



## TERMS OF REFERENCE

<b>Title:</b>	National consultants for digital governance tools development
<b>Project:</b>	Accelerating Digital Transformation in Public Sector in the Republic of Moldova,
<b>Reporting to:</b>	Project Manager
<b>Duty Station:</b>	Chisinau, Moldova
<b>Contract Type:</b>	Individual Contract (IC)
<b>Duration:</b>	variable, upon specific assignment defined

### 1. Background

The digital transformation is already a reality in Moldova, as the country has begun to transfer public, legal, social and civil service delivery online. Accelerated digitalization can be expected to create new business models and opportunities for digital leapfrogging in traditional industries and governance.

The COVID-19 crisis has highlighted the need for significant support and investments on digital transformation and effective digital governance, particularly to ensure the continuity and delivery of core government functions.

The pandemic has revealed the lack of preparedness of the public sector to quickly adapt policies and tools due to lack and low quality of data; to work remotely and online, including in delivery of social services in education, health, mobility and other sectors for specific population groups; and to adapt the performances of services for the economic sectors to the conditions induced by the crisis.

In the past months, business continuity was severely hampered, and many government officials and staff had to continue working in their physical offices not only due to infrastructure issues, but also most importantly due to the presence and location of data and information in offline data files and paper-based systems.

While there has been much emphasis on digital tools and technologies in Moldova, digital transformation areas like policy, institutional coordination and trainings, as well as, leadership remains a significant challenge and continue to constrain effective digital transformation and economic growth. One of the underlying causes is the low digitalization of the public sector and its offer.

With Accelerating Digital Transformation in Public Sector Project (Digital Transformation Project or Project), UNDP Moldova aims to improve access to and quality of public services and business conditions through accelerated digital transformation of government processes and business model(s) and promote innovation, as well as collaborative experimentation within the Government, in the private sector, internally in UNDP Moldova, and in collaboration with external partners.

UNDP Moldova, through this Project is strategically positioned as an integrator of programmatic solutions with innovative mindset, including bringing forward digital components in supporting accelerated delivery of the SDGs.

The Project has the following objectives:

- Support transformative changes in the organizational and innovation culture in the public and private sectors and align all participants for the accelerated achievement of the Sustainable Development Agenda and national targets;
- Contribute towards streamlining innovation through engaging with the ongoing and prospective projects and seeking ways to maximize and to measure their social impact.

Support the Digitalization of Moldova that will contribute to improved governance by increasing the efficiency and effectiveness of government processes, increasing transparency and public access to governmental information – and therefore promoting accountability and public participation, and improving an innovative delivery of public services, as well as impact evaluation and strategic support to scaling-up of the successful solutions.

A key actor in this regard is the Electronic Governance Agency (EGA). EGA has the mission to bring leading technologies into the Government, rethink processes, improve public services and make them work for the benefit of the citizens. Using its unique positioning, EGA develop services that work for the user, facilitating the process of obtaining representative powers, exclude paper, reduce costs and cases of forgery or interpretation of documents which in essence make citizens lives easier. Services and platforms developed by EGA are used by millions of citizens and private and public institutions. Some of the services and platforms are:

**MCloud** – private government cloud computing platform

**MConnect** – data exchange platform

**MPass** – government electronic identity service

**MSign** – government digital signature service

**MPay** – government payment service

**MNotify** – government notification service

**MPower** – government authorization service

**MLog** – government journaling service

**Public Service Portal** – government portal for public services for citizens and business

## **2. Job objective**

UNDP Moldova in partnership with EGA is interested to explore the available expertise on the domestic markets and establish a pool of qualified experts who have niche-expertise across a

specific range of work areas and thus can support UNDP's and EGA development efforts of digital governance tools, as per positions defined below.

Specific deliverables for each area of expertise will be presented upon separate offers request from the consultants included in the roster.

### 3. Basic responsibilities of the positions

<b><u>Architect</u></b>	<p><b>Position objectives:</b></p> <ul style="list-style-type: none"><li>- provides technical leadership and architectural designs, which help product managers and software development teams to develop products for millions of clients and numerous public and private institutions;</li><li>- ensure high quality solutions architecture is based on industry standards and is in line with the digital strategy of EGA. In this role the architect will work closely with developers across multiple teams and projects.</li></ul> <p><b>Basic responsibilities:</b></p> <ul style="list-style-type: none"><li>- Design end to end technical and functional solutions to support digitalization;</li><li>- Provide advice on technology advancements, standards and technology governance;</li><li>- Serve as the technical point of contact for product and project managers as well as development teams;</li><li>- Contribute and maintain road maps of products, services and platforms;</li><li>- Work with the Project and Product Managers and Business Analysts to develop high level project design, contribute to schedule resource plans for implementation projects;</li><li>- Develop a deep understanding of customers' goals and objectives and articulate how AGE products and services can address those goals, needs and objectives;</li><li>- Actively participate in all phases of software development lifecycle;</li><li>- Developing and maintaining a deep understanding of the AGE products and solutions to identify improvement areas;</li><li>- Educate, enable and support AGE partners in their onboarding;</li><li>- Develop and maintain enterprise architecture and relevant documentation as per international open sources best practices;</li><li>- Participate in existing IT systems audits and validations of proposed technical specifications for new developments in public services digitization;</li><li>- Collaborate with product managers for continuous development of products and services;</li><li>- Collaborate with IT development and operations divisions in order to ensure agility, DevOps and cloud-native computing principles in products development and deployment;</li><li>- Participate in relevant procurement activities and reviews and drive vendors to deliver products that will be in line with the platform architecture and digitization methodology;</li></ul>
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	<ul style="list-style-type: none"> <li>- Provide technical trainings on issues related to platform-level services, at least once per quarter, for developers of information systems for public sector.</li> </ul>
<b><u>DevOps engineers</u></b>	<p><b>Position objectives:</b></p> <ul style="list-style-type: none"> <li>- Ensure high quality support to the EGA in provisioning and maintaining automated deployment, operational tools and implement reusable PaaS services that support e-government infrastructure, sectorial services, as well as the environments on which they operate;</li> <li>- Support the automation of deployment and IT operations of EGA operated governmental reusable services, such as MConnect, MPass, MSign, MPay and other services. investigating alternatives and proposing appropriate solutions, implementing their initial deployment, optimizing their maintenance, as well as automating the operational aspects of the tools, including logging, tracing, monitoring and alerting.</li> <li>- Support EGA in defining an efficient architecture for IT operations and reusable PaaS services. This approach has a broad impact on the whole lifecycle of products development.</li> </ul> <p><b>Basic responsibilities:</b></p> <ul style="list-style-type: none"> <li>- Implement automation tools and PaaS services;</li> <li>- Maintain and optimize automation tools and PaaS services;</li> <li>- Implement automated deployment, upgrade/downgrade, backup, log collection, monitoring, alerting and other reusable services;</li> <li>- Monitor the industry for new tools or optimization of deployment for existing tools.</li> <li>- Investigate alternatives for automation tools and PaaS Services;</li> <li>- Provide technical consultancy on development projects on matters related to optimization of automated deployment and IT operations;</li> <li>- Take part in procurement of goods and services by drafting Terms of Reference, technical specifications, contributing to development of bidding documentation, participating in offer evaluations and reporting;</li> <li>- Other duties as assigned.</li> </ul>
<b><u>Knowledge Management Manager</u></b>	<p><b>Position objectives:</b></p> <ul style="list-style-type: none"> <li>- Champion knowledge sharing so that know-how, information and experience is shared on the corresponding channels (as appropriate) outside and inside the organisation with clients, partners, and stakeholders;</li> <li>- Will establish the framework and lead the development of the tools required to manage the organisation's knowledge assets. This includes developing standard operating procedures to ensure consistent knowledge management across all M* products and services;</li> <li>- Provide direction to the Strategy &amp; Operations teams who are responsible for developing knowledge assets for the service delivery teams to use.</li> </ul> <p><b>Basic responsibilities:</b></p> <ul style="list-style-type: none"> <li>- Lead development and implementation of the organisation's Knowledge Management Strategy;</li> <li>- Define knowledge management requirements, goals, and strategies;</li> </ul>

	<ul style="list-style-type: none"> <li>- Promote knowledge sharing by strengthening links between knowledge sharing and other information systems;</li> <li>- Lead and encourage project managers, product managers, developers and other team members and stakeholders to share knowledge;</li> <li>- Ensure colleagues and stakeholders are aware of the knowledge management resources available to support their work are appropriately trained and are using the systems efficiently and productively;</li> <li>- Provide a strategic view on the further development of knowledge management systems and practices in order to support the work and development of the organisation into the future.</li> </ul>
<b><u>Product Manager</u></b>	<p><b>Position objectives:</b></p> <ul style="list-style-type: none"> <li>- Development of the life cycle of the products entrusted, from the development of the concept and business model (business case) to the design, development, testing, operation, deployment and continuous development;</li> <li>- setting-up the short and long-term vision and strategy for the product and follow the continuous promotion of the product in order to drive its adoption.</li> </ul> <p><b>Basic responsibilities:</b></p> <ul style="list-style-type: none"> <li>- Develop and update the vision and strategy for product development;</li> <li>- Ensure development and updating of the product case and business model, which contains such elements like: <ul style="list-style-type: none"> <li>o product description, benefits and basic features, product development roadmap, cost / commercial, functional, operational, promotion models;</li> <li>o the institutional responsibilities of the parties involved in the development and operation of the product;</li> <li>o the contractual and legal framework for the operation of the product.</li> </ul> </li> <li>- Ensure the elaboration and updating of administrative, technical, and operational documents related to the product;</li> <li>- Identify and manage key partners and suppliers for product development and operation;</li> <li>- Collect functional requirements from potential customers (beneficiaries) of the product;</li> <li>- Manage the process of continuous product development, in accordance with the concept and business model, the available budget and the agreed level of quality;</li> <li>- Manage of inter-institutional arrangements for the development and proper functioning of the product, including contracts and agreements with partners, beneficiaries and suppliers, as appropriate;</li> <li>- Ensure planning of data, budgets, etc. necessary for the continuous development and proper functioning of the product;</li> <li>- Elaborate the budget related to the exploitation, promotion and continuous development of the product;</li> <li>- Plan and monitor the operational activities of the product;</li> <li>- Ensure adequate support mechanisms for product users;</li> </ul>

	<ul style="list-style-type: none"> <li>- Manage activities related to the launch and promotion of the product or new versions of it, to drive adoption of the product;</li> <li>- Coordinate with the technical, legal, financial, procurement, human resources, etc. team of the activities necessary for the efficient management of the product.</li> </ul>
<b><u>Software Tester</u></b>	<p><b>Position objectives:</b></p> <ul style="list-style-type: none"> <li>- Design and develop of Functional and Automation test scripts;</li> <li>- Clarify requirements, ensure testability and ability to automate, to provide feedback on design, both functional and technical;</li> <li>- Innovate on latest tools and processes to improve QA functional manual and Automation testing, document best practices and mentor junior team members. Identify test cases from Acceptance Criteria for the User Stories, estimate work and participate in design reviews;</li> <li>- Work on frameworks to ensure continuous deployment and continuous integration.</li> </ul> <p><b>Basic responsibilities:</b></p> <ul style="list-style-type: none"> <li>- As a Tester/QA Analyst for AGE, will be responsible for creation of Test Plans, Test cases, Test case execution and Defect management and Estimation;</li> <li>- Contribute into end-to-end test activities such as test script development, test execution &amp; defects management;</li> <li>- Work collaboratively with Test Lead / Business Analysts in project to assess test scenarios and provide test requirements based on risk-based testing methodology;</li> <li>- Design and Develop, Maintain Test scenarios, test conditions, test scripts, test data, and expected results for test streams, including Product Test, Integration Test, Technical Test and Deployment Test;</li> <li>- Work closely with developers, support for various testing activities including test case / script writing, Clarification, data load, build deployments etc.</li> <li>- Develop, update and maintain existing regression test assets;</li> <li>- Identify and Manage Test Data, Test Environment needs;</li> <li>- Execute test scripts;</li> <li>- Provide test progress, test results with accurate Reporting to leads;</li> <li>- Provide clarity on defect severity &amp; priority;</li> <li>- Participate in continues improvement initiatives.</li> </ul>
<b><u>Software developer</u></b>	<p><b>Position objectives:</b></p> <ul style="list-style-type: none"> <li>- Ensure high quality code delivered in line with programme goals and delivery cycles.</li> </ul> <p><b>Basic responsibilities:</b></p> <ul style="list-style-type: none"> <li>- Ensure the continuous development of CSS, Bootstrap and jQuery, Angular and / or React frameworks services and platforms;</li> <li>- Improve as well as develop toolkits and APIs based on WS- * standards and / or REST style using WCF and / or Web API aimed to increase adoption, performance, security and scalability;</li> <li>- Build automated tests to support our continuous deployment environment;</li> <li>- Explore techniques which will allow services and platforms to bring in data from other sources and visualize it in new ways to provide insights to users;</li> </ul>

	<ul style="list-style-type: none"> <li>- Design and iterate appropriate database schema and associated jobs to ingest data from a variety of data sources (for example time series data from web analytics);</li> <li>- Develop up-to-date technical documentation, including integration guides;</li> <li>- Participate in the elaboration of the norms regulating the activity procedures of the subdivision and the Agency (regulations, instructions, methodologies, concepts);</li> <li>- Contribute to the planning of the technical capacity of the testing and production environments of the services and platforms;</li> <li>- Ensure the functionality and maintenance of the testing and production environments of the services and platforms.</li> </ul>
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#### **4. Level of effort**

This TOR does not set a number of days. The level of effort (LOE) will be defined upon separate offers request for specific deliverables under each area of expertise.

#### **5. Place of performance**

The consultant will perform his/her duties in the Republic of Moldova.

#### **6. Period of performance**

Specific tasks for each technical position shall be addressed to the preselected consultants during the years of 2022-2023, with possible extension.

#### **7. Reporting instructions & institutional arrangements**

The consultants will report to the UNDP Digital Transformation Project Manager, or his designee, who will be responsible for supervising the consultants' performance.

Working language: English, Romanian and Russian. All produced information shall be in English and Romanian.

#### **Payment arrangements**

The payments will be disbursed in instalments, upon submission and approval of deliverables by UNDP. The consultant will also submit the timesheet specifying the achieved deliverables and the consumed time.

#### **Travel**

Given the Covid-19 context, travel is not envisaged under current assignment. To the extent possible, interviews, meetings, workshops will be organized online.