally at the central government,	% increase in the availability of digital public services at	Annual	Service Delivery	PMO (supported by PMG) will coordinate	PMO (supported by PMG)

disaggregated by channel – mobile, portal	the central government – disaggregated by channel (50% on portal, 20% through mobile)		Portal and mobile application platforms of the central government	with EKENG to produce system generated reports	
Mobile					
Portal					
Percentage of public services available digitally at the local level, disaggregated by channel – mobile, portal	% increase in the availability of digital public services at the local government – disaggregated by channel	Annual	Service Delivery Portal and mobile application platforms of the local level	PMO (supported by PMG) will coordinate with the local governments to produce system generated reports	PMO (supported by PMG)
Mobile					
Portal					
Percentage of eligible citizens enrolled on digital ID	Percentage increase in enrollment of digital ID	Annual	Digital ID platform	PMO (supported by PMG) will coordinate with EKENG to produce reports from the digital ID system	PMO (supported by PMG)

Number of service delivery systems interoperable with digital ID	Number of service delivery systems interoperable with digital ID	Annual	EKENG digital ID and interoperabili ty systems	PMO (supported by PMG) will coordinate with EKENG to produce reports from the interoperability platform (XROAD)	PMO (supported by PMG)
Number of calls effectively handled through GBV hotline per the protocol	Number of calls effectively handled through the GBV hotline annually by providing information or making referrals.	Annual	GBV hotline	PMO (supported by PMG) will coordinate with the MoJ/MLSA to ensure implementation	PMO (supported by PMG)
Study on cloud readiness assessment and roadmap developed	Disaster recovery center	Once	Prime Minister's office has ensured operation of the data center	PMO (supported by PMG) will coordinate with the Ministry of High-Tech Industry to produce this report and roadmap.	PMO (supported by PMG)
Findings of the cybersecurity assessment addressed and implemented	Findings of the cyber security assessment addressed and implemented	Bi-annual	Ministry of High-Tech Industry has issued the assessment, monitoring reports to monitor the implementati on	PMO (supported by PMG) will coordinate with the Ministry of High-Tech Industry to produce this assessment and monitoring reports	PMO (supported by PMG)

AI piloted in Government System/s	Number of AI PoC completed in use cases	Annual	Government System(s)	PMO (supported by PMG) will coordinate with EKENG to submit a report	PMO (supported by PMG)

COUNTRY: Armenia
Fourth Public Sector Modernization Project

Project administration mechanisms

1. Given the wide span of the reforms proposed under the Project, targeting various ministries and agencies, the Project will be implemented under the leadership of the PSRC, which will serve as the Project Steering Committee.[55] The PSRC will be headed by the Deputy Prime Minister or Chief of Prime Minister's Staff. PSRC members include senior officials from the Prime Minister's and Deputy Prime Minister's Offices and different ministries. The PSRC will provide support and strategic guidance to project activities; approve important financial management and procurement documents; ensure that adequate budget provisions for the Project are made in the national budget; resolve inter-agency coordination issues; and assist in building support for reforms and overcoming resistance to reform. The PSRC will be responsible for ensuring satisfactory implementation of the overall project and achievement of the PDO.

2. The Chair of the PSRC, who is also the Deputy Prime Minister/Chief of Prime Minister's Staff, will be the Project Director. A number of specialized agencies will participate in Project implementation as clients/beneficiaries. Their roles will be to provide technical requirements and specifications for the systems or other activities to be financed through the Project, to review consultant and vendor outputs, to organize acceptance testing of IT software and hardware, and to utilize project outputs that correspond to them. These entities will not receive any Project funds or undertake any financial management or procurement. The beneficiary organizations are as follows:

   - **Components 1:** Subcomponent 1.1 –SCO/ PMO; Subcomponent 1.2 – MoJ; Subcomponent 1.3 - MoJ (MoI upon establishment).

   - **Component 2:** Subcomponent 2.1 – SRC; Subcomponent 2.2 – Ministries and Government agencies at central and local levels; Subcomponent 2.3 – Ministry of Territorial Administration and Infrastructure.

   - **Component 3:** All Subcomponents – PMO, MHTI and EKENG

3. Day-to-day Project implementation will be carried out by the PMO with the support of a small PMG headed by a Project Manager, who will report to the Project Director (Deputy Prime Minister/Chief of Prime Minister's Staff). The contractual arrangements with the staff of the existing PMG (hired under PMSP3) will be extended and relevant contract amendments or new contracts signed under the terms and conditions with terms of reference and qualifications satisfactory to the Bank. The PMG will provide support to the PMO related to 1) technical and administrative support for project implementation, 2) FM, 2) procurement, 3) compliance with environmental and social safeguards requirements, 4) M&E, 5) support to development of technical requirements and specifications for procurement documents based on inputs provided by the Project's stakeholders, and 6) advisory services to agencies that implement

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[55] The PSRC was established by Decree of the Prime Minister in 1999 and its composition was reviewed in 2021.

project activities. Project implementation and reporting process is provided in Figure A1:1 below.

Figure A1:1. Project implementation and reporting process.
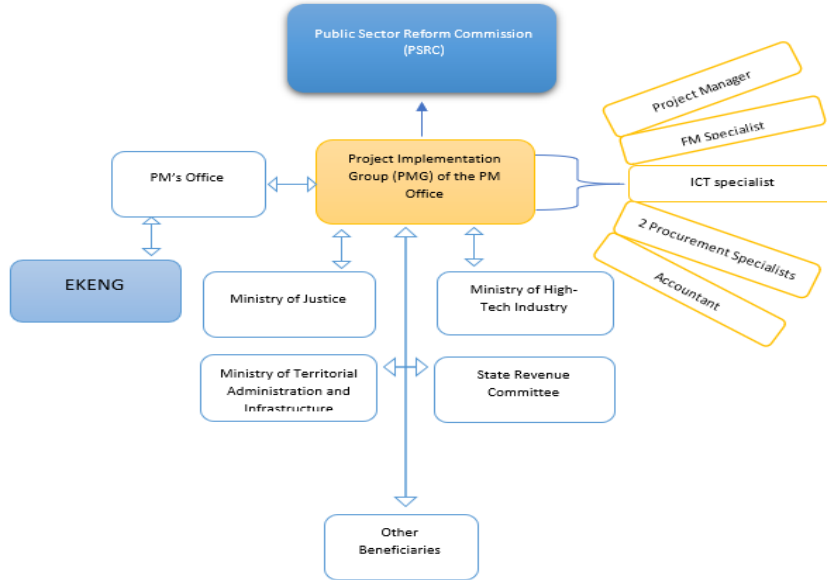
4. The Project Manager will be selected by the PSRC and will be financed by the Project. The Project Manager will be an experienced professional, having the trust of and access to the highest-level of decision-making in the Government. He/she will participate in the meetings of the PSRC. The PMO will provide office space for the PMG and upon necessity the Project will cover its operational cost during Project implementation. PMG staff will be composed of consultants hired to work full-time or part-time for the Project's implementation. In addition to the Project Manager, the current staff includes a procurement specialist, and a part-time FM specialist and a part-time accountant (or a full-time specialist with FM/accountant functions). An additional procurement specialist and an additional ITC specialist position will be added for PSMP4.   The PMG will provide administrative support to project implementation, monitoring and reporting, preparation of procurement documentation and monitoring of the procurement process and providing advisory services to the implementing agencies.

5. EKENG will be in charge of supporting beneficiary entities in shaping the TOR and specifications for all ICT related procurement (hardware, software, systems). EKENG will also support/advise in the acceptance of all the deliverables under ICT contracts. In many cases EKENG will also act as a member of bid evaluation committees.

Procurement and financial management

6. Fiduciary activities related to the Project will be performed by the PMO with the support of the PMG. PMG has experience in managing the previous PSMP projects financed by the WB. The PMO with the support of PMG will be responsible for ensuring that procurement of goods and services is done in a timely manner in accordance with WB Procurement Regulations, managing Project funds, maintaining accounts, preparing financial management reports, and getting the accounts audited. The Combined Fiduciary Risk Rating for the Project was assessed also to be Moderate.

Financial Management

7. PSMP4 will follow the same FM arrangements as the ongoing PSMP3, with the PMO fulfilling the Project's FM function with the support of the PMG. The FM arrangements in place at PMG were reviewed and assessed as acceptable to the Bank for the Project's implementation. The Project FM assessment undertaken in September 2021 and updated in November 2021, confirmed that, in particular: internal control and filing systems in place are overall adequate; the FM staff at PMG has significant experience in the Bank-financed project; PMG utilizes adequate accounting software; results from the latest annual audit of the PSMP3 project managed by PMG were satisfactory; and the IFRs were always received on time and found to be acceptable to the Bank. Prior to the project effectiveness, PMG will develop the Project's Financial Management Manual acceptable to the Bank to reflect the FM arrangements, funds flow and internal control procedures under the Project.

8. The overall FM risk for the Project is assessed as moderate with the Inherent Risk and Control Risk also assessed as Moderate.

9. The PMO with the support of the PMG is capable of preparing relevant project budgets. The budget is classified by categories, components, and sources of funds. All changes in procurement plan are agreed in advance with the Bank and with the Ministry of Finance (MoF), and only then are the changes incorporated in the annual budget. Once reviewed and endorsed by the MoF, the Project budget is included into the State Budget.

10. The Project's accounting function will be carried out by the PMO with the support of the PMG, which utilizes 1C accounting software, used by a few Armenian Project Implementation Units and found to be adequate. For reporting purposes, the Project will follow cash basis International Public Sector Accounting Standards and accrual basis accounting will be used for project accounting.

11. The internal controls at PMO are found to be overall adequate and capable of safeguarding assets, recording transactions, ensuring effectiveness and efficiency of operations and compliance with applicable laws/regulations, and providing reliable and timely information on project. PMG FM staff regularly (before each Withdrawal Application is prepared or at least once a quarter) reconcile the Project's accounting records with the WB disbursement data via the Client Connection system.

12. The backup of all accounting data is made on the server's external hard drives on a daily basis and once a month on data storage device (Compact Disks, Hard Density Drive, or other).

13. Project management oriented IFRs will be used for Project monitoring and supervision. PMG FM staff have significant experience in IFR preparation, and the IFRs of PSMP3 project were always received on time and found to be in general acceptable to the Bank. The format of the IFRs has been confirmed during assessment and includes: Project Sources and Uses of Funds; Uses of Funds by Project Activity; Designated Account (DA) Statements and a Statement of the Financial Position. The PMG will be producing a full set of IFRs every calendar semester throughout the life of the Project. These financial reports will be submitted to the Bank within 45 days of the end of each calendar semester.

14. The current auditing arrangements under the ongoing PSMP3 project are satisfactory to the Bank (there are no pending audits; the auditor issued unmodified (clean) opinions on the financial statements of the PSMP3 project with no recommendations in the management letter), and it has thus been agreed that similar audit arrangements will be adopted for the Project. The audit of the Project financial statements will be conducted by independent private auditors acceptable to the Bank, on TOR acceptable to the Bank and procured by the PMO with support of PMG, according to the International Standards on

Auditing issued by the International Auditing and Assurance Standards Board of the International Federation of Accountants.

15. The annual audits of the Project financial statements will be provided to the Bank within six months after the end of each fiscal year, also after the Project closing date. The Borrower has agreed to disclose the audit reports for the Project within one month of their receipt from the auditors and acceptance by the Bank by posting the reports on the Government's/Cabinet website[56] or other official websites of the Borrower. Following the Bank's formal receipt of these reports from the Borrower, the Bank will make them publicly available according to the WB Policy on Access to Information. The cost of the audit will be financed from the proceeds of the Project.

Disbursement Arrangements

16. The FM staff of the PMG is familiar with the Bank's disbursement procedures. The PMO with the support of the PMG will establish a DA, in Euro currency, specifically for this Project, in the Single Treasury Account of the Ministry of Finance at the Central Bank of Armenia, which is holding almost all DAs for ongoing WB projects in Armenia. The Project's DA will be managed by the PMG. The IFR based disbursement method will be applied for the Project. The ceiling of the DA will be variable based on the forecast for the next three quarters approved by the TTL.

17. Project funds will flow from the Bank, either: (i) via the DA to be maintained in the Treasury, which will be replenished on the basis of IFRs or full documentation; or (ii) on the basis of direct payment withdrawal applications and/or special commitments, received from the PMO via the PMG. Withdrawal applications documenting funds utilized from the DA will be sent to the Bank at least once in every semester. The following disbursement methods may be used: reimbursement, advance, direct payment and special commitment. The Government counterpart funding will be made via the State Treasury through normal budget allocation procedures initiated by the PMO via the PMG in accordance with standard Treasury and Budget execution regulations. Government counterpart funding is assessed to be adequate for the entire duration of PSMP4 implementation and it is expected that the level and timeliness of the Government counterpart funding will be satisfactory.

Procurement

18. The Project risk for procurement is deemed "Moderate". The assessment concluded that the PMG procurement staff are familiar with WB procurement procedures and have acquired adequate experience and capacity under previous and currently implemented WB projects. However, risks have been identified with respective mitigation, taking into account the circumstances outlined in Section VI – (D) above. The procurement related risks are summarized in the table below:

Table A1:1. Summary Risk Assessment

Description of Risk	Rating of Risk	Mitigation Measures	Rating of Residual Risk
The existing PMG procurement specialists will be assigned to manage several foreign-financed projects.	Moderate	A new procurement specialist will be added to the PMG to support the Project. POM for the Project will include job description of the PMG new/additional procurement	Low

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[56] https://www.gov.am/en/PSMP3/

Description of Risk	Rating of Risk	Mitigation Measures	Rating of Residual Risk
		specialist. Changes to the POM are subject to the prior agreement with the WB.	
In the multi-stakeholder environment, possible interferences and pressures could result in delay of the implementation	Moderate	Ensure (i) project implementation is protected from the interference and pressures of special interest groups to avoid delays; (ii) transparent decision making based on disclosed evaluation criteria in bidding documents and proposal documents.	Low
Slow and incomplete development of the technical specifications for ICT and other goods/equipment for bidding documents and TORs for proposals	Substantial	Improve/develop the technical capacity of the PMG, EKENG, and beneficiary agencies through training, and having an IT & Cyber Security specialist at PMG.	Moderate
Unclear and ineffective distribution of implementation responsibilities between project stakeholders.	Substantial	Precise identification of the roles and distribution of the responsibilities between PMG, EKENG, and project beneficiary agencies should be provided in the POM and followed strictly during the course of project implementation.	Moderate

19. Procurement for the Project will be carried out in accordance with "WB Procurement Regulations for IPF Borrowers – Procurement in Investment Project Financing Goods, Works, Non-Consulting and Consulting Services", (Fourth Edition November 2020) (Procurement Regulations). The Project will also be subject to the WB's Anti-Corruption Guidelines, dated July 1, 2016 and the provisions stipulated in the Loan Agreement (LA) and POM. The implementation arrangements are described in draft POM which has already been prepared by the PMG and submitted for the Bank's review and approval. The adoption of the final version of the POM is an effectiveness condition.

20. **General Procurement Notice:** A General Procurement Notice will be prepared and submitted to the Bank before beginning any procurement activity under a project. The Bank arranges for the publication of the General Procurement Notice in the United Nations Development Business on-line. Specific Procurement Notices and Requests for Expression of Interest will be published for all international competitive bidding procurement and consulting contracts per Procurement Regulations, as the corresponding bidding documents and Requests for Proposals become ready and available.

21. **Thresholds for Procurement Methods:** Goods (including ICT) and Non-consulting services shall be procured, under contracts awarded using International or National Request for Bids with International or National approach to market per the PPSD, and as reflected in the Procurement Plan. Contracts estimated to cost US$100,000 equivalent or less may be procured using Requests for Quotation. Direct Contracting may be used when justified.

22. **Consulting Services and Training:** Consultancy services to be provided by consulting firms shall be procured through Quality and Cost Based Selection method. Other methods such as Fixed Budget Based

Selection, Consultant's Qualification Based Selection, Least Cost Based Selection, Quality Based Selection, and Direct Selection shall be used as reflected in PPSD, irrespective of the amount. Individual Consultants will be selected in accordance with paragraphs 7.34-7.35 of the Procurement Regulation. For assignments estimated to cost US$300,000 equivalent and less, the shortlist may comprise only of national firms. However, if foreign firms express interest, they shall be considered.

23. **Operating Expenditures:** Operating expenditures are not subject to the WB's Procurement Regulations. The procurement under this category will follow the procedures described in the POM. Nevertheless, in case of selection/appointment of the managerial and key staff of PMG, the WB procurement regulations for selection of individual consultants applies, and the Borrower shall provide the Bank team with the TOR and the qualification assessment report of the selected candidate for review and no-objection, prior to offering the contract to him/her. Operating cost will not include salaries of civil servants.

24. **Post Review Ratio:** Contracts not subject to Bank's prior review will be post reviewed by the Bank's supervision missions and/or during regular post reviews by a Procurement Accredited Specialist on a sampling basis. Post-review ratio is proposed as 20 percent that is, one out of every five contracts.

25. **Filing and Record Keeping:** PMG will be responsible for adequate filing and record keeping. The PMG has experience in this activity from other Bank-financed projects.

26. **Anti-corruption Measures:** The Borrower shall ensure that the Project, including procurement, is carried out in compliance with the latest version of the Bank's Anti-Corruption Guidelines (Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants (dated October 15, 2006 and revised in January 2011 and as of July 1, 2016). All bidding documents, including contracts, used under the Project shall include the latest version of the provisions on fraud and corruption. All members of the evaluation committees shall sign a disclaimer on absence of conflict of interest and confidentiality for each evaluation process.

27. **Procurement plan.** For each contract to be financed under the Project, the selection method, the estimated cost, prior review requirement, and time frame will be agreed between the Borrower and the Bank through the Bank's Systematic Tracking of Exchanges in Procurement (STEP) system.

28. In case of a slice and package arrangement, the prior review threshold is determined based on the aggregate value of individual contracts to be awarded under such arrangement. The TOR of consulting assignments (individual and firm) and technical specifications of ICT packages are subject to prior agreement with the Bank Task Team Leader. All cancellation of selection process and/or re-invitation shall be subject to Bank's prior review. All the contracts with cost estimation below the Bank's prior review threshold are subject to prior review if the financial offer of the selected firm exceeds such threshold at the proposal evaluation stage. Irrespective of the thresholds, the selection of all consultants (firm and individuals) hired for legal work or for procurement activities as well as the individual hired for long-term technical assistance or advisory services for duration of the Project (or most of it) are subject to prior review.

29. The Procurement Plan will be updated at least semiannually or as required to reflect the actual project implementation needs and improvements in institutional capacity. Any updates/modification to the Procurement Plan should be forwarded for the Bank's review /approval through Bank's STEP system. Upon approval, the Bank will arrange for the publication of the Procurement Plan on its external website in accordance with Procurement Regulation (para. 4.2 Section IV)..

30. **Prior Review Threshold**: Procurement decisions subject to prior review by the WB as stated in the Procurement Regulation are as follows:

	Selection Method (in US$[57])	Prior Review Threshold (in US$)
1	Goods packages	> 1,000,000
	IT system and non-consulting services	> 1,000,000
3.	Request for quotation/Shopping (Goods) packages ≤ 100,000	First contract
4.	Direct Selection (Goods)	> 50,000

N	Selection Method	Prior Review Threshold US$
1.	Competitive Methods (Firms)	> 500,000 and first contract irrespective of estimation
2.	Direct Selection	> 5,000
3.	Individual	> 100,000

31. **Any Other Special Procurement Arrangements:** PSMP4 will use the Armenian e-Procurement System for all request for quotations (both Open and Limited) selection procurement method as well as request for bids with national approach to Market as it provides continuity with the previous PSMP1-3 projects. The Law on State Procurement was enacted in 2016 and provides a good legal framework for reforms, including the introduction of e-procurement. The unified e-procurement system was launched in 2012. The current system has reduced the volume of paperwork and has increased transparency. As a result, in April 2014, the Bank agreed to use the Government's e-procurement system for projects financed by the Bank for selection methods of request for quotations and Request for Bid when Approaching the National Market.

32. **Environmental and Social (including safeguards):** Environmental and social screening of the Project resulted in its classification as a Category C operation. The Project will not support any physical works, nor will it provide such technical assistance that may carry tangible indirect environmental impacts. Based on the WB's safeguard policy, Project activities do not require environmental assessment and they are not subject to clearance according to the national environmental legislation.

Implementation Support Plan

Strategy and Approach for Implementation Support

33. The Bank will provide Project implementation support for mitigation of implementation risks stemming from political economy of the reform and lessons learned from previous PSMP projects. The assessment of the relevant implementation risks has been assessed and presented using the SORT framework. The key features of the implementation strategy are reflected below.

34. *Policy Dialogue.* The Project seeks to improve efficiency of and access to selected public services for citizens and businesses through modernization of public administration, digital service delivery, data management, and digital infrastructure. Some reform resistance may be anticipated where the Project limits the scope for gatekeeping, corrupt practices, and conflict of interests in public administration. The Project tackles resistance through technical solutions – improved security, interoperability, and integration of the relevant electronic government systems – and change management. However, there may also be opportunities to reinforce reforms through policy dialogue. The Bank teams will coordinate

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[57] EUR equivalent will be applied for all the US$ amounts.

closely with the project teams of and ensure coherent messaging with GoA.

35. *Technical and Change Management Support.* The client has invested significant time and effort in preparation of the Project. Substantive project components build on the previous work under Bank support and the lessons learned over the last decade. The Bank team will provide day to day support on planning and implementation of project activities and related change management interventions. The quality assurance for the technical design will be ensured through review of the procurement and substantive aspects of project activities. Where needed, the Bank team will bring international change management expertise in its project implementation support.

36. *Results Monitoring.* Regular implementation support missions accompanied by the periodic and timely filing of Implementation Status and Results Reports (ISRs) will assist the Government and the Bank in tracking progress towards achievement of the Project objectives and advise on adjustments in project design. The everyday monitoring of activities will be conducted under the leadership of the Project Manager.

37. *Procurement.* The implementation support by the Bank will include the following: procurement of relevant training for the PMG; detailed guidance on the Bank's Procurement Regulations; review of procurement documents; assistance with using STEP; and monitoring procurement progress against the Procurement Plan. Periodic site visits for physical inspection and post reviews will be carried on selected contracts subject to post review.

38. *FM.* As part of its project implementation support and supervision missions, the Bank will conduct risk-based FM implementation support and supervisions within a year from Project effectiveness, and then at appropriate intervals. During project implementation, the Bank will supervise the Project's FM arrangements in the following ways: review the Project's semi-annual IFRs as well as the Project's annual audited financial statements and auditor's management letters and remedial actions recommended in the auditor's management letters; and during the Bank's on-site missions, review the following key areas: (i) project accounting and internal control systems; (ii) budgeting and financial planning arrangements; (iii) disbursement arrangements and financial flows, including counterpart funds, as applicable; and (iv) any incidences of corrupt practices involving project resources. As required, a Bank-accredited FM Specialist will participate in the implementation support and supervision process.

39. The team will maintain continuity of the dialogue with Government counterparts on technical and policy aspects of project implementation. The Bank will ensure two implementation support missions annually. The field-based team will ensure uninterrupted implementation support between the formal missions.

40. *Environment and Social Safeguards.* As part of Project launch activities, ESF training will be conducted for staff of Project Management Group prior to disbursement of Project proceeds.

41. **Table A1:2 and A1:3** indicate the level of inputs that will be needed from the WB to provide implementation support for the Project and skills mix required.

Table A1:2. Implementation Support Plan

Time	Focus	Skills needed
First 12 months	Provide support to the existing PMG to strengthen Project management that includes: • Successful Project launch • As part of Project launch activities, conduct ESF training for staff of PMG	All skills

	• Strengthening of the M&E system in place, • Filling in the PMG vacancies • Launch and completion of first citizen satisfaction survey	
Years 2 to 5	Ensure adequate implementation support, compliance with fiduciary and ESCP Monitor implementation of Project activities (including at minimum 2 missions per year) Mid-term review at the end of Year 3	All skills

Table A1:3. Skill mix required (for the duration of the project)

Skills needed	Number of Staff Weeks	Comment
Task Team Leader	40	Field based
Co-Task Team Leader	40	Headquarters based
Technical Leads/Operational Staff	30	Headquarters and field based
Financial Management Staff Specialist	10	Field based
Procurement Specialist	10	Field based
Environment and Social Safeguard Specialists	2 (each)	Field based

COUNTRY: Armenia
Fourth Public Sector Modernization Project

1. **The Project has three technical components and a project management component.** The GovTech concept encompasses the development of a dynamic system of infrastructure with a technological platform for a gradual expansion of service digitalization, delivery, and deployment to a wide range of citizens throughout the country. Such a system allows for growth through standardization of commodity technologies, including hardware, software, and personnel. The three Project components encompass an integrated changeset that resolves outstanding issues of accessibility and efficiency and promotes ongoing innovation within a broadly interoperable GovTech infrastructure. Component 1 will focus on modernizing the public administration, providing an essential underpinning of improved management capacity. Component 2 will support digital service delivery to citizens and businesses by consolidating information systems, improving access, efficiency, and the availability of public services provided by the central and local governments to citizens. Component 3 will support the underlying technological foundations needed for the successful implementation of Components 1 and 2, by improving and strengthening data governance/management, cloud computing, cybersecurity, and AI. Component 4 will support Project management to ensure timely and successful implementation. All components of the Project will finance primarily IT (software and hardware) and MIS, advisory services (i.e., hiring of consultants), training and workshops, and covering of operating costs.

Component 1: Modernization of the public administration

2. The objective of this component is to improve the overall efficiency of public administration. The component will support improving the productivity and service offerings of the public service administration, the MoJ, and the newly established MoI. The component will have three sub-components that are focused on improving the internal efficiency of the public administration. The sub-components will focus on i) improving the efficiency of public service administration, ii) improving the efficiency and compliance of justice services and judicial processes, and iii) support in modernizing systems in the MoI.

Subcomponent 1.1: Modernization of the public service

3. The Project will improve the efficiency of the civil service administration, by funding the following activities:

    a. **Development and implementation of a model of a senior executive service based on international best practices.** The Project will support the development and implementation of a model of SES based on research into best international experience. The model will include tailored processes and conditions appropriate for Armenia, including on qualifications, performance, promotion, and oversight. This activity will result in an elite cadre of civil servants who are highly qualified to lead the design and implementation of a new generation of more efficient and accessible public services. This cadre will occupy senior management positions in the ministries and other key government agencies which are critical for public service delivery. The SES will enable the government to attract high quality, professional candidates to public service, fostering higher performance, productivity, innovation, and reforms.

    b. **Enhancement of human resource management information system and business processes**. This

activity will focus on enhancing the HRMIS, including through provision of hardware, software, training, and change management, aimed to eliminate gaps in processing, provisioning, skills, and retention of government employees. It aims to provide stability to government services to better support the hiring, training, and retention of civil servants, including the SES.

c. **Modernization of the civil service office through promoting leadership and data-driven decision making.** This activity will focus on reducing decision fatigue and promoting healthy leadership and data driven decision making across a broad array of services with better outreach to marginalized citizens.

Subcomponent 1.2: Electronic justice and court systems

4. The Project will fund key activities to improve the efficiency and compliance of justice services and judicial processes. This subcomponent will support the following activities:

a. **Digitization of National Archive documents and business processes**. The objective is to establish a comprehensive digital archive with large, expansive, data processing and storage capabilities and digital document scanning, data entry, retrieval, and document storage services. An electronic system for the National Archive in the MoJ will be established, which will facilitate the internal procedures necessary to carry out service delivery and benefit all users of justice archive services nationwide. It will establish an electronic archive and digitize, at a minimum, the following key services: the Civil Status Act Registration, the State Register of Legal Entities, legal expertise. This will also help to prevent loss of records as a result of climate induced events.

b. **Digitalization and integration of select justice services and judicial processes and procedures ensuring interoperability between the systems.** The subcomponent will include digitalization of e-criminal cases[58] and e-systems on court procedures and sanctions. The digitalization of processes will start from crime report submission to law enforcement bodies, case creation, investigation, trial, appeals, sentencing, sanctions, and archiving of the case. Integration of e-criminal cases to the e-systems on court procedures will ensure the interoperability of those systems. This activity will support the means for relevant state agencies (investigative agencies, prosecution, penitentiary, probation, and compulsory enforcement services) to access the electronic criminal justice system within all levels of the GoA. The full digitalization of criminal justice procedures will facilitate a more uniform judicial process nationwide, ensure timely and quality implementation of criminal-procedural functions, and ensure the compliance of all procedures and actions of responsible agencies and officials with relevant laws, legal principles, and international commitments. This will also help to promote access to justice during natural disaster.

Subcomponent 1.3: Support in modernizing systems in the new MoI

5. The Project will support the new MoI in meeting the demand for online citizen services. Higher efficiency of this Ministry will play a significant role in reducing the service gap and enhancing the productivity of

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[58] E-criminal case management was initially developed under PSMP3. Activities under PSMP4 cover its further integration with the e-court system.

the economy.

The Project will support the modernization of systems of the new Ministry of Interior, through:

a. **Acquisition of software and hardware based on a review of the capacities and systems of the Police/MoI of the Republic of Armenia.** The procurement of software and hardware solutions will be informed by a review of the legacy systems in the Police of the Republic of Armenia that will identify the gaps and needs in capacities and systems for the MOI to be functional.

b. **Digitalization and modernization of internal operations and capacity building, including development and implementation of a plan for the modernization of databases and services.** The Project will support the development and implementation of a plan for modernization of relevant databases and services, focusing on digitalization, data infrastructure, cybersecurity, data protection, and technical capacity building. The Migration and Passport Service of the MoI will acquire an interoperable data infrastructure interlinking various internal services (migration flow, passports, visas, asylum etc.).

Component 2: Digital Service Delivery

6. This component will fund improvements in central and local government digital public service delivery. Digital business processes will indirectly result in better transparency and mitigate corruption risks in the service delivery process. Digitalization will enhance access to and engagement with services for all citizens, including in remote regions and among vulnerable groups. Central government service delivery improvements will also address the current challenges of the tax and customs administration through the expansion of services in electronic formats and multi-channel service delivery. The digitalization of service delivery will mainly follow business process reviews. There will be three sub-components.

Subcomponent 2.1: Central government digital public service delivery though modernized Tax and Customs Administration Systems

7. This subcomponent will improve the efficiency of revenue mobilization. The Project will finance the core systems of technological interoperability, including commoditized hardware, software, and cloud services, which are essential for long-term service delivery. Standards-based progressive web application development in all services will lay the foundation for mobile service applications. Mobile services, in turn, will improve outreach to citizens, including to marginalized citizens in underrepresented demographics. This subcomponent will also support climate considerations by reducing the use of natural resources for paper-based communications and time spent on tax-related activities by both the taxpayers and the administration, which will reduce the GoA's carbon footprint.

8. The Project will fund modernization of tax and customs administration systems, including:

a. **Enhancing and upgrading of a web-based taxpayer tax account system.** The objective is to strengthen single self-service accounting for managing tax liabilities and taxpayer returns. This introduces a single self-service account for managing tax liabilities and returns from a progressive web application, eliminating the need for manual intervention. Tax liabilities and debit amounts will be more convenient and simpler to calculate, and automated software processes will transfer the debit amounts submitted by taxpayers through tax returns to a single account.

b. **Implementation of accessible tax services through multi-channel self-service applications.** The E-Services Platform and mTax Application for individuals will improve the quality of services

provided by the SRC, enabling more accessible service delivery to marginalized, alter-abled, and non-technical citizens.

c. **Upgrading of the e-invoicing system to a web-based version using modern information technology architecture, including the development of progressive web applications for desktop, tablet and mobile phone environments that enable self-service.** Self-service is intended for invoice submissions, validations, adjustments, and cancellations. This upgrade of the e-invoicing system will allow the SRC to iterate rapidly and make simple and understandable mobile applications available to the taxpayer.

d. **Upgrading the tax self-declaration system by engineering a mobile application.** The objective is to make the process simpler and more accessible. This will allow citizens to re-calculate and confirm the amount of income tax they have paid through annual declarations as necessary. The Project will also allow the option to submit declarations through a mobile application or payment terminals to make the process simpler and more accessible.

e. **Digitalizing and modernizing the existing software and electronic hardware computing systems.** This will involve implementation of new software and hardware systems at the SRC data center. This will resolve issues with quality, data processing capacity, storage, retrieval, network transfer, support resolution, uptime, and cybersecurity.

Subcomponent 2.2: Central government digital public service delivery – Other Central Agencies

9. The subcomponent will fund digitalization of a wide range of public services in central government agencies, supporting the re-engineering of databases and reviewing of policies, regulations and business processes to promote long-term interoperability of data with better access controls, storage, processing, data structure, and computing infrastructure. GovTech reforms will also facilitate making public services more accessible and affordable to lower-income and vulnerable segments of the population.

10. The selected public services will establish improved databases, registers, and data processing platforms. These will use a common data document-based structure enabling whole-of-government interoperability. An enhanced and extended government document flow system will be established, and a single integrated data storage platform created for core operations and public services. Common standards will ensure the development of progressive web applications to offer citizens a practical step-by-step user experience that will eliminate bureaucracy and facilitate citizens' participation in public decision making. Service providers will require certification of their use of certain databases, programming, and application delivery processes to ensure compliance, similar to the United States' FedRAMP[59] criterion model. As an example, each service will offer a single sign-on across the whole-of-government services; a user experience available in the web browser via desktop, laptop, mobile, and in any kiosks offered by the Government; and a process workflow that enables the end-user to complete a specific task that is separate from others within the system. Each task will correspond to a particular business logic required to complete government requirements for any number of scenarios (tax, certification, payment, registration). Specifically, this subcomponent will finance:

a. **Digitalization of selected public services in the central government, through:**

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[59] The Federal Risk and Authorization Management Program (FedRAMP) was established in 2011 in the United States. The goal of the system is to provide a cost-effective, risk-based approach for the adoption and use of cloud services by the federal government.

(i) Re-engineering of databases and reviewing of policies, regulations and business processes to promote long-term interoperability of data based on a common data document-based structure;

(ii) Roll out of a coherent concept of national digital ID;

(iii) Enhancement of data processing and computational infrastructure; and

(iv) Development of progressive web applications for multi-channel mobile and desktop service delivery.

11. The funding and focus of these activities support the overarching activity on digitalization of public services at the central level, based on the criteria of readiness and impact, including support for business process reviews, enhancements, and upgrades to database, storage, and computing infrastructure. Digitalization of historical paper-based records into new storage, data processing, and computational infrastructure; implementation of AI pilot models of analytical decision-support systems; development of progressive web applications for multi-channel mobile and desktop service delivery; data center modernization for current and anticipated capacity and computation improvements; and implementation of a data analytics, ML, and AI, for example, in the SRC.[60] Availability of national Digital ID will be also used to facilitate delivery of relief aid and improve identification of climate migrants.

   b. **Strengthening of the Ministry of Labor and Social Affairs' capacity to respond to GBV/DV, through:**
       (i) establishment of a hotline designated for handling GBV/DV-related calls;

       (ii) capacity building and training for staff; and

       (iii) carrying out a communications campaign.

12. This will require updating of the existing protocol for the hotline and the establishment of a dedicated hotline for GBV/DV. The direct hotline for GBV/DV related calls will administer a direct, accessible, and specialized GBV hotline under the MLSA, using trained and designated staff, and conducting robust nation-wide communications and gender outreach campaigns could help improve the access to, effectiveness, and efficiency of GBV services, making them more citizen-centric and responsive to the needs of the beneficiaries.

   Subcomponent 2.3: Local government digital public service delivery

13. The sub-component will fund digitalization of systems and databases in local self-government to ensure seamless service delivery to citizens and businesses. Supporting the local digital economy will also help to promote regional socio-economic development. A standardized information infrastructure is essential for the long-term growth and short-term service interoperability among municipal, regional, and national sectors within the government. Such reforms will help to prevent the fragmentation, lock-in, and siloing of information and therefore foster interagency accountability and fiscal policy reforms. The activities will be implemented though pilots in order to observe implementation challenges. The Project will finance the following activities:

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[60] Import and export data analytics with linkage to the production, pricing calculation of the products, and price fluctuation will be available for citizens.

Support of local governments through the piloting of activities related to re-engineering databases, data infrastructure, and computing systems aimed at aligning business processes with central government agencies' business processes and digitalization of local public services, including:

    (a) development of progressive web applications for multi-channels;

    (b) implementation of modern digital infrastructure technologies, including the design of an early warning system to gather data enabling timely alerts of climate-related disasters and disseminate such information within municipalities; and

    (c) digitalization of selected local public services including business progress review of back-office processes with a mobile government approach to public service delivery.

14. For local governments participating in the pilot, this will involve upgrading of computers and other hardware, training of municipal staff, and development of progressive web applications for multi-channel mobile and desktop service delivery (including by private sector operators); implementation of modern digital infrastructure technologies that leverage economies of scale, including commodity infrastructure[61] among similar platforms and systems being deployed in sub-national governments. These activities form the subset and basis of one core activity within the scope of local government service delivery improvement – digitalization of several local services. This will also include design of a system for gathering data regarding early warning systems for timely alerts of climate-related disasters, which will develop systems in the municipalities devoted to disseminating information and immediate mobilization of resources and personnel during climate-related risks. New equipment/hardware will correspond to the standards of energy efficiency. Digitalization of several local public services mainly includes business process reviews of back-office processes, with an mGov approach to public service delivery; the selection of services will be based, as in Subcomponent 2.2, on readiness and impact.

Component 3: Data management and digital infrastructure

15. This component aims to strengthen the foundation of the digital system, by enhancing the ICT backbone of the GoA to address the issues with data governance/management, cloud computing, and cybersecurity, and to enhance government-wide decision-making support using AI in areas capable of support large data pools for analysis. The component will optimize the use of available public sector data in support of the Project's objectives of greater efficiency and accessibility of services, by providing a whole of government approach to the data management and digital infrastructure sectors.

Subcomponent 3.1: Hybrid cloud

16. This subcomponent will enhance the efficiency, security, stability, and operability of digital infrastructure. The Project will support the government on diagnostic and policy formulation on cloud computing through technical assistance activities. The Project will finance the following activities:

    a. **Preparation of a cloud readiness assessment and roadmap to inform policy on a hybrid cloud;**

    b. **Preparation of a data classification report to guide the policy on hosting government data on the Borrower's cloud, and the public cloud;**

    c. **Development of a cloud assessment framework to screen, authorize, and license cloud service**

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[61] Commodity infrastructure refers to devices that are relatively inexpensive, widely available, and interchangeable with other hardware of their type.

providers suitable for hosting government data; and

d. **Technical assistance on the establishment of a disaster and climate change resilient data recovery center and backup sites.**

The latter will also help minimize the impact of climate risks and disaster-induced (for example, flood or earthquake) interruptions and data losses. The energy efficiency performance of the data center and backup sites will comply with internationally recognized good practice guidelines. The data center and backup sites will have enhanced insulation and improved efficiency of cooling systems and cooling agents with lower global warming potential.

Subcomponent 3.2: Cybersecurity

17. This subcomponent aims to improve the resilience to cyber threats of the Government's digital infrastructure and assets. The Government has issued a decree to develop a cybersecurity strategy. The Project will support the decree by providing technical assistance to the government in assessment, policy formulation, and monitoring of cybersecurity. It will finance the following activities:

   a. **Carrying out of a cybersecurity assessment of existing hardware and software in selected areas;**

   b. **Preparation of an institutional assessment of cybersecurity functions' coordination within the Borrower's agencies and institutions;**

   c. **Organization of knowledge exchanges on cybersecurity arrangements; and**

   d. **Technical assistance on strengthening data infrastructure, threat management and cybersecurity.**

18. Targeting of technical assistance will be informed by the assessment and will include focus on interoperable data with access control lists and automation of integration across data centers. With respect to training, delivery will include climate change, DRM and natural disaster recovery considerations.

Subcomponent 3.3: Data science, ML, and AI in GovTech

19. This subcomponent aims to improve the application of data science, machine learning and AI in GovTech. The activities focus on increasing the efficiency of citizen engagement, service delivery, and cybersecurity through providing an integrated modern approach to the generation and use of data for decision making and service delivery. The government is using AI in the SRC improving efficiencies in tax collections. Based on this experience, the Project will support expansion of the use of AI in other domains through TA on the whole-of-government approach to the overall architecture, proof-of-concepts, and capacity building. The Project will finance the following activities:
   a. **technical assistance on the development of an integrated data fabric architecture concept for the whole-of-government approach to artificial intelligence;**
   b. **technical assistance on piloting artificial intelligence concepts in selected areas; and**
   c. **capacity building on artificial intelligence, including iterative innovation, research and development.**

Component 4: Project management

20. **The Project will support Project implementation, including but not limited to the provision of**

administrative support to PMG in relation to Project implementation, such as procurement, financial management, monitoring and evaluation, capacity building, Project management, coordination, and development of institutional capacity and absorption of the Project-supported reforms.

21. The PMO, with the support of PMG, will coordinate implementation, including fiduciary aspects, knowledge management/communication, citizen engagement, and gender considerations; and will monitor implementation of environmental and social requirements. The grievances will be addressed by a specialized department in the PMO. This component will finance the remuneration of Project management staff, consultants to support the PMG in M&E and other areas, office equipment and operations, training in subjects related to Project management, financial audit of the Project, translations of Project related documents, awareness raising of project activities, and other costs directly related to the Project management agreed with the Bank.